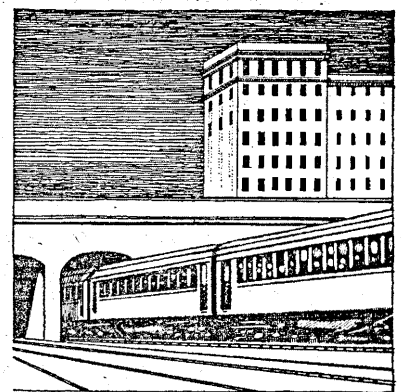
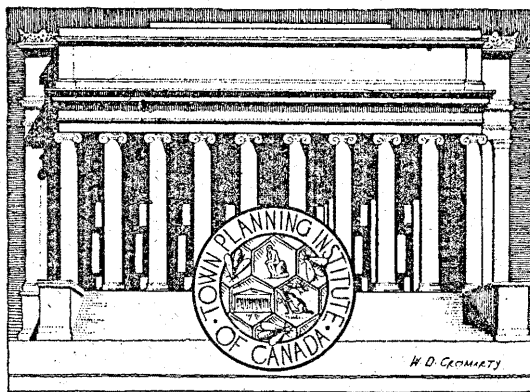


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*Town planning may be defined as the scientific and orderly disposition of land and buildings in use and development with a view to obviating congestion and securing economic and social efficiency, health and well-being in urban and rural communities*

### WHAT CAN THE MATTER BE ?

#### A STUDY OF NATIONAL DEVELOPMENT

BY JAMES EWING, M.E.I.C.

We have been told in the immigration pamphlets that Canada is a land of wonderful and limitless natural resources, of vast fertile fields, of abundant forests with almost inexhaustible timber supply, of great oil and mineral bearing regions the riches of which can only be conjectured; that in our wilds abound almost every kind of fur-bearing animal, that our lakes, streams and sea coasts are teeming with fish, and that besides all this, our mighty rivers have only to be harnessed in their descent to give such volumes of cheap water power as are simply incalculable and more than sufficient for all our needs.

And, unlike most advertizing stuff, this is absolutely and unequivocally true.

Our late premier, the illustrious Sir Wilfrid Laurier, told us that the twentieth century would be Canada's century, yet two decades have passed and with anxious eyes we are still looking for the dawn of the New Era.

We have been told that Canada can comfortably support a population of over a hundred millions, yet

we know there are less than ten millions here, and most of them scratching for a living.

What then is the matter ? It must be one of three things,—something is wrong with the country, with its people, or with its methods.

We will not admit either one or the other of the first two indictments. The Country is all right and offers every advantage; even if its climate be somewhat rigorous, it is all the more healthy and invigorating for that. As for its People, both in peace and in war they have proved their mettle, and there is no nation in the world to-day of higher mental and physical development, of greater courage, energy, enterprise or resource.

Indeed, there is nothing wrong with the people but they are all too few, and so, "Immigration's the thing", says the Big Fellow, "We want lots more men to come and work for us to help develop the country, to lighten our transportation charges and share the burden of our taxes,—a truly inviting prospect for the immigrant.

But the Worker asks "Why Immigration, when there is not enough work to go round, when most of those who are working get barely enough wages to exist in comfort considering the high cost of living, when many are working on broken time, and some without work at all?"

"Well, then, let them go dig", replies the Big Fellow, "There is plenty of land waiting for willing hands to work it and garner the richness of the soil."

"But farming does not pay", says the farmer, already trained and hardened to the work,—what with transportation charges, middleman's or rather middlemen's profits and uncertain seasons, there is barely enough left to maintain the old folks at home, while the young and vigorous are hieing to the big cities or over the border."

"What we need is Capital", says the economist. "That must be the sword to open the oyster", and even while they tell us there is lots of it lying idle. Capital remains singularly coy and coldly apathetic. In fact capital seems to prefer the hazard of the stock market or the off chance of a gamble rather than sound investment that will help develop the country and give merely moderate returns.

It is not as in the old days when our big financiers had only to take a trip across the Atlantic and return with their pockets bulging with money enough to fling a railroad across a continent, whether it was needed or not.

Such faith had we in the bright and glorious tomorrow that little did we reckon of the day the books had to be balanced and revenue and expenditure evened up.

And now the sky is darkened and doubts and fears are in men's minds. The emigration offices are besieged with panicky people who fancy they can better themselves elsewhere. Vainly are we signalling for others to take their places, and statistics tell us that during the last decade the outgoers outclass the incomers both in number and in quality, and that the meagre growth in our population is not sufficient to be accounted for by the natural increase.

At our great universities, the pride and glory, also the expense, of our young Dominion, hardly has the curtain rung down on Convocation Day before the train is waiting at the station ready to whisk away fully fifty per cent of our brightest and most promising manhood, the hope of the country, *to help build up other lands than our own.*

But perhaps the last straw is when the happy and carefree habitant of the province of Quebec becomes restive,—this the only race of the Dominion which is truly indigenous to the soil, whose wants are few and whose faith is big, whose attachment to the land of his fathers and his relatives is of 'the tie

that binds', who knows and cares for no land on God's earth but 'good old Quebec'; who, in spite of all this, even while the gentle restraining hand of the kind old parish curé, revered from infancy, is laid upon his shoulder, stubbornly breaks away and turns his back upon the fair fields and gentle slopes of his beloved land for the drab and dingy walls of the Connecticut mills,—and, for no other reason than the weekly pay envelope. This surely must give us pause.

And yet we must reiterate there is nothing wrong with the Country nor with its People, and we are driven to the conclusion there must be something the matter with its Methods.

What then can the matter be?

Perhaps we shall find it in the vulgarism, "We have bit off more than we can chew". We are trying to run a business with a heavy overhead that paralyzes our best efforts and intentions.

