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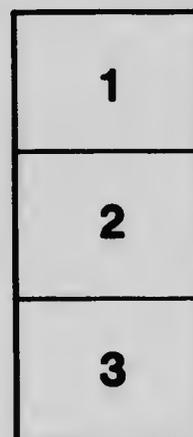
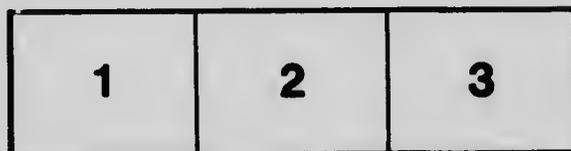
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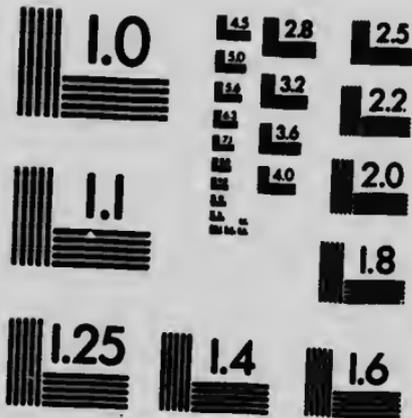
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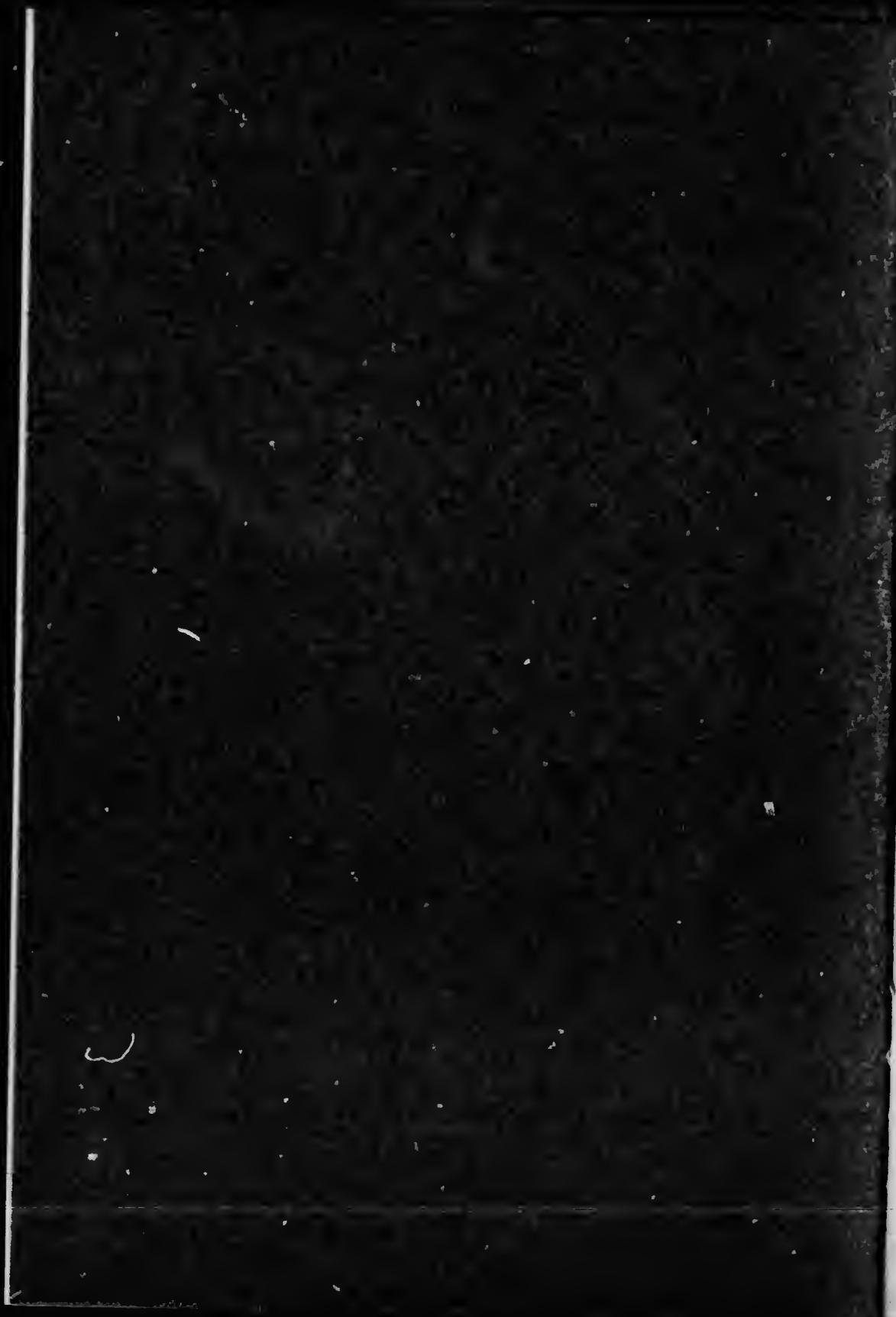
CONSERVATIONS

REPORT OF AN ADDRESS BY

JAS. W. ROBERTSON

ON SATURDAY, 25 FEBRUARY, 1911

(Revised from a Shorthand Report by Mr. A. C. Campbell)



THE CANADIAN CLUB OF OTTAWA

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THE HULL & BAIN CO. LIMITED, OTTAWA

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Conservation and Technical Education

Dr. James W. Robertson, C.M.G., LL.D., D.Sc., was the guest of the Canadian Club of Ottawa at luncheon in the Grand Union Hotel on Saturday, February 25th, 1911, and afterwards delivered an address on the Work of Two Commissions—Conservation and Technical Education.

