

**FOUNDERS' DAY ADDRESS**

**University of New Brunswick, Fredericton, N. B.,  
February 14th, 1949**

**INNOVATIONS AND THE MARITIME ECONOMY**

After expressing his deep pleasure at being back home in Fredericton, and his appreciation of the honour U. N. B. had done him in inviting him to deliver the Founders' Day Address, Professor Keirstead said:—

The Founders, whose wisdom and foresight we celebrate today, established this institution to play a two-fold role in the life of the Province. It was designed to maintain the aristocratic tradition and cultural inheritance of humane learning, and it was to serve to make available to the people of the Province knowledge of the useful arts to alleviate their life and to increase their welfare. The University still serves, loyally these two purposes. It has remained true to its dedication. The Founders knew what they wanted. They knew, too, some of the problems and difficulties which the Loyalist people had to face, and the virtues and strength they brought to face these difficulties.

They had come to a new country. It was one which possessed some wealth, but it was uncleared, its resources were unknown, and it was competing for existence, so to speak, against communities which had long since been cleared, developed and settled, and which had already established lucrative trade connections and achieved wealth and prosperity. The Founders realized that the new colony, under these conditions, would have a long hard struggle, that there would be hardship and disappointment. They believed, however, that the men and women who had come to New Brunswick brought with them the courage, skills, knowledge and determination necessary to overcome these difficulties and to build up a flourishing and prosperous British community in this land. I will draw your attention, if I may, to the emphasis the Founders put upon knowledge and skill. It was not in the unknown and problematic natural wealth of the land in which they put their trust, but, as they would say, "under God," in the capacity and knowledge of the people. The handicaps of history and geography were to be overcome by the determination and knowledge of men.

The subsequent history of the Province showed the wisdom of the Founders. The Province proved not to be rich in good agricultural land, but it possessed one invaluable resource,—great stands of white pine, which an ingenious and adaptable people were quick to exploit. On this single resource the great

wood and wind economy was established, and New Brunswick ships sailed all the oceans and carried a significant proportion of the commerce of the world. The prosperity of the days of the clipper ship has not, however, endured, and, in the words of a former Premier of Nova Scotia, many Maritime communities of these later days, have found themselves "left behind, derelict, so to speak, in the march of progress."

It is into the causes of this, shall I say failure of development, that I wish now to inquire. There are two popular schools of thought which claim to explain this failure of the Maritime economy, and I doubt if either of them has the true explanation. One point of view is that of people who fix their gaze on political history and political developments, and who seem to exclude any other considerations. They find that New Brunswick, and the Maritimes generally, were prosperous in the days before Confederation, and that since the formation of the Union these Atlantic Provinces have never enjoyed a prosperity comparable to that of the rest of the Dominion. They conclude by a natural, if fallacious, process of thought, that Confederation has been the cause of our discontents, and that, but for this political event, the Maritimes would have continued to flourish and to prosper. In their language, the Maritimes got a raw deal. This school of thought is, unfortunately, only too common among our people. I can remember when a certain newspaper of this Province was so convinced of the truth of this fallacy that anyone who would not subscribe to it was regarded as the agent of a foreign power, the foreign power being, in this case, not Russia or Germany, but an equally hostile land called Canada.

The other school of thought, to which I referred, was based on what was believed to be hard-headed, down-to-earth economic thinking. According to this school, the Maritime Provinces were poor in resources, and were inevitably doomed to sink into relative poverty and decay, as the greater wealth of the Dominion was discovered, and the new lands opened up. Reciprocity with the United States offered the Maritimes some benefits between 1854 and 1866, when the American States were enjoying a great boom, and it was the end of reciprocity, not Confederation, which brought Maritime prosperity to an end. Since then, these people point out, the history of the Maritimes has been like the history of the New England States, the history of an area poor in resources, gradually declining in wealth and importance, as the great resources of the new lands to the west were opened up. In an extreme form this theory is set out by an American historian who said, "had the Pilgrim fathers landed in California instead of Massachusetts Bay, the Atlantic coast would not yet have been discovered."

This point of view is widely held, I discover, among the business men of the Central Provinces. I have repeatedly run across it, frequently accompanied by the corollary that the sensible thing for people of the Maritimes to do is to leave these wretched Provinces and come up to Central Canada to form a cheap supply of labour for the industrialists there. "Nobody will invest capital in the Maritimes," they say.