Ten to thirty years ago, when the flow of capital was unstinted, and we fancied it would always continue so, we were building railroads yearly by the hundreds of miles, and not content with one system, we had to have several systems paralleling one another and cutting each other's throats.

Take for instance, that thousand mile desert of sand and boulders, rocks and Christmas trees, stretching from the settled part of Ontario to the prairies, which had to be bridged three times over when once would have been ample; and again, the same blunder repeated at enormous expense by a triple scaling at the great mountain divide between the prairies and the Pacific; and every province of the Dominion has the same tale to tell, heaping up and helping to swell the astonishing total of needless expenditure.

The man who coined the phrase, "Canada is a land of magnificent distances" forgot to add the word "costly" which would have been more apt and less glittering.

And what do we get for all these miles and miles of needless duplication of railroads, built in advance of settlement? Nothing but abnormal transportation charges and thin and scattered development, which is the curse of Canada.

Our good friends of the prairies spurn the scale of freight rates needed to make the railways pay and so the burden has to be borne on the shoulders of the country at large.

And then there is a frenzied outcry against Government ownership, forgetting the fact that that is the result and not the cause of our distress. If there had been Government ownership since the beginning and a single well planned railroad system we could have saved hundreds of millions of dollars, and had a saner, more compact and healthier development of the country.

It is not because of Government ownership we

are called upon to foot the deficit, but in consequence of the capacity of much lauded private enterprise or rather exploitation, coupled with the flaccidity of weak-kneed governments of both political hues in yielding to it.

It would seem on the face of it that a government that is not fit to run a railway is not fit to run a country, for is not the whole greater than its part?

And what is true of the country at large is true of the cities as well. We have only to look at the cities and note the hundreds of thousands of idle acres surrounding them whose only crop is the stubble and the surveyor's stake. Miles and miles of graded streets, laid out in primitive and wasteful rectangular fashion, some with water and sewerage services laid and an occasional tramway's line, and all mostly bordered with vacant lots, while of the few houses that are built most of them are only half finished and many are 'for sale' or 'to let.'

Somebody has to pay for all this one way or another, and the brunt falls upon the weary shoulders of the overburdened tax-payers, while the city treasuries have been drained, financing private real estate exploitation, and are unable to carry out the improvements and repairs most needed in the heart of the city.

Again we have bit off more than we can chew, and again the result is thin and scattered development, the curse of the cities too.

Nor should it be forgotten that here too we have a network of unnecessary and most costly duplication of rival railway surface lines and terminals, obstructing and paralyzing the street traffic, and holding and binding the very vitals of the city in a grip of steel.

With a bitter taste in our mouth we have recovered, it is true, from our orgy of railroad building, and now what catches our fancy is a Riot of Roads. It is a splendid idea and it is a pity we did not awaken to it years ago and build highways where we built railway lines that are now streaks of rust.

Manifestly railways are for the long haul and roads for the short. But there is nothing small about us, and so we are fascinated with the fine spectacular idea of a Grand Transcontinental Highway from Atlantic to Pacific, forgetting the fact that the market cart is stuck in the mire up to the axles while bringing us things to eat.

It is wonderful with what perfect *sang froid* we can throw twenty millions away on a grand spectacular bridge with the longest span in the world, when we cannot find means for the urgent necessity of connecting a great metropolitan city with the mainland at a quarter of the cost, a palpably paying proposition in itself.

Good roads cost more than railway lines if they

are built to last, and as it is beyond our powers to accomplish everything, with the meagre settlement we have, we should concentrate on our trunk lines first, and see that they are strongly built and maintained, and not as it too often the case, a mere linking up of old and tortuous highways, with steep grades, abrupt jogs, and sharp bends, interlaced with death dealing railroad crossings. These trunk lines between important centres should give free, safe and uninterrupted passage by the most direct route the country can afford, and should be carefully studied and planned on economic lines, remembering that one extra unnecessary road mile means millions of extra car miles at never ending cost.

It has been said that the man who can make two blades of grass grow where one grew before is the benefactor of his country, and even so especially in a land like Canada, is the man who can shorten distance and lessen transportation charges by ever so little, a nation's benefactor.

The main trouble is that we Canadians never stop to think, to look before our noses, or to study cause and effect. We are wonderful workers, grand accomplishees, but we simply do not deliberate and are singularly unconcerned as to the why and the whither. The result is that both in town and in country we have a far flung, flimsy, hap-hazard and conflicting development that may be cheap in the beginning but is mighty wasteful and costly in the working out, and entails a never-ending recurrence of makeshift building and rebuilding, putting up and pulling down without any set or enduring purpose. So much indeed is this the case that altogether it is doubtful if with one hundred per cent effort we get much more than fifty per cent positive and lasting effectiveness.

It is the vice of a pioneer people of amazing energy but little forethought, which long ago we should have outgrown. And if bitter experience fails to bring the folly home to us, then we shall just have to continue at that school until we shall have learned our lesson. It is the burning-in process we are undergoing now, and the sooner we take the moral to heart, the sooner we shall get over it and go ahead by leaps and bounds, for we are not the kind of people to go under.

By all means let us have immigrants, and bushels of them, but before trying to bring them here, we should endeavour to learn *how to hold the ones we have*.

Lloyd George has told us "the only way to keep the people on the land is to make life worth living for them". And that is a naked truism which governments may afford to blink at for a time but sooner or later must face and find the solution.

And we can do it, but not until we begin to give

as much consideration to the Human element as we do to the Material, when we are as much concerned as to the people thriving and taking root in the soil as we are about the Crops; when we watch as eagerly for the first indications of rust in the Workers as we do for the rust in the Grain; when we care as much for the price at which Men must sell themselves as we do for the marketing price of wheat. And, if we have no other motive, when we learn to appreciate that the best paying proposition there is, is the conservation of the health, comfort and well-being of the people, we shall then be on the right road, and the rest will only be a matter of careful study and planning on broad civic, regional and national lines.