The President of the Club, Mr. Gerald H. Brown, occupied the Chair, with His Excellency Earl Grey, Governor-General, on his right, and the speaker of the occasion, Dr. Robertson, on his left. The luncheon was very largely attended, among those present at the guests' table being the Honourable Sir Frederick Borden, Minister of Militia and Defence; the Honourable W. L. Mackenzie King, Minister of Labour; the Honourable William Ross, of Halifax; Mr. Martin Burrell, M.P. (Yale-Cariboo); Sir James Grant; His Honour Judge D. B. MacTavish; Lord Lascelles, A.D.C.; members of the Royal Commission on Industrial Training and Technical Education; representatives of the Board of Trade, Ottawa, of the Public and Separate School Boards, of the Collegiate Institute Board, and of the Ottawa Electric Company and allied interests.

In introducing the speaker, the President said: "We are privileged to entertain to-day in the person of Dr. James W. Robertson, one of the makers of Canada—of the new Canada of smiling fields and prosperous cities, of high hopes and substantial achievements—which is growing up around us. In his address to us

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this afternoon Dr. Robertson will speak of the work of two important Commissions; one of these is the Commission of Conservation, of which he has been since its inception a most active and useful member; the other is the Royal Commission, appointed by the Dominion Government to investigate the needs of Canada in respect of industrial training and technical education. The members of this latter Commission are now in session in Ottawa after having completed a survey of Canada from coast to coast. For almost twenty years before the word 'conservation' had ever been heard among us, Dr. Robertson's voice was heard up and down throughout Canada like the voice of one crying in the wilderness, proclaiming to Canadian farmers the methods by which they can best produce and market the best kinds of crops, and at the same time conserve the soil from exhaustion.

"As Chairman of the Royal Commission on Industrial Training and Technical Education Dr. Robertson brings to the discharge of his important duties in this respect the wide experience which he has had as an investigator and adviser, coupled with the qualities of practical idealism and of whole-hearted enthusiasm, which have contributed in very large measure to the success of his work as an advocate of improved methods of agriculture.

"It is my pleasant duty to thank Dr. Robertson for his presence here to-day, also to extend to other distinguished guests of the occasion a most sincere and cordial welcome. Without further remark, I shall now call upon Dr. Robertson to address you."

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DR. JAMES W. ROBERTSON said:

Mr. President, Your Excellency and Gentlemen:
It is very pleasant to be with a Canadian Club, and still more pleasant for me to be with the Canadian Club of Ottawa. As one of its old members I am not only with you but of you. I thank you for the cordial welcome you have extended to my fellow members of the Royal Commission on Industrial Training and Technical Education. Our Commission is a body of working citizens. I take the youngest as a type—Rev. Dr. Bryce, diligent in business, fervent in spirit, serving Canada. Sometimes he challenges the accuracy of my quotations, but he will not doubt the aptness of this application. Apart from the embarrassment of making a speech to one's intimate friends—(I think I understand why the church sends young missionaries to preach first to the heathen instead of to the fellows they played with at school)—I am glad of the opportunity of speaking to the Canadian Club. Since I last had the privilege of attending a meeting of this Club, I have spoken to over a score of Canadian Clubs from Halifax to Victoria. These Clubs stand for the development and nourishment of intelligent patriotism. In Canada we are all patriotic; but the manifestation of our patriotism differs in quality and manner according to our knowledge and intelligence.

The love of our land is instinctive; it runs in the

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blood. The man who knows little save his own task and his own field will show as much love of land as will the statesman who knows most about the affairs of his country. We have instinctive pride of race. That finds expression in many ways, and is well worth conserving. It is a man's privilege and duty to acquire an intelligent understanding of his nation and to nurture his patriotism by his knowledge. And when intelligent appreciation makes a man know the quality of life in the race of which he is proud, his patriotism makes him live for the service of its people. Intelligent understanding keeps the individual, and keeps the nation, secure in loyalty to the best things it stands for.

The two Commissions of which I am to speak were appointed to inquire into, consider and report upon, not some transient occurrence, but important matters that concern the wellbeing and prosperity of Canada. The stability of our nation rests upon a few fundamentals, and the nation is secure and strong so long as the best in those things are conserved--and no longer. Four main factors constitute the basis of our civilization and determine the direction and rate of our development:

Who we are;
What we have;
What we are doing; and
What we stand for.

The Commission of Conservation is concerned with enquiring into, considering and reporting upon what we have in natural resources; and the Royal Commission on Industrial Training and Technical Education

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was appointed to enquire into what we have and what we need in the way of means and opportunity for industrial training and technical education, in order that our people may be fit for the big job of making the most and the best of their resources *and of themselves*. The one Commission has to do chiefly with the conservation of our possessions, the other with the conservation and development of our powers. It is necessary that native talent should be trained into ability—into industrial efficiency—to ensure worthy progress and prosperity. Let me spend a moment in considering “who we are” from the point of view that has come to me, more definitely than before, from the survey of Canada as a member of these two Commissions.

WHO WE ARE.

I suppose we have been in the breeding, in the making, for at least 100,000 years on earth. That is a long process of creation. The fine things, the refined things, are not made fast. In McGill Museum, we saw the fossils of monsters that were on earth before the glacial period. One of them could not have stood at ease in this end of the room—big coarse creatures that grubbed and fought and just survived, and after all succumbed.