Well, I haven't a great respect for this view either, though it is the view taken in certain provincial political circles in Canada. I hope you will not feel there's any duplicity in the language in which I drew up this criticism. According to them, if the Maritimes are poor, it is their own fault, and no federal government should attempt to distribute to the poorer Provinces services supported by taxes levied against the richer. That is what these politicians mean when they say they stand for provincial rights. They mean that they stand for the rights of Quebec and Ontario to disregard the problems and conditions existing in the Maritimes and the Prairies. Intellectually this is an understandable point of view, as long as we think in purely provincial terms and refuse to think of Canada as a nation whose people share a common lot.

Now I believe this latter view of Maritime economic history is about as fallacious as the former one. It is shallow, superficial, and one-sided. As the political view, so popular in the Maritimes neglected certain economic facts, so the economic view, so popular in St. James Street, Quebec and Queen's Park, neglects certain political facts, and, for that matter, certain economic facts as well.

Of recent times economists have been attempting to make a new approach to the interpretation of economic history. We have been trying to understand the process of economic change. I want to try to look at the problems of Maritime economic history in the light of some of the things we have been finding out.

We believe now that the location of industry depends in large measure on what we call innovations. By an innovation we mean the application to production of some new invention or some new process. It may be an engineering invention, such as the steam engine. It may be a chemical invention such as the Bessemer process. It may be a management invention such as the dictaphone. Or it may be an organizational invention, such as the conveyor belt, which is basic to mass production. Practically all these innovations have had the result of making more possible and more profitable large scale plant units. And this has meant that industry gravitates towards the market, rather than towards the source of raw materials. Indeed inno-

vations in transportation have so reduced the cost of moving raw materials, together with preferential rail rates which favor bulk freight, that proximity to populous markets has come to be one of the prime considerations in determining the location of manufacture. Availability of power, not,—I emphasize this because it will be important in what I have to say later on,—cost of power, is a further important consideration, because the innovations making for large-scale plants require inevitably great power consumption.

If we apply this theory of industrial location to the problem of interpreting Maritime economic history, we are soon able to understand some of the developments which have taken place, and we can fit political events, such as Confederation, into an intelligible pattern.

Steam power, and the steel ship, were both known before the great days of the wood and wind economy in the Maritimes. But they were in an experimental stage. New Brunswick and Nova Scotia shipwrights made reply to the new inventions, by developing the clipper ship, which could outsail any steamer afloat. The sailing ship remained master of speed, and this gave the Maritime builders and masters a temporary advantage. For a brief period, innovations in the sailing ship kept competitive pace with innovations in steam-powered ships. Indeed for many years after the introduction of the steamer, the sailing ship remained superior in speed, but not, alas, in cost. The steamer required less labour. The clipper could outsail her, but that was not important, because, for perishable goods, neither clipper nor steamer had refrigeration, and so the articles of ocean transport consisted entirely of non-perishables. On non-perishable staples, the important competitive factor was not speed, but cost. And though the clipper masters drove their ships as ships had never been driven before, and established passage records which steam could not match, the cheaper cost of the new vessels gradually won the battle. The tall ships gradually left the seas for lack of cargo, and the dauntless spirit of the sailing man yielded to the steam-shrouded calculations of the company accountant.

Confederation was intended as an answer to the menace of the Fenians and of America jingoistic tariffs. British North America would build a transcontinental economy which would be secure against American attacks, and which would create a manufacturing economy which would give a comparable prosperity to that of the aggressive republicans. Such was the conception. Unfortunately for the Maritimes the National Policy created an economy which paid Britain for the capital necessary for the railways with staple exports from the west-

ern lands. This programme, of course, took full advantage of British free trade theory and practice, but did not reciprocate, because, behind the protection of Canadian tariffs, a mixed manufacturing was developed to supply the domestic markets for consumers' goods. Such an economy meant an end to the entrepôt trading economy of the Maritimes. Instead it emphasized the development (a) of western land with new people, and (b) the development of light mixed manufactures in the great centres of population. This policy coupled with innovations in manufacturing techniques proved disastrous for Maritime industry. It would be a mistake to suppose that the people of the Maritimes were unaware of what was going on. One of the Maritime spokesmen in the post-Confederation Parliament said that he believed that the establishment of a great transcontinental economy would mean that the Maritimes, containing the most skilled and adaptable artisan population of British North America, would soon become the manufacturing centre for the continental economy. This view was perfectly understandable at the time, and was held to justify the sacrifices the Maritimes made in entering the new tariff-bound Union, and in sacrificing the advantages of a commercial economy at the very centre of the West Indies-North American-British trade.