Sir Lomer Gouin struck the right note when he said that to encourage the agricultural life we must develop the industrial along with it. We must build up the home market as a mainstay and look after the uncertain and unstable export trade as an overflow.

This cannot be effected merely by helping to swell the already bloated and overgrown great cities, whose smoke spreads like a pall over the surrounding country and the glamour of whose bright lights draws the silly moths inwards to their doom.

It is by stimulating community growth and developing the small town in the heart of the agricultural district, as a centre of healthy social and intellectual life, affording both employment and amusement to the younger generation without tearing them away from the parental influence.

The ideal small city of from forty to sixty thousand population should be our aim, but it must be *well planned* on rational and convenient lines, preserving all the advantages and avoiding the disadvantages of both purely rural and urban existence.

Of course employment giving industries is essential to such development and the problem of how to attract them can hardly be left to chance. Nor surely, should it be by auction sale to the highest bidder, —by bonusing, free sites or exemption from taxation, which are but the merest subterfuge, and a self-evident confession of incapacity and weakness on both sides. This sort of thing may fetch them but will never make them flourish or take root. — Neither can it be done by empty boasting, but by frankly and squarely delivering the goods:—giving the factories the food on which they thrive, good and convenient transportation, ample power, water and sewerage services and fire protection, and most important of all, reasonably cheap and reliable labour supply, towards which the main essential is healthy and comfortable housing at moderate rental, with social, educational and recreational advantages thrown in.

In the past for such things as these we have relied on private initiative, that broken reed. It has been left to 'George', to the other fellow, who gets into it

only for what he can get out of it, and the result has been precisely what might have been expected under the circumstances, a wasteful, fragmentary, chaotic, crude and sorry mess.

Shall it be said that our governments, federal, provincial, and municipal, have been too busy 'playing politics' and 'passing the buck' to attend to matters of such vital moment; and likewise that our monied men have been too busy amassing more, contenting themselves with here and there dropping a few charitable doles?

There is, however, waiting at the door, a tremendous responsibility which all men, each to the extent of his power, must shoulder, and none can afford to shirk. And so we would do well to realize that the emigrant train leaving the station is merely an incident, a straw showing the way of the wind, and that behind it all among the bulk of the people broods a great smouldering, seething, sullen, discontent which sooner or later must find some sort of vent.

Let us hope that before that day comes we shall grow wise and learn that too long we have exalted the doctrine of 'Devil take the hindmost', and 'Let the weakest go to the wall'; that the remorseless Bolshevism of to-day among the masses is but the boomerang of the high handed and regardless Bolshevism of yesteryear among the classes; and that private and corporate privilege and interest can be allowed to outweigh and override the common welfare only for a time.

We must learn too, if we want to build up a great country, the value of solid well studied and enduring development, as contrasted with self seeking, time serving exploitation, with its trail of misery and waste.

We must learn in work, as we have learned in war and in play, the value of teamwork, of co-operation, holding high the principle that what is best for all is best for one.

Then we can go forward with unfaltering step, with fixed objective and with clear aim, pressing towards the goal, and the question of "What can the matter be"? will neither have to be asked nor answered.

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To him who dreams a noble dream,  
Whose vision like a sunlight gleam  
Strikes through the darkness of man's day  
And shows afar a path that leads  
To broader uses for men's lives,  
To wider service for men's needs—  
What though the way  
He only carve with word and pen—  
To him who dreams a noble dream,  
Honour and glory and the praise of men!

—ALFRED BUCKLEY.

# DECENTRALIZATION OF INDUSTRY AND METROPOLITAN CONTROL

By G. H. FERGUSON, B.Sc.

(Continued from May issue)

## City v. Country Location

The advantages of a location in the country are not so numerous as those in the city, but they may be of paramount importance. Thus if waterpower is obtainable or if a supply of pure water is necessary, as in paper making, a country site may be desirable. Land is cheap in the country, hence, the factory can be built to suit the exact needs of the industry and ample provision can be made for growth. Taxes are low and restrictive ordinances are not likely to hamper the activity of the plant. The larger the plant the less dependent it is on other industries; and hence the country site in general appeals to the large operator more than to the small one. Undesirable neighbors can be more easily avoided in a country location and the danger from fire and other hazards resulting from surrounding industries are also minimized.

On the other hand the labour supply of the country is usually a troublesome problem. The city offers advantages and amusements to the workers that are not readily obtainable in rural districts. An effort is often made to offset these attractions by building model villages where employees may acquire homes on easy terms and enjoy the healthful life of the country. Of course the employer who engages in such an enterprise must expect to feel a greater responsibility toward his employees that he would in the city where the bond is so much looser. But such work as this is worth while and no doubt the near future will see a great amount of decentralizing of industry from the thickly congested centres in favour of rural locations. Just as it is difficult to persuade the workers to leave the city so is it difficult to detach them from good country industries if the conditions of life are made attractive; and labour troubles are likely to be less in a rural location than in a congested urban district.

The suburbs of many cities offer a compromise between the urban and rural locations and possess many of the benefits of both. Land can be obtained more cheaply, and street car lines have made living in the suburbs cheaper than in the city and still made it possible for the suburban dweller to take advantage of the attractions of the city. This suburban location is particularly advantageous to medium-sized plants.

In general, it may be stated that the city location offers greatest attractions to the small plant, the

suburbs are best adapted to fair-sized plants and the country districts offer by far the largest attractions and fewest disadvantages to very large works, provided that an adequate supply of labor can be obtained.