That is not the form or purpose of man. If I may be somewhat personal without bad taste, let me speak of one of my ancestors. I never knew him personally, but I can picture him in my imagination, from what I can learn from the little trace he left of his living. He lived a long while ago. I suppose he lived in a cave or hut, in the stone and club age, long ago, long, long ago; may be twenty or thirty thousand years ago. I did not have

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an intimate acquaintance with the old chap. And I do not know where he is now. But I do know where some of the fundamental emotions that throbbled through his body run now. He was a fellow you should think of as kindly as you can; you had ancestors not unlike him. They did not have much chance. Picture him in his old cave or hut. What sort of a fellow was he, anyway? How did he live? How did he save his family from extinction? Big claws, and great paws, and huge jaws; was that the fellow? It was a coarse kind of life, and he had to be a masterful animal, as well as the beginnings of a man, to keep the bear and the wolf out of his cave and protect his wife and the babies—or there would not have been any Scotchmen. He had fire and a big club, and gathered his living—a pretty crude sort of occupation. Did you ever see Lord Lister, who visited Canada and Ottawa some twelve years ago with the British Association for the advancement of Science? He was a physician; he is a physician still, though now old and retired. He is the modern Scotchman, a lineal descendant of that old hunter, with some twenty-five thousand years in the gap. There is a man for you, in appearance and power and service. See the contrast, the refinement in texture of brain, and expression of face, and quality of service rendered. Hundreds of thousands of mothers in childbed have been saved from suffering and death because Lord Lister has lived. We have the quality of life of Lord Lister. That is who we are in our heritage; in quality of brain and body, in outlook on life, how different from the man of claws and paws and jaws! It means a lot for our behaviour in Canada to recognize that we are not of the baser sort. We are

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about where Lord Lister got to. And is there any reason, if we are true to the blood that is in us and to the breed of which we are, why we could not make as long an advance for the children in five hundred years as was made in those twenty-five thousand? "Ye also are sons of God;" and "It doth not yet appear what we shall be."

Take another illustration. You know the character of a crab apple. And you know the quality of a McIntosh Red from the Experimental Farm. Each is attractive in its way. Did you ever take a fine, full grown, red crab apple, take a bite and chew what you had in your mouth? It was not very satisfying. And have you tried the same experience with a McIntosh Red from the Experimental Farm? When you have taken such a bite you want more of the same sort of thing; you want more. The difference was not in the colour of the skin, or in the glisten put on by the cloth of the maid. It was not the superficial polish that made the difference. The quality of sap that ran up and down the old tree made the difference in the fruit, which in one case was satisfying and in the other distasteful. How was the sap altered? By cultivation; by grafting in all that was good out of the past of cultivations into some fine tree, of the Lord's making in partnership with a man. A fruit grower finds some "sport" or mutant or seedling in which human labour had allied itself with the wisdom and mystery and power of the Almighty in the production of a new strain of fruit. Then he grafted that into the wild tree and cultivated and pruned and sprayed; and you had a cultured fruit, satisfying because of the

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quality of the sap of life and of the conditions under which it was grown.

In the quality of life we folks are not crabs. There are crabs of humanity still on the face of the earth; but we are not of the crabs. A thousand years of cultivation, a thousand years of struggle for liberty and intelligence and opportunity and justice pure and undefiled, for the children and the grown children—that has made the difference in the sap of life. More is expected of fellows of our kind of sap, a heap more. It is expressed by the French “Noblesse oblige.” We have got to live up to the inheritance of this quality of life.

We have been enriched by streams of learning, not by the rubbish of the old fellows who did not know much or do much worth while but recorded some foolish things they tried, and bad things they did—and perhaps because they were all revered as classics we keep the bad with the good. I take worthy learning to be whatever the race has found useful; and that is the stream of learning that enriches and uplifts. That is the sort of learning which is worth conserving: just whatever out of the experience of the race has been proven true and good and beautiful; that is learning. It is not talking Greek or translating from English into Latin; it is the wealth of the good things saved out of the experiences of the race. Whatever the past has made clear as being true and good, let us have the use of that now. Streams from Edinburgh and Glasgow, Cambridge and Oxford, Paris and other continental places, flow through our common schools and make for the quality of thinking, for the concepts of life and duty, that determine even now the arrangement of the brain cells.

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These influences help to fix our standards of conduct. Lifting your hat to a lady on the street means what? Somebody wished to conserve his feeling of deference and almost reverence by some simple act, and we conserve that feeling still by the same act. That is part of culture. Culture is not from the mere learning of languages, living or dead. It is the residuum in the brain and heart from experience gained and knowledge gathered by doing or being. It is the "left-over" in character, in body, in mind and in spirit. It is shown as between this old fellow in the cave—and Lord Lister; between the Mujik of Russia—and Canada. We ought to do more, be more and behave better. We are the heirs of all the ages. Our youth and our position on the face of the earth add to our responsibility. Streaming across our face come men of leisure, men of talent, men of wide outlook and deep insight: statesmen from Japan no less than from England, France and Germany—streaming across our face to see what we, a young people with immense resources and a great heritage of blood and ideals, are going to make of ourselves and to become among the peoples.

There is a great stream of foreign blood flowing into our citizenship. I do not see any risk from a large stream of foreign workers pouring on to our fields or into our factories: but are not we a little short-sighted in thinking that because a man removes his body from one place to another, therefore he should at once come into the rights of sonship without being quite sure that he is worthy of the blood of the breed and wants to live up to it? Of the 301,000 who came to us last year, we run no risk in that respect from most of them. Of every

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100 who came, 37 were from the British races—like ourselves in ancestry, aspiration and concepts of citizenship. And 41 were from the United States—like ourselves with the limitation that they have not yet had personal experience of the rights of self-government in such full measure as we have. They are facing that way, but they have not attained to the full stature of liberty and respect for law which Canadians enjoy. Then, 22 came from other countries. Of the whole stream of immigration, 57 out of 100 went west of the Great Lakes, and 43 remained on this side. When they go west of the Great Lakes and when they stay east they are not merely with us, but become of us. But, of those who came from countries other than Great Britain and the United States, 54 out of every 100 remained on this side of the Great Lakes and 46 went west. Of those that come from these other countries, the best go West. The Galicians, the Doukhobors, and others of the best workers go West. These are fine streams of blood worth having. Nothing gives us more reason to be proud of the enrichment of our blood than the stream that came with the Doukhobors. A good many of you do not believe that? Well, it is Saturday afternoon, and it may be worth while to follow that idea for a moment.