Alas for these hopes! The innovations which had destroyed the supremacy of the clipper ship continued, and, in this period following the adoption of the National Policy (1879), developed only too rapidly the superiority of the large-scale manufacturing unit. A further innovation, about this time, say at the turn of the century, also reacted unfavourably on the Maritimes. This was electricity. Just as steam, the first great innovation in prime movers, destroyed the Maritime wood and wind economy, so electricity affected the second attempt to found a strong Maritime industry on steam. For the Maritimes had no sooner realized that in the romantic struggle of the sea-lanes sail had to yield to steam, than they sought for the sources of steam in their own territories. Iron was discovered and worked in Pictou County, coal in Inverness and then in Cape Breton. Later, sources of supply of cheap iron ore were discovered in Newfoundland. This development took place in time for the Maritime steel industry to participate in the benefits of Canadian railroad building. But no sooner had heavy commitments been made to the development of Maritime heavy industry than electricity was introduced as a power innovation depending on water power. Again the Maritimes found themselves outmatched by the march of technical progress. Mass production methods in industry also were introduced, favouring those plants which were close to the greater



centres of population. Immigration to the western lands had not only deprived the Maritime Provinces of their natural increase in rural areas, it had also built up, as trading and supplying centres, the cities of the Central Provinces, and created there urban markets for the newly expanding industries of Canada. The statistical records of the period 1901-1921 are the chronicle of Maritime industrial decline. The number of industrial establishments declined everywhere because of the rapid increase in the size of the more successful firms. While the decline in the Maritimes, however, was the decline of bankruptcy and merger, comparatively unmitigated by the growth of new and larger plants, the process in the Central Provinces was simply the assimilation by the larger and stronger businesses of the smaller and weaker ones, a process which reduced the number of plants, but increased the quantity of employment and production. This trend towards concentration of industry was not peculiar to Canada. It happened in England, in France, in Germany and in the United States. It was part of a technical process in modern industry, now well understood by economists. It was not the process which was peculiar to Canada, it was the results. Germany, France and England were unitary countries. If depressed areas resulted from an industrial process, this was the responsibility and the problem for the whole country, and must be solved by national action. Even in the federal United States, the tendency has been to increase the sense of national responsibility and with this the federal power to deal with regional problems which arise from a national development. Only in Canada has the full impact of this process of industrial concentration, which redounds to the benefit of the whole nation but which involves certain costs or sacrifices, been permitted to fall without adequate protection upon a certain section of the population. Unquestionably the attitudes which today are expressed in the political circles to which I've referred are the attitudes of regional groups who hope to enjoy all the gains of technical progress, and hope to impose all the sacrifices of such progress on others. If Canada is to become a nation, it cannot be by such methods.

Well, Mr. Chancellor, the tide of technical progress has been set against the Maritimes, as it has against the New England textile industry, and against the heavy industries of Wales and North England. But economists have also been looking towards new trends. Industry has surprisingly begun to decentralize itself. In the United States the automotive and engineering industries have started a process of decentralization. In England, too, this process has begun.

What does it mean? I doubt if we are very sure of this. Some have suggested the rising marginal cost of management,—that there is a limit to the size of the concentrated firm set by the capacity of a single plant manager to take within his compass the multiple problems of managing a single enormous manufacturing unit. Whatever the cause, there does definitely appear to be some trend towards the breaking down of concentrated manufacturing capacity, if not of concentrated ownership. Industry is decentralizing. The advantages of concentrating manufacturing capacity near the populous markets are being offset by the high cost of industrial elephantiasis. Plants have got too big altogether.

I have myself studied this question of the optimum size of plants and I discover that my conclusions match with those of economists in both England and the United States who have made similar studies. The evidence seems to be that in all three countries,—Canada, Great Britain and the United States, a medium scale of plant is the most efficient. And when I say most efficient I do not beg any questions. For, luckily for the economist who has to choose between alternative definitions of such terms, it works out that the medium-size plant is most efficient both in the sense that it is most profitable and most efficient in the social sense of producing at least unit cost.