Congestion with all that it means in choked streets, dark work-rooms and high taxes, has been forcing factories to our city limits and beyond. Industrial managers have shown extraordinary foresight and skill in the arrangements of their plants in the outlying areas, but no such expert planning has gone into the accompanying community development.

## Lack of Planning for Community Life

Huge industrial plants are uprooting themselves bodily from the cities. With households, small stores, lodges, churches, schools—clinging to them like living tendrils, they set themselves down ten miles away in the open.

While we spend years of effort in reconstructing our civic centres, only to have our schemes stalled by costly obstructions of brick and mortar and suspended by condemnation proceedings, city extension as a process is going on every week and every month on the edge of our cities.

We have stated some reasons for the location of these industrial communities. The impulse toward cheap land, cheap electric power, etc., low taxes and elbow-room throws them out from the large centres of population. These are the centrifugal forces. The centripetal forces are equally powerful and bind them as satellites beyond the outer rings of the mother city. Even the towns like New Toronto, which have attained a considerable measure of self sufficiency, are bound by strong economic ties. Through switch yards and belt lines and practically all the railroad facilities which are at the disposal of a downtown establishment are at the service of a community in the suburb. It means much to be within easy reach of at least one large market for finished product and proximity to a large labour market is a still more important factor.

## Housing the Workers

The scientific thoroughness which follows the technique of efficiency and health down to the details of street planning may be seen in drawings for the construction of a state prison in the United

States. Here a study was made to determine the exact angle of the compass at which the building should stand in order to secure in each twelve months the maximum amount of sunlight. If it is worth while to take such care in housing the prisoners of state surely it is but reasonable that the same care should be expended on street plans and the housing of free city dwellers.

Transportation is a many-sided factor in the industrial suburb. It may tend to reduce the risk in home ownership if houses can be conveniently occupied by people who work in nearby towns. It may broaden the opportunity for work, for it may relieve the local industry from being the sole dependent.

Recreation and social life may need quite as much if not more, wholesome opportunity and promotion in the industrial suburb, with its isolation and its sudden massing of strangers, than in the city centre with its longer established neighbourhoods and its greater facilities. Schools, libraries and similar civic institutions are criteria by which to gauge the standard of community life. Adequate provision for them may be of business value to the suburban plant management in keeping people contented away from the city.

There can be no doubt that employers appreciate fully that home ownership tends to retain the workman in the community. Rare is the plant that is always working at its greatest capacity. If the extent to which the plant is worked varies all the way from 30 per cent up to the maximum, a grave problem confronts the population which endeavours to make its home in the industrial suburb. Intermittent employment cannot comfortably be accompanied by intermittent meals. Housing must be continuous even if employment is not. If the community has many establishments representing diversified industries, lack of work may not involve all at the same time. Moreover work people temporarily laid off at one factory often have an opportunity to earn something elsewhere until their regular trade offers them a job. If the satellite city be dependent on a single industry or plant, this opportunity is in a measure lacking.

The movement of industry to city outskirts reaches deep into the common life—deeper than is as yet recognized. It has potencies for good and evil, lends itself as readily as a land boom to glowing images and as readily dwindles off into a cold fact. The factory gains by this transfer to the city's edge. The city gains in the relief the movement brings to its arteries of trade; industrial freight does not have to be choked through its central valves.

The social problem then is whether community interests receive attention commensurate with the

foresight, skill and ingenuity devoted to securing the utmost industrial advantage; whether the shift for the thousands of working people away from the city pressure is to bring an increment of better living—a lifting of the standards of civilization; or whether, for a great mass it is merely another swapping of the frying pan for the fire.

Desire to live where big things are doing, near the bright lights, street crowds, big stores and amusements of the city centre, and where friends are close at hand, is, after all is said and done, the reason why many workers do not make more of an effort to live where they work. The flats and apartments near the downtown section of any large city testify to the same sort of craving on the part of better-to-do people who find metropolitan advantages more to their liking than the quiet routine and distance from friends which the suburb enjoins. Theatres, opera, the life of the large hotels and the pleasures of the smart set have quite as strong an attraction for them as the cheaper amusements and thrills have upon the working people. Most of us have a yearning for sociability. If it is worth while as a civic policy to encourage escape from congestion to better and healthier living conditions, it is worth while to study out and provide means whereby recreation and neighborhood can be stimulated.

### Need of Town Planning

The broad handling of town planning, housing and transportation conditions in industrial suburbs, involving the relation to residential areas, demands first of all a program of construction and public control in the interests of the whole body of people who live and work in them. The complexities of modern life which have made citizens so interdependent upon one another for their mutual welfare have also made the towns and flanges of a metropolitan district interdependent. Each locality has much to gain from a comprehensive plan including all, and each has something to contribute.

The tendency for large manufacturers to move from urban centres to rural and semi-rural districts only requires to be properly organized to yield results of great national importance in connection with the distribution of population and the utilization of the resources of the country. There is the kind of development which consists of the establishment of new factories in rural territory where the existence of natural resources including waterpower and raw material for manufacture, may enable a small town or village to be extended into a large industrial centre, or may result in an entirely new town being created. In 1911, whereas the population within the county of London had fallen off to the extent of 0.3 per cent in the ten years ending 1911, in the outer fringes



of the metropolitan areas it had increased 33.5 per cent in the same period. This rapidity of decentralization of city population is becoming nearly as great in America; it is one of the tendencies that is lowering the values of land in large cities.

Recent tendencies in industrial decentralization have also shown the importance of one of the modern aspects of town planning, namely, the direction and control of the growth taking place within the rural and semi-rural districts where new industries are being established. New developments are taking place in connection with the lumber industry which seem likely to revive its prosperity on lines which will be productive of permanent settlement. With the growth of the pulp industry and the building of new mills in proximity to the available timber limits, and at points where ample waterpower is available many opportunities are now arising for planning and developing new towns in rural territory.