We have received about 12,000 Doukhobors. I saw 400 of them, the first winter they were in Canada. Women and children were living in a shed not much wider than this room. There were bunks on both sides, and a common table in the middle; there was no foulness or disorder—not the first evidence of anything like coarseness. The people had clean clothes and fine faces, and the women were women of modesty and good de-

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meanour. But these people, you say, would not fight. No. That is where they may be a bit superior to the Scotch, who sometimes fight on too little provocation. It is not cowardice that keeps these fellows from fighting, but centuries of believing in ideals and of striving towards them. They think that every man's body is a temple of the Almighty. And how far does that come from our profoundest thought? "Ye also are temples of the Holy Ghost". They would not mar, they would not damage or debase that temple. Clean, I thought; and think they were, in body, mind and soul.

How did they gain the reputation for craziness they acquired? I remember a fellow at the foot of the street in the village near which I was brought up—Jock Morris. He was the silly of the village; and there are sillies in every village, poor fellows to whom the Lord did not give a full chance here. Some thirty-five of the Doukhobor folks like that, pushed off the base of what we call propriety by religious enthusiasm, traversed the western plains, in some cases going about naked, and never stole a chicken or harmed a baby. They were foolish! They were the Lord's foolish with an exaggeration of fine ideals. They were foolish by our standards, immensely so--they went to look for Christ in Winnipeg.

At about the same time what else happened? Have you seen the other trail? You remember the craze for the Yukon gold. And you can go over that trail to-day and can see the green spots on which the grass grows higher where the bones of the horses lie. That whole route was sprinkled with the wrecks of men who went

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there, not for ideals, but for greed of gold. No doubt some good to the country came from that in some ways; but I would rather have been one of the Lord's fools in that Doukhobor pilgrimage than have my bones bleaching on the wastes as evidence of one who was on earth chiefly to get gold from the Yukon.

But that is an aside. These folks from Central and Southern Europe are with us in large numbers. We must see to it that our education for them and their children gives them a chance to be qualified to take their places in our ranks. Many of them had small chance where they came from, and unless we lift them up our way, they will drag us down to their level. Six weeks ago, I was in a town—I will not name it; it is far from here—taking tea with two old friends. They told me "We have some vile conditions here which we wished to clean up. But there are seven hundred in Italian town whose men voted against us." Does Italian town dominate that Canadian city? The only hope is by the elevation and cleaning up of Italian town—not cleaning it out, but cleaning it up, so that the Italian children shall have a good show in Canadian schools and fields, and factories and homes.

Why did these people come? Because this is a land of liberty and not of coercions. This is a land not of mere tolerations, but of appreciations. This is a land of wide liberty, a land of respected law, a land of opportunity for property and recognition of manhood; and, above all, a land with chances for the children. That is why they come to us in swarms, and the thing that we most need to stand for is that all the children,

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theirs and ours, shall have a chance to thrive and rise.

WHAT WE HAVE.

I have tried to shed a little light on who we are; now I turn to what we have. Ours is the greatest estate that ever came into the unearned possession of seven or eight millions of people. I have no time to describe it, nor have I knowledge or capacity for that. I can only bring glimpses of a few of its great features. Our land is a continent wide. From the Atlantic to the Pacific, there are four vast areas, each with many districts of varied resources. For a thousand miles westward from the Atlantic is the first great stretch of land and rivers and lakes, a land of apple trees, of clover blossoms, of running streams, of cloud-decked skies, a land flowing with milk and honey. It is a thousand miles for homes. Where else is there such another place for children? Then a thousand miles of wilderness north of the Great Lakes is our reservoir for the regulation of climate, as to rainfall east and west. Its forests need conservation.

A thousand miles of prairies stretch westward into the foothills of the Rocky Mountains. Fifty thousand years or more the Lord took to make its surface rich and fit for crops—fifty thousand years of Nature's far-sighted economy. Then along comes a man, may be some foreigner whom long oppression and suppression have made greedy and left ignorant, and in fifty years he dissipates for the good of nobody, what Nature was fifty thousand years in conserving. Such a man has no business at large. We should not allow him to do wantonly anywhere. This is our heritage, and it should be conserved, not merely for the benefit of the man who

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occupies it under a Crown title, but conserved and improved for those who are to come after. And there are thousands of good farmers on the prairies who take their lawful toll out of land by intelligent management. These also need the help of education to meet the increasing difficulties of prairie farming.

Then come five hundred miles of mountains and valleys, of magnificent scenery and nooks for homes. The mountains are examples of the Lord's landscape art in the bold and the rough. The valleys tucked in between carry wheat and grow apples and peaches—and plums that cannot be surpassed, if equalled. The ranges of mountains are not merely a tourist's delight—up one side before breakfast and down the other side after breakfast. The thirty hours in an express train are full of scenes of bewildering beauty and grandeur. And the valleys are full of good things. The British Columbia coasts fairly teem with fish from their inexhaustible feeding places in the far north. A great province in resources and in prospects is that western stretch of five hundred miles.

I went to France once, to an institution some distance from Paris. There was a great estate, a beautiful place with pleasant fields and wide sweeps of lawn and in the midst the old castle. A stone wall had been built for miles and miles a long time ago to keep the people in employment during hard times. One could not but think what a sturdy owner must have [lived there to leave] such splendid material manifestations of his devotion and ability. And I saw his descendant, the possessor of the estate; a slave of absinthe and atheism.

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He did not match the place. And what do you think about ourselves, with this superb estate that has come to us? Do we match the place? I think we can. But it is up to us to do something different and better than we have been doing, or we will not match this matchless heritage of resources.