Already this most recent trend has begun to show itself in Canada. While concentration continues, for this is the firmly established process of modern industry, the future makes itself known in the present, by some movements towards decentralization. But it is as yet a weak counter tide, not the full ebb of Fundy Bay.

In Great Britain, these trends of modern industry have been carefully studied, and a new point of view has been brought to bear on them. Men have been asking, are these trends inevitable, and must people simply submit to them, and adapt to them as best they can at whatever cost to themselves, their family connections, and their desired way of life? Must men always choose between living in their established home, among their own people and their traditional way of life, and between enjoying, if afar among strangers and a foreign and hostile culture, the kind of material advantages to which their education and skills entitle them?

In Great Britain they have been asking, are the most recent technical developments in industry such that we can begin to decentralize industry, and provide a diversified and profitable industry in all parts of the country, and with it a happy and prosperous life for all regions and sections of the

population? The study of the concentration and location of industry has developed rapidly under the stimulus of this kind of thinking in Great Britain. I am not referring to the ideas of any particular political party. I am afraid we in Canada have become so far behind the times in our economic thinking, and have been so infested with the prevalent hysteria, which calls itself "the preservation of the American Way of Life" that we do not really know what is going on in the rest of the world. Actually there have been in the United States themselves several examples of the kind of policy I am talking about, perhaps the most notable the development of the great area served by the Tennessee Valley Authority. And in the United Kingdom, the planning of the location of industry has been shown to be possible. It was begun, indeed, under the Coalition Government headed by Mr. Churchill and has been continued by the present Socialist Government under Mr. Attlee. What the British have established is this. That with the advantages of modern technology, any region may enjoy the advantages of a diversified development. The advantages of large-scale formation and industrial concentration are offset, or more than offset, by the disadvantages. Diversified, well-engineered plants of medium scale can be dispersed about the country without the loss of efficiency. As long as the capital-labour team is big enough to achieve the full advantage of technical progress, further increases in size by multiplying the number of such teams brings no additional advantages. One economist studying the boot and shoe industry has found that there are economies from size up to the point where an optimum team of capital and labour is combined. After such a moderate scale has been achieved, further increases in size bring no additional advantages. I have made similar studies myself of a typical Canadian industry, the newsprint paper industry, and I have found that after a scale of 300 tons daily capacity, further increases in scale bring no additional advantages in productive efficiency. Thus if further concentration to enhance size of plant brings no additional advantages, what factors may determine the location of industry today?

There are two answers. One is that clearly distinct regional markets, with long transport hauls between, favour the devolution of plant. This has been clearly demonstrated in the United States. The other is, that the planned and scientific development of natural resources so as to make these resources available and accessible to industry is important in location. In Britain this has been an important factor in the planned location, to which I referred, of new industry. Instead of insisting that the people from the distressed areas migrate, at great costs, to new industrial sites, the British Governments of recent



times have studied the natural potentialities of the distressed areas, developed the resources in those areas which might attract industry, and so directed the devolution of industry, that the machines and factories have been brought to the communities of the people instead of forcing these communities to uproot themselves and move their people to the machines and factories.

We may say then, that whereas in the past, the technical developments and innovations of modern industry have all played a hostile part towards the Maritimes and have been primarily responsible for the disabilities under which the Maritimes have laboured within Canadian Confederation, the most recent trend is much more favourable for regions such as the Maritimes. British practice has shown us the possibility of decentralizing industry in regional groups, and the advantages of a planned use of special regional resources. The new Keynesian economics places great stress on the wise use of public investment to improve the productive capacity of undeveloped or inaccessible natural resources.

The present Government of the Province of New Brunswick has shown its awareness of these trends. The Government has undertaken to study the likely potential resources of the Province and the possible development of these resources. This is sound practice, in accord with the most recent developments of economic thought. More, however, is required. New Brunswick is no island unto itself, it is a part of the main, a Province of our national community, and the full advantage of industrial decentralization can come only as a result of federal policy. It is for this reason that the people of New Brunswick should look for their future advantage to those people in the rest of Canada who think in national and not in petty provincial terms. Only if we all try to think of the mutual advantage of the whole Dominion can we hope for remedy of the disadvantages under which special regions labour.