The creation of small towns in rural areas is a much healthier and more stable form of development than the expansion of large cities. During the next twenty or thirty years new industrial development in rural areas will take place and should be encouraged to take place to a greater extent than formerly.

Regarding the growing tendency of manufacturers to locate their works in suburban districts, an eminent American authority has given expression to the following statements:

New factories for their own interests and in the interest of all concerned should locate in the outskirts of cities wherever practicable.

Existing factories in cities should be encouraged, as opportunity offers, to remove to the suburbs.

Employers and employed should co-operate in a social and democratic way to create an attractive local community on the outskirts of cities near factories, each doing his part to make the local community healthful, convenient and satisfying.

The same co-operation should be directed toward securing also for employees and their families, by transportation facilities, some of the advantages and permanent attractions of city life.

The choice for factory employees should not be sharply drawn between the city and the country. Both should be recognized as desirable—the city for occasional inspiration and diversion, and the more open country on the outskirts of cities for the essentials of daily life.

The trend of population from the city's centre to new areas on the outskirts is good for the individual and the nation, provided the suburbs are planned with a view to the development of a

healthy people. But unless care is taken at the outset and a standard of housing maintained, many of the districts will degenerate into the condition of congested areas as we know them to-day.

When industry moves from the city's centre to the suburbs, it is seeking economic advantage, the ultimate object of the manufacturer being to reduce the cost of production and to improve his product, and at the same time to escape from the handicap of congestion, and secure elbow-room; to establish an efficient modern plant where conditions are freer and land is inexpensive.

#### Decentralization in Toronto

A reliable estimate of the number of persons engaged at the present time in the factories of Canada shows this to be approximately 700,000. Let us suppose then, that each such person has but two dependents, and it immediately appears that the factories of Canada support directly about 2,000,000 people. That is to say, these industries, therefore, enable 2,000,000 persons to live in houses, to secure clothing, food and the other necessities of life. It is also worth noting that in addition to those that are actually employed in factories and their dependents, probably 3,000,000 persons obtain their livelihood by association with the industrial system of Canada. Due consideration of this condition of affairs demands that more than mere casual attention must be given to any apparent tendency on the part of manufacturers to move their works from the central portion of our cities to the suburban areas.

A study of this decentralization of industry in the Toronto district about three years ago showed, among other things, that since the movement of their works from the central district of the city to new positions in the more outlying areas, in fifty per cent of the cases investigated, there had been an improvement in the labour turnover. Forty per cent showed no change in this very important matter and eight per cent have suffered as the result of the movement outwards.

With respect to housing conditions, the movement to the outer rim of the city has resulted in better housing for the workmen in over forty per cent of the cases investigated. No change in conditions in twenty-five per cent and in about thirty per cent of the cases the housing conditions are not so good as when the factory was more centrally situated. In these latter instances the employees very frequently continue to live in the city, travelling long distances to and from their places of employment daily in crowded street cars.

#### How Land Values are Created

The establishment of factories in the suburbs has

been usually followed by a corresponding increase in the selling price of lands adjacent to the new factories. The amount of this increase depending very largely on whether the lead once taken by one industry has been followed by others, as in the case of the district near Lansdowne and Royce avenues, or whether the original works has been surrounded by houses as on portions of Dundas street. In the district adjacent to Lansdowne and Royce avenues, land that was offered for sale at \$1,000 per acre at the beginning of the migration of factories to that district is now valued at over \$10,000 per acre. Similarly in the Carlaw avenue neighbourhood land that fifteen years ago was bought for \$3,600 is now assessed at \$36,000. So also in the district adjacent to the factories at New Toronto, the prices obtainable for property have shown a decided increase. In one particular instance in this neighbourhood land that was offered at \$6.00 per foot jumped to \$13.00 per foot frontage in less than six months time.

Industrial areas once created have an irresistible attraction for new and other industries that are about to be established with the result that eventually we have quite sturdy industrial communities formed about the original nucleus. That a site near the city's edge adjacent to a railway line is a very desirable location is emphasized by the practice of companies having their headquarters in the United States. These people appear to make an invariable practice of choosing a site near the city's terminus.

#### Other Factors

From the experience of manufacturers and the statements of engineers engaged in the development of industrial areas it would appear that in these new industrial developments, the principles that guide manufacturers in the selection of factory sites in relation to the power situation, are:—

- (a) Plentiful supply of labour available at moderate rates.
- (b) Easily accessible transportation facilities.
- (c) Abundant supply of cheap power.
- (d) Welfare of employees.
- (e) The cost of land both for the factory and its needs and also for home building purposes for the factory operatives.

In certain instances in the city of Toronto, owing to the long distances necessary for their employees to traverse to and from their places of business, the employers have reduced the hours of work. Notable instances of this nature are the shortened working hours of the employees of the T. Eaton Company and the Robert Simpson Company, both of which firms operate large manufacturing establishments in addition to their retail shops. A somewhat similar method of compensation to their employees for this

hardship of having to travel in crowded street cars for miles across the city, has been adopted by another manufacturer. Here the factory is closed down each Friday night until the following Monday morning during the months of June, July and August, but wages are paid for a full working week. Needless to say these firms have no labour troubles.

#### Industrial Zoning

So as to encourage the establishment of manufacturing plants in the positions best adapted for obtaining efficient means of transportation, satisfactory labour conditions, ample supply of power, etc., without having to pay excessive prices for land, the most favoured suggestion is the establishment of industrial zones under municipal control, (i.e. area to be reserved for industrial purposes only on lands adjacent to the railway lines) and stopping houses from being erected upon such properties which may later have to be torn down to make way for the progress of industry. This, combined with improved housing conditions, forms the suggestions most favoured by manufacturers and others most vitally interested in the improvement of industrial conditions.