The Commission of Conservation is investigating and considering the condition and extent of our resources. The contents of these big areas of which I have spoken are vast, varied and valuable beyond anybody's apprehension. Our knowledge is very inaccurate, even in regard to small areas, very incomplete in regard to big areas, and altogether badly arranged in our heads. Who knows the extent of our forest areas? Or the destruction and damage by fire or the loss from wasteful methods of lumbering? Or the possibilities of growing trees successfully on areas good for nothing else? In short, while the lumbermen and holders of timber limits are growing rich, is the wealth from forest protection and forest growth inuring to the benefit of Canada? The Commission of Conservation is to enquire into what we have and how we can best conserve this estate for this growing people.

On a former occasion you heard an address from the Chairman of the Commission of Conservation, Hon. Clifford Sifton. Hence I need touch but briefly on the history of the subject. The motive towards definite organized action came to us from our neighbours and friends—the United States. In 1908 President Roosevelt had called a conference of the Governors of all the sovereign States of the Union at Washington to consider

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what steps might be taken to conserve the natural resources of their nation. That was a great gathering—in my opinion one of the greatest gatherings in history. Early in the following year we had the pleasure of an address before this Club from Gifford Pinchot, at that time Chief Forester to the United States. He brought to Ottawa a message from Washington inviting the Government of Canada to appoint representatives to a continental conference to consider the conservation of the natural resources of North America. The invitation was accepted and Hon. Sydney Fisher, M.P., Hon. Clifford Sifton, M.P., and Dr. Henri S. Béland, M.P., were the men who were sent to represent Canada. The conference drew up a declaration of principles. Soon thereafter the Parliament of Canada passed a special act providing for the formation of a permanent commission—the first of its kind created by any government. The Commission was duly constituted and held its first convention at Ottawa, in January, 1910. Twelve Cabinet Ministers, three Federal and nine Provincial, serve on the Commission *ex-officio*, and twenty other men. Its business is to enquire, to consider and make recommendations as to how the people can conserve forests, minerals, fisheries, waterpowers and waterways, lands and public health. It is also its duty to make such inventories, collect and disseminate such information and conduct such investigations as seem conducive to the accomplishment of that end. Some things can be conserved by legislation, and in some matters the Commission may consider what legislation and what administration will best prevent waste, loss and unprofitable destruction or consumption. The Commis-

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sion itself is not an executive or administrative body with power to deal with the natural resources themselves. The authority of its recommendations rests upon and rises from their merits. It has no legal power to say "Thou shalt" or "Thou shalt not." Its findings will carry weight from their intrinsic worth. Parliament or Legislatures can regulate by legislation the control of waterpowers, and the terms and conditions to govern the use of forests and fisheries. It is immensely more difficult to accomplish much by legislation in the case of conserving the fertility of lands and preventing the intrusion of weeds. The ownership and control of the lands are in the hands of multitudes of individuals acting singly and independently. Because it is difficult it is all the more needful that the task should be undertaken with care and energy. To some extent regulation by law can prevent waste and damage. But no parliament has yet been able to legislate ability into citizens for the wise use of what they have conserved. Conservation does not mean keeping out of use. The conservation of seed grain is putting it on the best field over as wide an area as possible. That applies to forestry also. I have no sympathy with the people who would reserve the forests for our descendants; if only that, you multiply the risks of fire and insects. Conservation means taking the largest toll out of these resources now and leaving them not only unimpaired but extended and improved by wise use—using the annual production but not destroying or reducing the source of supply.

At its first meeting in 1910, the Commission formed Committees for the particular consideration of the several large questions with which it has to deal. The

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seven Committees are: Fisheries, Game and Fur-bearing Animals; Forests; Lands; Minerals; Press and Co-operating Organizations; Public Health; and Waters and Waterpowers. I serve as chairman of the Committee on Lands. Let me tell you of two questions that came out in our investigations. Of one hundred farms surveyed in Manitoba, every farmer reported that wild oats were bad and in many cases getting worse. There is a how-d'ye-do for you—wild oats in the land where grain growing is the staple occupation of the people. The weed is not so bad further west, but it is widening its invasion that way. Let the wild oats get possession and the farmers—and with them most of the other folks—might as well say good-bye. In some localities, the weeds have actually taken possession, and the people have moved away. I have heard of one locality, about six miles square, from which the people have gone—the weeds pushed them off. You say "Summer fallow." Yes, but that means expense and labour; and unless due precaution is taken, you destroy and consume the fibre in the soil—the decaying roots of grasses, clovers and other plants. In some western areas, when the spring comes, and the surface is dry, the wind blows away both soil and seed. It is necessary to conserve the presence of these roots all through the soil, otherwise, there is danger of western places being smothered into oblivion like Nineveh. This is no figure of speech. Hundreds of square miles are already in a condition to drift. We must conserve the land by intelligent methods.

I offer two instances of conservation. One farmer came before our Commission who was working a farm near St. Thomas, Ont., settled upon about 75 years ago.

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He told us that he had 100 acres which he had been farming for 23 years, and his revenue was now twice as much in a year from the same area as 20 years ago. Had he reached the limit of production? No, he told us; if he could get the right kind of labour—it was not so much a question of price as of kind of labour—labour that knew how to grow crops and look after live stock—he could again double the production in ten years. There is conservation. The farm itself was worth twice its value of 20 years ago.

Here are some sentences transcribed from his testimony:—

“Q. A great deal of land in Western Canada is as good as your land naturally? A. Yes, lots of land just as good naturally, with the same climate.

Q. Have you any special advantage in regard to market? A. No, further than I have a little better market for dairy produce than land further away would have.”

* * * *

“Q. Did you get any help in your own school days to enable you to understand how plants grow? A. No.

Q. Or the meaning of rotation of crops? A. No, I learned that by practical experience; it would have helped me materially if I had learned that in school the same time I learned geography and other things.