There are certain specific things which can be done. Forest road development can make good stands accessible for cutting, and enable the forest-using industries to adopt more desirable long-term cutting policies. Power can be developed. On this question of power there has been, I suspect, some careless thinking. People have thought and written about power costs, as though these costs were important determinants of industrial location. For most industries power cost is so small a proportion of total cost that it is unlikely that small variations in power cost have an effect at all on location decisions. Even in the industries where power cost is an important ele-

ment of total cost, industries such as newsprint, the differentials are frequently less important (as, for example, between the Maritimes and Quebec) than such items as labour and wood costs. The important thing about power, as the unfortunate people of Ontario are now learning, is its availability. One of the weaknesses of the Maritimes in attracting industry is the lack of power. It is not that steam power costs more here, or that water power is expensive. Our weakness is that we lack power. We need more power developed, and we could develop it from steam, using Minto and Nova Scotia coal. The cost differential would not be important.

But I want to turn from these practical examples to a more important general observation. What I am really trying to say is that human will, the determination of a people to work out solutions to their own problems, is a causal factor in social development. We have had too much, in Canada, of the geographic determinism which says, in effect, that geographic factors, natural resources, rivers and natural channels of communication determine the whole course of economic progress and development. These and other objective factors do, it is true, act in a way so as to limit what can be achieved. They define what we might call the areas of free decision. You can't for example decide to have a citrus fruit industry in New Brunswick, or a herring industry in Saskatchewan. But within these limitations human beings enjoy a freedom of will. We can decide between alternative courses of action. Our policies do not affect what happens. Let me choose an example from the work of a scholar of the last century. He speaks of the course of a sailing vessel. If the wind is from the west the men who sail the ship cannot decide to sail due west. Their freedom is limited by the wind. Yet if they want to reach a western destination they may do so. By using their knowledge of wind and sail they can tack southwest and northwest and finally gain their port. It is the knowledge of men which informs their purpose, and the planned policy, which expresses this purpose and this knowledge, which ultimately determine social movements.

Nor would I want you to think I had only technical knowledge in mind. For our needs we must combine the skills of the technician with the knowledge of the social scientist and the wisdom of the humane scholar.

This, after all was the faith of our Founders. They did not place their trust in some easy nature-given advantage. They foresaw the probable inferiority of the soil. Their faith was in the human element. So must ours remain. The people of the Maritimes must seek their fortune, and the solution

of their difficulties, not in the hand-outs of a paternalistic Quebec or Ontario, but in the human achievements of a superior people, who can take the lead, afford the initiative, in those technical developments which will enrich their natural resources and make possible the devolution to these Provinces of the industries which already have become over-centralized and require only intelligent planning and direction to be drawn in this direction. In this task, once more, the University of New Brunswick has its traditional role. As the Founders, whom tonight we praise, had faith, so still must we. A citizenry, rich in the traditional culture of the humanities, resistant to the yahooism of a commercial continent, and imbued with the empirical sense, served by a great institution dedicated to this tradition and determined to provide the experimental knowledge necessary to the development of the skilled arts and the intelligent uses of the resources of our land, such a citizenry is our greatest resource, worth, as our Founders knew, far more than all the wealth of the pre-Cambrian shield. We have a great people, and a great tradition. The times are on our side. The luck of modern technology, which so long was set against us, has shifted. Perhaps the shift is not great, but it was the faith of our Founders that we should develop and use the skills of modern science and the wisdom of the ancients to win our place on this continent. To that task, this University is dedicated. Today, as much as ever in the long past, the demand upon the men and women of this University is urgent. It is not to the luck or good fortune of geography, nor the paternalistic charity of others, that our Founders bade us look for aid, but to the resources within ourselves, to the skill, the knowledge and the wisdom, that disciplined learning alone can bring.

### REVISION OF THE STATUTES

It was with joy that the legal profession heard that the Attorney-General was taking steps to have a consolidation and revision of the New Brunswick Statutes.

The last revision, which was completed in 1927 under the chairmanship of the late Wendell P. Jones, K.C., came into force on the 16th day of February, 1928. That revision consisted of 209 Chapters or Acts, and since then over eleven hundred Public Acts have been passed by the Legislature. Of course, many of these Acts are temporary in their nature, such as those authorizing borrowing. A great many of them are Acts amending former statutes, but not a few deal with absolutely new material, particularly in the way of social legislation and in the matter of standardization of certain industries, labour relations, marketing, etc.

It is not the intention this time to issue a Royal Commission for the purpose of consolidation, but the work will be done by the Attorney-General's Department, which now has