That the establishment of industrial zones is not only popular with industrial operators but is also favorably regarded by the assessment department of Toronto is manifest in the statement of a prominent official of that branch of Toronto's civic government. He says: "We find that the factories are gradually being forced out of the centre of the city and are finding new sites along the railway lines. Toronto does not need any more main lines of railway but it does need a great many more sidings; these could be readily built from the existing main lines to factory sites adjacent to these existing lines. All railway sidings are now occupied and the shortage is so severe that the establishment of industrial zones adjacent to the railway lines is strongly advocated."

A study of the problems connected with the development of industrial centres shows that to obtain the best results in the provision of housing accommodation and facilities for recreation control must be obtained over the adjacent areas or otherwise real estate speculators will make the cost of land so expensive that proper housing arrangements at moderate cost will be impossible.

#### Toronto Conditions

An examination of the conditions existing in various portions of Toronto, shows that while in the central portion of the city there has been a practical stagnation of growth for a period of years, the districts adjacent to the suburbs have increased by leaps and bounds. Statistics are here given for division 5 of ward 3, an old residential section in process of becoming a business district.



Although the total area enclosed by the boundaries of this ward division is 147.2 acres, when the space occupied by streets, factories, office buildings and public institutions is deducted, the remaining 73.2 acres are occupied by 1,639 dwellings, or on an average of 22 buildings to the acre, a badly congested condition. It is estimated that 60 per cent of the building area is "combustible", in comparison with 22 per cent for an average residential district in another portion of the city. Indeed so great are the risk on many of the buildings in the district that insurance companies refuse to take them.

The changing character of the district is indicated by the fact that while in 1909, 76 per cent of the total number of buildings were used as dwellings, this had fallen in 1916 to 63 per cent of the total. In the same period the number of shops had increased from 20.4 per cent to 30 per cent of the total, and the number of buildings other than dwellings or shops increased from 3 per cent to 7 per cent.

During the same period land values have doubled and in very many instances trebled or even quadrupled. The greatest increase being in the case of the property on the southeast corner of College and Elizabeth streets. In 1917 this corner was valued at \$1,000 per foot as compared with \$95 per foot frontage in 1909. The greatest proportionate increase has taken place off the main business thoroughfares of Queen and Yonge streets, although the corner lot values of the latter are, of course still much the highest.

In this subdivision the number of tenants greatly predominates over the number of owners, and the tendency to absentee landlordism is on the increase. In 1909 out of a total of 1,665 occupied dwellings and stores decreased from 1,665 to 1,346, or by 19.1 per cent, while the proportion of dwellings and stores to other buildings decreased by 13 per cent.

The assessed value of land in this ward subdivision is from \$100,000 to \$150,000 per acre. This figure of itself is sufficient to cause the workingman to turn to a more outlying district where such property as he may desire for the purpose of making a home may be purchased for from \$1,000 to \$2,000 an acre.

Division 5 of ward 3 is the most cosmopolitan in the city and is very old. It is situated in the central portion of Toronto, being bounded on the east by Jarvis street, on the south by Queen street, on the west by University avenue, and on the north by College street. In the ten years from 1909 to 1918 inclusive, the population has practically remained stationary, while in the same period the population of ward 7 on the west has grown from 11,686 to 30,166, increasing over two and one-half times. Similarly a comparison of the growth of population for wards 1, 3 and 6 shows that, while in 1905 their

populations were 22,210; 41,804; and 31,467 respectively, the figures for 1919 are 98,277; 49,997, and 103,484. In other words while in ward 3, which contains the central business section for the city; there has been practically no increase of population for fifteen years, in the same period the population of ward 1 has increased to over four times its former size and in ward 6 the increase has been somewhat more than treble. This increase of population in the wards of the eastern and western extremities of Toronto has been co-incidental with the movement of industries from the central part of the city to the outer portions of its area. So also we find that while in wards 1 and 6 the increase in the numbers of persons between the ages of five and twenty-one years for the years 1918-1919 was 1,329 and 627 respectively, the centrally located ward 4 shows a decrease of 88 persons between the same ages during the same period; this decrease being credited to the movement of families away from the centre of the city.

In a map presented with this thesis entitled "Decentralization of Industry in Toronto", is shown the old and new positions of factories that have moved away from the central portion of the city to more outlying districts. The positions once occupied by the factories in the downtown district, have become sites for financial institutions, office buildings, restaurants, moving-picture houses, and in one or two instances club buildings have been erected in the areas so vacated.

On reference to the decentralization of industry map and the tables showing increase of population it appears that not only is there a definite movement away from the city's centre outwards but also that the greatest increase of population and growth is taking place in a zone whose main axis lies along a line radiating in a north-westerly direction from the city's centre.

In 1834 the population having reached 9,254 the municipality was incorporated as a city and its name changed from York to Toronto. Since that time the progress of the municipality has been steady, the population doubling every fifteen years. In 1884 the population was 105,211; in 1905, 238,642; in 1910, 341,991; in 1914, 470,144; in 1916, 460,526, and the latest statement of the health department declares that the population of Toronto is now not less than 625,000.

The growth of the city beyond the limits of the areas served by the lines of the old Toronto street railway has been remarkable. In 1915 there were approximately 85,200 people residing outside the city limits of 1891, and 31,400 of an interurban population outside but adjacent to the city limits and within the limits of an eight mile radius of the corner of King and Yonge streets, totaling 116,600

people or the equivalent of almost one-quarter of the entire population of the city. Toronto's rate of increase of population for the five years previous to the war averaged 25,000 persons per annum.

With the increase of population, land values have also risen until now the assessment roll shows that in one instance at least land is valued at as much as \$16,500 per foot frontage.