Q. If you had known the names and character of weeds, as a boy of twelve, would that have helped you much in regard to farm management? A. A good deal.

Q. Do you see anything too difficult for a boy to understand in the names and nature of farm weeds? A. Nothing very difficult as I could see; I think it would be very beneficial and I think apart from that it would be interesting to the average country boy.”

* * * *

“Q. Supposing a Committee should ask for your farm to be an Illustration Farm for two years where other farmers could go and see how you carry on your work, if you got enough compensation just to pay you for the time and expense you were put to, would you agree to that and would you publish a statement of your accounts for two years? A. Yes, I would be willing to do that.

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Q. Do you think that would help lots of men who do not get as much crop or revenue as you get, if and when they saw the actual thing and how you do it? A. Yes."

* * * *

"Q. Do you think it is possible and practicable for other men to adopt the methods you have? A. Yes, they could easily adopt the same methods. There is not any farm I think, in Ontario, that could not produce three times as much as it does. I feel confident I could produce three times the amount with sufficient labour.

Q. Is your farm up now to the limit of its capacity?

A. Not half.

Q. You could double it in twenty years? A. Yes in ten years if I had sufficient labour."

Then in Prince Edward Island, a farmer from near Summerside testified. I recall that section when eighty per cent of the farms were mortgaged. When I was last there, I was driven over the place by a member of the Local Legislature. Last year only about five per cent of the farms were mortgaged, and these mortgages were mostly held by other farmers. We asked this farmer how long he had been on the place he then farmed? Twenty years. He had 97 acres. Twenty years ago he had a mortgage of \$1,100 on the farm. For ten years he just held his own. Then he learned to grow clover, keep cows and make butter. There is conservation—land, cattle and remunerative pleasant work for the family. The previous year, 1909, he had sold \$600 worth of butter and \$300 worth of pork, and he sold a horse every second year. There was no mortgage on his farm. A few years ago, one of his boys was going West, but he sent the boy to the Agricultural College at Truro—another of the institutions that have grown up under the conservation idea. The college is maintained by the Province of Nova Scotia, but students from the other two Maritime Provinces are admitted free. Conservation of provincial apprecia-

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tions and goodwills. The boy took the short course in this institution, and now farms in Prince Edward Island—thought it best not to go West. A younger son went to that college also, and he is working at home. That man is satisfied; his farm is cleaner and richer, and he is giving himself and his boys a better chance.

Here are some sentences transcribed from his testimony.---

"In the first place I got a farm that had been cropped with oats, and the oats and the hay sold off, until it was pretty poor and in a run out condition; that is twenty years ago and today I can grow good crops. When I started I was about \$1,100 in debt twenty years ago. I hadn't as good stock then as I have now. I had no exceptional advantage. I think a good many men could have done better than I did. There are a great many stronger men than I am. There is no reason in the world why other men cannot do as I have done. The land is still getting better. There is not any man in the settlement but could have been in a better position than I am in today. I believe I could have made faster progress if I had learned as a boy at school how oats grow, the names of the weeds and how they propagate themselves, and the names of the diseases that attack plants, and what milk is, and such things, and the meaning of a thermometer and a windmill and a pump and sanitation and wholesome conditions."

WHAT WE ARE DOING.

The Commission on Industrial Training and Technical Education was appointed to enquire into the present equipment of Canada in respect to those matters, and what Canadians say their needs are and how their needs can be met. We are a Commission to enquire, not to propose, and not to advocate. The Commission does its work under the supervision of the Minister of Labour. Before the Minister of Labour, acting for the Government, announced that such a Commission would be

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constituted, he wrote to the Premiers of the Provinces, enquiring how they would regard action by the Dominion Government in appointing such a Commission. Satisfactory replies were received from all. There is no fear of encroachment on provincial rights, and no awakening of provincial hostilities or suspicions. We began our sittings at Halifax, N.S., and crossed the Dominion to Victoria, B.C. We have been received officially by the Provincial Government or its representative in every province of Canada, and have received not merely assurances of goodwill, but the heartiest co-operation. In four provinces the Provincial Governments asked us to hold our sessions in the Parliament Buildings. The Canadian Manufacturers' Association and Organized Labour, speaking by their various organs and representatives, had been asking for the appointment of such a Commission. Both employers and employees throughout the Dominion desired this work to be done.

In July we began our work of inquiring into the present equipment of Canada for industrial training and technical education, our needs in respect thereto and how our folks thought their needs could be met. We visited one hundred cities, towns and important localities. Our course was usually first to visit the industrial establishments and educational institutions, then to hold sessions to receive testimony under oath. We held some 174 such sessions. We have in our records the testimony of 1,470 of the leading men and women of Canada as to what we now have, what we need and how those needs can be met. For example, in Nova Scotia, the Chief Superintendent of Education,

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the principals of four of their universities, the head of the Normal School, the head of the Technical College, teachers in common schools, including women teaching a one-roomed country school, all testified. Mr. M. J. Butler, a former citizen of Ottawa, General Manager of the great Dominion Steel Corporation, was another witness. Capitalists and employers, and workmen, gave their evidence. Women testified in regard to the needs of women in respect of technical education; and men in public life as to the needs from their point of view. This gives you an idea of the scope of the first part of our work. It is all important that our facilities for industrial training and technical education should be better than they are.

What are we doing? We are doing a great deal, doing most of it well compared with former days, but very badly compared with what we might and should do. The field crops of Canada last year produced \$507,000,000. If all the farmers had farmed as well as the man at St. Thomas or the man in Prince Edward Island, or many others whom I could name, without using more land and without greater expenditure except for labour, chiefly in threshing and marketing, the crops might have been made to represent \$500,000,000 more. Of course, all the farmers can not get there right off. But there is no reason why, in twenty years, the average farmer should not be where the good farmers are now, and the good farmers so much farther ahead. This will mean better chances for the children, better schools, more leisure, better business and a higher standard of living. The live stock of our farmers last year was worth about \$600,000,000. Our dairy

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products amounted to \$100,000,000. That is wealth gathered out of chaos by labour. It is not the exchanging of property from one pocket to another, but the actual enrichment of the people by intelligent labour. There are people who, still, even in serious discussion, call a farmer "a clod-hopper" or "hayseed." If you call a boy down to a low standard of behaviour or character he will incline that way; but call him up to a high standard and he will grow that way. I have patted enough boys on the head to know that. And it is a damaging thing to Canada that men in cities have so little knowledge of the meaning of agriculture. What is growing crops anyway? It is the finest application of human power to the creation of wealth from Nature's resources. A plant spreads its leaves and gathers in sun power. It sends down its roots and gathers up a little of the strength of mother-earth. It is the marriage of Father Sun to Mother Earth—and the farmer manages the job. If he uses poor seed or gives the plant a poor root hold, its leaves are not spread out abundantly and the sun does not roll himself in. The man who has most brain power to control the lowly life of bacteria in the soil will by cultivation make conditions suitable for their activity. They are the cooks of plant food. He will also select seed with great potency to produce plants that will gather in wealth, from soil, air and sun, to roll into the lap of our people. Farming is not only making wealth, it is partnership with the Almighty.

I might go on to speak at length of minerals and fisheries and forests, but time will not permit. The revenues, in Canada, in 1909, in round figures came to \$90,000,000 from minerals, \$69,000,000 from forests and

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\$29,000,000 from fisheries. There might be enormous increases in the two latter without destroying or reducing the supply, just in proportion to the efficiency of our people.

Those who represent the manufacturing industries put the value of their output at \$1,000,000,000 annually. The need for industrial training and technical education for the wise development of our vast resources in lands and industries is very evident. Among the matters which came to the attention of the Commission were instances of the starting up of comparatively new industries calling for highly skilled labour, the rapid growth of small towns as industrial centres and the satisfactory conditions under which work-people live in such places.

What are we doing for technical education? We have made a good beginning at both ends. We have hand-work of some sort—hand-and-eye-training—in the elementary grades of some schools from the kindergarten up. In an increasing number of towns there are courses in Manual Training and Household Science. That is part of general education for development, for culture and for citizenship; and it is also preparatory education to which industrial training and technical education will piece on without waste. At the other, or upper, end of formal education several colleges and universities provide courses of a partially technical character for what I may call the technical professions. They are doing fine work for these higher branches of technical education. The bulletin published recently by the Carnegie Foundation places the University of

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Toronto, in regard to physics (and implying I think the whole department of engineering), in the front rank. The University of Toronto has 4,000 students, many of them in the faculty of applied science. These young men are looking towards leadership in the development and administration of our natural resources by intelligent management. I put McGill University in the same class. The Polytechnic School of Laval University is also good. Queen's also is excellent with staff and student enthusiasms. Halifax and New Brunswick, and others not so large, are also good.

We have made a beginning in secondary technical education in Montreal, Toronto, Hamilton, Sault Ste. Marie and Halifax. Technical and Commercial High Schools in Montreal and Toronto are carrying on day and evening classes. The evening classes are attended almost wholly by young men and women who are working in some factory or shop or office during the day or are engaged in the building trades. New Technical Schools have been established at Montreal and Quebec, but classes in them have not yet begun. Winnipeg is erecting two new Technical High Schools at a cost of \$700,000. We have very good night schools for the workers in places like Montreal, Quebec, Toronto and Vancouver, but not very much in the smaller cities and towns where the man who has begun to earn his living by craftsmanship can get a further training.

The Agricultural Colleges of Canada are intended primarily for the technical education of farmers; and they also give courses to qualify students for entering upon professional work related directly to rural occupa-

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tions. The Ontario Agricultural College at Guelph, with the Macdonald Institute on adjoining grounds, receives men and women. The courses include the various branches of Agriculture, Household Science and Manual Training. An Illustration Consolidated Rural School rounds out the equipment. During recent years some of the teachers-in-training go from the Normal Schools of Ontario to the Ontario Agricultural College for a special course of some ten weeks in Nature Study and Elementary Agriculture. Macdonald College at Ste. Anne de Bellevue, Que. (which is a College of McGill University), carries on its work in three Schools: the School of Agriculture, the School for Teachers and the School of Household Science. It also has a Macdonald Illustration Rural School with a model school garden. The Agricultural Colleges at Truro, N.S., and Winnipeg, Man., do similar work suited to the needs of their provinces. Buildings are in course of erection at Saskatoon for the College of Agriculture as a part of the University of Saskatchewan. Extension teaching and demonstration work for the rural populations are promoted and assisted by the Agricultural Colleges in all the provinces.

There is general discontent over Canada with the product of the schools—that is the testimony of the witnesses, especially of the employers and the industrial workers. I think—if I might put in a personal word, and not as chairman of the Commission—that one of the great mistakes we have made is in asserting that the three essentials of a common school education are reading, writing and arithmetic; for a child can learn these subjects more quickly and better as

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part of its general training than if and when they are taught as separate subjects. I find that the schools in which children learn to read about the things they are doing and to write concerning what they have seen and to figure on the questions coming up in the school, learn reading, writing and arithmetic in half the time. If we give our attention to the essential method for efficiency, viz.: training the children to observe closely, to think clearly and to manage without waste and with goodwill, the use of the literary tools for further education will come easy to the pupils. The subject matter for such training need not be less cultural because it is closely related to the lives and occupations of the community. Perhaps the closer the relation, the greater the cultural value of the necessarily few subjects and courses. So much for my personal opinion.