Along the lines of industrial development the city has made great progress and takes a place second to none in the Dominion. The Board of Trade with a membership of more than 2,000 is recognized as one of the most potential bodies of its kind in the British Empire. As a wholesale centre Toronto holds a dominant position, primarily due to the easy accessibility of rail and water transportation.

In all there are over thirteen hundred manufacturing establishments in Toronto, representing a capital investment of over \$225,000,000 and producing an output having an annual value of \$250,000,000. This hive of industry gives employment to 85,000 persons and distributes \$55,000,000 annually in wages and salaries. In other words Toronto with one-sixteenth of Canada's population employs one-eighth of the total number of persons engaged in work in factories in the whole Dominion of Canada.

Three transcontinental railroads enter Toronto, providing an expeditious freight and express service to all points in Canada and connecting with the principal railroads of the United States. Water freights are provided for by the creation of a modern harbour, affording entrance to vessels of large size. A depth of water of twenty-four feet is now available in the Eastern Harbour terminal district, with the construction allowing of an ultimate depth of thirty feet, if required.

The largest single area of vacant industrial land provided with rail and water shipment facilities is that controlled by the Toronto Harbour commissioners, who hold it in trust for the city of Toronto. The total area under control of this body is 2,202 acres, divided into three districts viz., Eastern, Central, Western and Toronto Island, as follows:—

Eastern Section—Total area, 1,205 acres.

On complete development there will be 644 acres of industrial lands; 130 acres of waterways; 233 acres of streets, etc., 196 acres of park lands.

The distribution at present is as follows:—512 acres reclaimed, 108 acres of waterways completed, 35 acres of streets improved, 90 acres leased, 4 acres sold, 418 acres available for lease or selling, 290 acres partially reclaimed, 403 acres not yet developed, 6½ miles of dock walls constructed, 3.4 miles of streets paved and sewered, 10.4 miles of railway sidings available.

Central Section—Total area, 294 acres, which includes lands at present in the hands of the Canadian Pacific and Grand Trunk railways.

When this section is completely developed there will be available 165 acres for the purposes of industry, while 40 acres of land will have been converted into streets.

At the present time, 207 acres have been reclaimed, 15.6 acres of streets have been improved, 80 acres have been leased, 2¾ acres have been sold, 87 acres are available for lease or selling, 47 acres are still undeveloped, 2.6 miles of dock wall have been completed, ½ mile of streets has been paved and sewered, 3.8 miles of railway sidings are available.

Western Section—Total area 262 acres, which when completely developed will make available 88 acres of lands fit for industrial purposes, 33 acres of streets, etc., 141 acres of lands suitable for park purposes. At the present time 262 acres have been reclaimed, 13½ acres of streets have been improved, 10 acres leased, 78 acres are available for lease or selling, 1/7 mile of dock wall has been completed, and 5.2 miles of streets have been paved and sewered.

Toronto Island—The island is practically a summer resort and has an area of 441 acres of land and water.

Factory sites may also be secured in various parts of the city, with or without railway siding accommodation according to the needs of any particular business.

The development of the Toronto Harbour Terminals district has been concurrent with the movement of factories to the suburban areas. But unlike the other areas, which have grown up purely as the result of private enterprise, this development is being made by the expenditure of several million dollars of public funds, contributed jointly by the city of Toronto and the Dominion Government. The work of reclaiming portions of Ashbridges marsh was commenced in 1912 and up to date quite a number of manufacturers have either established new works in this area or have signified their intention of doing so. During the late war a huge shell factory was operated here by the local representative of the Imperial Munitions' Board but subsequently a portion of the works was destroyed by fire.

The movement of industries to the Midway or Carlaw avenue area commenced in 1906, with the establishment there of a factory of the Canadian Chewing Gum company, who induced the Grand Trunk railway to construct a private siding across Logan avenue to the new works. The reasons given by this pioneer company for moving their works from the city's centre were the usual ones, viz.:—

- (a) To obtain room for expansion of works.
- (b) Better premises and lower insurance rates

- (c) Switching facilities
- (d) Cheaper land with lower assessment and taxes.

The lead having been taken this company was rapidly followed by others so that at present there are over twenty-four factories in this area.

A movement similar to that which led to the growth of the industrial district in the Midway set in at about the same time towards Wychwood and Earls Court, with the result that these two areas were eventually annexed to the city of Toronto in 1909 and 1910, respectively. And we now find factories clustered adjacent to the lines of the Canadian Pacific and Canadian National railways all the distance from the intersection of Davenport road and Dupont street to West Toronto.

This decentralizing tendency is also illustrated in a degree by the comparatively recent concentration of factories in Parkdale, Brocton and West Toronto adjacent to the railway lines and particularly noticeable on Dundas street, Stirling road, Dufferin street, O'Hara avenue, Fraser avenue, Atlantic avenue, and the adjoining neighbourhood.

The establishment of the Union Stock Yards at the intersection of Keele street and St. Clair avenue acted as a magnet that has drawn to its poles the huge works of the beef and pork packing companies and the subsidiary industries that have clustered about them.

The Harris Abattoir company, who employ a staff of about 1,250 persons, moved their works from Strachan avenue to their new location, a distance of over four and a half miles. Their reasons for moving are stated as:—

- (a) To be closer to allied industries, such as the Union Stock Yards, from which source they obtained their live stock.
- (b) Previous location did not permit of extension of works.
- (c) To take advantage of the exemption from taxes offered by the local corporation of West Toronto.

Gunn's, Limited, formerly had their establishment on Front street east but moved their works a distance of five and a half miles to their new site for very similar reasons, and not long ago erected a huge addition to their premises in the form of a cold storage warehouse.

Three other large manufacturers in this group, on the city's boundary, employ large numbers of workers who have to travel long distances to their places of employment.

Barely a mile beyond the packing houses one sees the new works of the Canadian Kodak company. This organization closed its former factory at 580 King street west and established entirely new works near the intersection of Eglinton avenue and

the Weston road; in this way making a move of nearly five and a half miles. The number of persons employed by the Kodak company is between 850 and 900 of which the majority are women. Owing to the scarcity of accommodation in the immediate vicinity of the works, shortage of houses, etc., approximately one-half of this number travel to and from the city of Toronto daily, between their homes and places of employment. This travel in the aggregate becomes a serious item for the workers, being upwards of \$100 per year.

Property in the immediate vicinity of the Kodak works is offered for sale by real estate development companies at prices that range from \$17.00 per foot frontage to \$30.00 per foot, for residential purposes.

The Kodak plant was moved from a city location to its present position in the suburbs primarily to avoid the dust and dirt of the central industrial section of the city. To attain this end two-thirds of the air that passes through the works is first subjected to a process of filtration.

Within a very recent period four large industries with headquarters in Toronto, have for various reasons established new factories at Weston. An immediate result of this movement was a corresponding rise in the selling price of real estate.

Until recently the terminals of the Canadian National railway adjoined the Rosedale station in the Don valley at a distance of 3.8 miles from Toronto Union station. As this was very low-lying, being only slightly above river level, each spring considerable difficulty was experienced with floods, which tied up traffic. In addition the site, being practically surrounded by the hills of the Don valley was incapable of expansion, so that the economic handling of motive power and car equipment was impossible as a result of congestion. Consequently it became necessary to obtain a site with better natural advantages which would also be capable of expansion with increasing traffic.

For these reasons a large track of land was acquired adjoining the Canadian Pacific railway at Leaside junction. The idea was that an industrial town would grow up adjacent to the railway terminals similar to that which grew up adjacent to the yards of the Grand Trunk railway at New Toronto. With this end in view the property acquired was considerably in excess of the requirements for terminal purposes. The town of Leaside was incorporated by act of the Ontario Legislature in May 1913, and about the same time the land was subdivided for building purposes, a number of buildings were erected, but no railway development took place for about four years. Now, however, a locomotive house, locomotive shop, blacksmith shop, passenger car shop, stores and an office building have been erected. In addition to the railway shops

the town now boasts of the factories of the Durant Motor Car company and the Canada Wire and Cable company.

The townsite has been well laid out on the original plan. Provision has been made for industrial, retail business, and residential sections.

The original area of Toronto was 5,297.7 acres, but since its incorporation there have been some very valuable additions to its land and water area. At the present time the acreage of land amounts to 21,307 acres. Two of the most valuable additions to the city were the municipalities of West Toronto and North Toronto. A number of industries had been induced to locate in the city of West Toronto by reason of exemption from general taxes and similar causes, as already stated. These exemptions are to-day causing the rest of the citizens of Toronto to carry a larger burden of taxation than otherwise would be the case. Some of these exemptions will continue until 1933, thus permitting wealthy manufacturers to retain millions of dollars that would normally go to help reduce the taxes of the small homeowner.

#### **Industrial Area Necessary**

From a consideration of this brief study of conditions in but two growing Canadian centres, coupled with what we already know regarding Great Britain and the United States it appears that in the development of a new municipality provision should be made to set aside a definite area for the purposes of industry, this area to be provided with access to all railways, including the radial electric systems that pass through the municipality, and if the town is situated on a waterway the industrial area should be adjacent to the waterway.

Older communities possess many advantages which newer communities cannot duplicate. Existing cities should strive to maintain their advantages and to create conditions which will overcome their shipping disadvantages. To do this they must either bring the railroad car to the factory or take the factory to the railroad car. As in many of the great cities it is not possible to do the former the solution seems to be to create union manufacturing centres just outside of the congested area where the cars of all the railroads can serve the industries there. This arrangement not only protects the industrial welfare of the community adopting it but lessens the congestion in the city streets. Then instead of uselessly hauling back and forth between the railroad station and the shipping-room the crude material and the manufactured product only such portions of the fin-

ished product as are required for actual consumption within the congested area are hauled through the city's streets.

#### **Regional Planning and Metropolitan Control Desirable**

The endless conglomeration of annexed suburbs, where building has proceeded in hap-hazard fashion, is an expensive and most unscientific way to build up a city. It not only develops a fringe of painless ugliness near the city's rim that must later on be re-shaped to the general configuration of the urban area, but also adds seriously to the city's problems; especially those of transportation and public utilities.

Partly as a result of industrial decentralization in the immediate vicinity of Toronto a movement is on foot to incorporate the three self-contained satellite municipalities of York City, Mount Dennis, and Humbervale practically on the city's outskirts.

To meet the conditions of affairs incident to industrial decentralization with the weed-like growth of satellite communities and suburban areas there should be some form of metropolitan control involving co-operation with the outside municipalities. Annexation is not only unnecessary but is frequently not desired. In the three years ended with 1921, it is stated, Toronto added 16,000 to its population or 3½%, while the suburban area increased by 25,000 or at the rate of 47½%.

London, Boston, and other great cities are using Metropolitan Control Boards with great satisfaction, while Manchester, England, and New York are both preparing regional plans with a view to adopting this form of metropolitan control. In the case of New York a regional plan is now in course of preparation for New York city and the region within fifty miles radius of Manhattan, on the initiative of the Russell Sage Foundation, organized for the improvement of social and living conditions, and with the assistance of interested citizens.

The desirability of having regional plans prepared and later metropolitan control applied in connection with the great metropolitan areas of Canada is too obvious for further comment.

Without a common design, without a grand design, all our little bricks of reconstruction might just as well remain in the brickyard; for the disharmony between men's minds betokens, in the end, the speedy dilapidation of all they may build.

—Lewis Mumford. "The Story of Utopias".