We find this also: the lure of high wages for the boy at fourteen or younger takes him out of school. And, there being no apprenticeship, he gets into a blind alley—he drives an express wagon or is a messenger boy. At eighteen, he is too big for his job and yet not willing and qualified to go into any calling that will make him a good workman with command of a trade. We have been allowing that sort of thing to go on; but we do not stand for the continuation of its handicap on the boys.

Some indications of our urgent needs have emerged into clearness from the testimony. One is the need in all schools of some opportunity for boys when they are past twelve, whereby the boy will reveal to himself and his teacher and parents the bent of his ability—some

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experience, in hand work as well as book work, before the boy leaves the common school, that will give an indication of what he should choose, and how he should prepare, for his life's work.

Another is the need, in the case of the boys from twelve to sixteen who intend to go into some skilled trade, to get a chance to learn in school how to use common hand tools for wood and iron and the qualities of common materials. A few of these are fundamental to most industrial occupations.

Another is the need of courses or schools, of High School or Academy grade, adapted to the boys who are going into industrial life. Such schools or courses should give them preparation for their future work equivalent to what the present High Schools give to the boys going into the professions.

There is need of some opportunity for education to make up to the boy, after he begins to work, for what he does not now get through lack of an apprenticeship system. The apprentice is not trained as he used to be. We need some forenoon, afternoon or evening classes to give him the further knowledge of mathematics and mechanical principles; and also some variety of shop work, to develop the skill of hand and the all-around ability in some trade, which the apprentices formerly got by their long and practical training. The manufacturers and other employers of labour have expressed a willingness to co-operate in helping to make such classes and courses effective.

We need evening schools for workmen in the smaller

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cities and towns, for men who have learned their trade, to fit them for advancement and promotion.

We need intimate correlations between those who manage industries and factories, the men most skilled in their trades, and the managers of the schools and classes where workers are trained.

We need some enlargement and improvements of the means whereby farmers' children may learn the elements of the scientific principles which underlie rural occupations such as the growing of crops, the feeding of live stock, the fighting of weeds, insects and plant diseases, and the maintenance of fertility and beauty. And we need the same in more advanced forms suited to the farmers themselves.

We need instruction—the means and opportunity for instruction—of a similar character suited to the lives and occupations of the fisherfolk.

We need training for women and girls to give them clear concepts of the sanitary conditions which make for the safety, comfort and economy of the home; correct ideas of economical ways of providing food and garments and of using fuels; and some practice in domestic art that will further enable them to reveal and enjoy their love of the beautiful by making beautiful things for the house.

These are some of the needs of which we have learned from testimony in Canada. We will soon go abroad and learn what other peoples have developed or adopted in systems or methods of industrial training and technical education that help to make their people fit for their

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jobs, not merely as makers of things, but as citizens and members of the race. We will make a report to the Minister of Labour, presenting with as much fullness and clearness as possible what we have learned in Canada of our equipment, of our needs and of how our needs can be met; we will also report what we have learned in the United States, in the United Kingdom, in Germany, France, Switzerland and Denmark. We will learn as much as we can, as much as diligent conscientious men qualified for this task are able to learn; and then, putting it all together, report to the Minister of Labour the result of our investigations, together with any opinion we may see fit to express thereon, and such recommendations as it may seem expedient to the Commission to make. The Report, when published, will be at the disposal of the provinces and available for general distribution. The people and the authorities will determine how the information we have been able to gather may be used to advance the interests of Canada by means of industrial training and technical education.

WHAT WE STAND FOR.

I have spoken briefly—and yet in the total already too long—on who we are, what we have and what we are doing. May I indicate, in the main, what we stand for?

We stand for the conservation of our natural resources by the application of scientific methods administered by highly trained, skilful and honest workers—conservation that the people may be more capable and have more possessions. We stand for the development of

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trained ability from native talent inherited from a long line of forebears who learned to make good things that lasted and beautiful things that pleased.

We stand for the conservation of the quality of life and of standards of living that do not tend downward. We stand for the conservation of our ideals and the sanctity of family life. "Our folks don't do things that way," should be enough to keep us from taking the wrong path.

We stand for the conservation of opportunities for the children. That is the most important thing; that is the index and measure of every nation's progress and achievement. Not sky-scrapers, not even beautiful public parks, not the best material things that wealth can purchase or skill and art bring into existence, but opportunities for the children—where they have the best chance, where they have the safest footing and the loftiest outlook with much help from the grown people—these mark our progress, these determine our worthiest attainments. If the children have less, we are going down; if they have more, we are going up. The aim of these Commissions is that they may have more and have it abundantly.

We stand for the conservation of partnerships. We have not found any province making progress to the hindrance of the others; the advancement of one province adds to the prosperity of all the others. We cannot, as a going concern, do business safely if the partners looking after the several departments of the business, each strenuously seeking success from his efforts and credit for his work, end up the month

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with feelings or words of hostility and rancorous bitterness. But we can conserve all the elements of strenuous activity for the good of self with a fine sense of partnership in, and service of, the community and the country. We have found a growing sense of partnership between provinces, between institutions and between occupations. I am sure that when His Excellency the Governor-General, our beloved Lord Grey, returns to England, he can carry with him this assurance and conviction, which, I believe, will be a satisfaction and solace after the years of strenuous public service for him are over—and I hope that may be a long time distant—that, somehow, since his coming amongst us, while we have lost none of the sense of individual responsibility for doing for oneself all one can, we have acquired a better working knowledge of the value and advantage to each and to all of being partners—partners in Canada and partners in the Empire. I hope we will continue to do what we have been learning to do better under his leadership:

“Build on resolve and not upon regret
The structure of thy future: do not grope
Among the shadows of old sins, but let
The light of truth shine on the path of hope
And dissipate the darkness: waste no tears
Upon the blotted record of lost years,
But turn the leaf and smile, oh smile, to see
The fair white pages that remain for thee.”

