

A Fact a Day about Canadafrom theDominion Bureau of StatisticsNo. 183. Fri. April 1, 1938 -- Dependency of Youth

A study of the earnings of Canadian wage-earners in the last three decennial census years indicates that the average young person on reaching the age of 20 in 1911 had earned twice as much as those reaching 20 in 1931. In the latter year the average accumulated earnings of a person's 'teens were equal to slightly less than one year's earnings of an adult male; in 1921 they had been the equivalent of 1.4 adult years, and in 1911 had equalled two. The actual accumulated earnings of young people on reaching their twentieth birthday under conditions of 1931 were \$892, a sum sufficient to have supported them for two years at the rate of \$37 per month. It might be said that they were independent on reaching the age of 18 in 1931, the age of 17 in 1921, and 16 in 1911.

A comparison of school attendance records in the same three censuses shows that the average child spent two more years at school in 1931 than in 1911. Whereas the child attended school for 6.58 full years under conditions of 1911 (10 months' attendance being taken as a full year), he spent 7.58 years at school in 1921 and 8.55 years in 1931. The same two-year increase is evident in the census records of the number of children attending school for some time during the census years; the average child under conditions of 1911 was enrolled in school for 7.96 years, for 9.13 years in 1921, and 9.89 years in 1931. Thus, the two years of added dependency as revealed by earnings were spent in school.

In 1911, the age for leaving school was 14.38, the age for achieving economic independence 16 years. The former rose to 16.25 in 1931, the latter to 18 years. Thus, there has been a continuous gap of approximately 1.75 years between the age of leaving school and the age when the young person is able to earn enough to support himself. School records of age of pupils in the years since 1931 indicate that the long-term trend is not yet broken. Pupils are remaining in school up to still older ages. If the tendency continues unchecked, young people will in a few years be dependent on parents at the age of 20.

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No. 184. Sat. April 2, 1938 -- Loss of Independence

The loss of independence has taken place entirely among young men and boys. Girls have actually gained in earnings while young men up to the age of 25 have lost 35 p.c. since 1911 and 27.5 p.c. between 1921 and 1931.

This loss of the male youth is only partially the result of being replaced in gainful occupations by girls and young women of the same age, females under 25 years of age accounting for only 6 p.c. of the 27.5 p.c. loss during the decade 1921-31, and 7 p.c. of the 35 p.c. loss for the twenty-year period. A greater part of the loss was apparently due to women over 25 years of age who obtained their jobs before the young men were old enough to work and have not relinquished them. These older women began at a higher salary than young girls do now and, during the decade 1921-31, were earning from two to five times as much as the younger ones.

Social effects of the increased dependency are suggested by the unusual fall in the marriage rate among the young people between 20 and 24 years of age (20 p.c. for men and 13 p.c. for women) as well as in the 100 p.c. increase in the illegitimate birth rate from 1921 to 1931.

The reduction in the earnings of young men of ages 20-24 between 1921 and 1931 was almost double the reduction for those in the 25-64 years age group, \$233 as compared with \$127. The earnings of the average woman in the younger age group went down \$87 a year while the woman in the older age group gained \$53 over the decade. The loss in the wages of the younger women was offset in part by the greater relative number of young women gainfully occupied, i.e., individuals worked for less but the group as a whole gained.

The drop in average wages for all ages between 1921 and 1931 was probably not a real loss since they fell only 12 p.c. while prices fell 18 p.c. Earners on the whole were probably better off, except for the youngest and oldest workers.

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No. 185. Sun. April 3, 1938 -- Effects of Competition

The development of large-scale enterprise has increased the proportion of wage-earners to independent workers. In 1911 only 60 p.c. of the gainfully occupied were wage-earners, but 80 p.c. of the new positions created since then have been in this category, with the result that the young men have been forced into the labour market where they have been obliged to compete with women and girls for office jobs and with more mature native and immigrant adults for heavier work. Girls and immigrants have obtained more than their share of wage-earning and salaried positions.

An attempt is made to gain a conception of the actual number of boys and young men of ages 15-24 lacking gainful occupation in 1936. The combined percentage of those without work due either to loss of employment or to never having been gainfully occupied appears to be over 16 p.c.; in round numbers, this group approximates 155,000, or one and one-half times the supply of new workers coming of age annually. Since nearly all of this group are non-farm boys, the average length of idleness for boys living in the city appears to be about two years.

Besides these there is the large number occupied on the home farm without making money. About 70 p.c. of farm workers are not receiving wages. These and many who are in school waiting for jobs have to be considered as possible applicants for new positions.

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No. 186. Mon. April 4, 1938 -- The Cost of Children

An attempt is made to estimate the cost of different items involved in raising a child to the age of independence. It appears that about \$1,550 is required, under conditions of 1931, to feed a child until he is 18 years of age, while clothing for that same period costs about \$800 and shelter over \$2,000. Health, recreational and social costs total about \$600, schooling about \$750.

The cost of an elementary schooling to the community is \$500 per pupil while a high school education requires about \$1,050. The cost of supporting a student in



the universities of Canada is much higher, \$550 being required to pay for one year's schooling. Although only 3 p.c. of the young people attend university, the high cost of such an education raised the average cost to the community to \$690 per average child. When the cost of books and other school equipment as met directly by the parents is added, the total sum required to educate the average child is in the neighbourhood of \$750.

The total cost of rearing a child until his eighteenth birthday is then \$5,750 of which \$4,350 or 77 p.c. is spent on satisfying elementary physical needs, 10 p.c. on health, recreational and social costs and 13 p.c. on education. It costs no more to raise six children and give them an average schooling than to raise seven completely illiterate.

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No. 187. Tues. April 5, 1938 -- Repaying the Cost

How long does it take the average child to repay society for the cost of his rearing, i.e., how many years does he require to earn an income sufficient to balance the amount expended on him during the period of his earlier dependency? Although the young man would be unable to repay the \$5,750 by the time of his marriage, at the age of 27, the combined earnings of his wife and himself equal at age 31 the principal outlay for their rearing but do not account for the interest which has accumulated thereon. The average man in Canada was earning \$927 in 1930-31, which meant that he would have had to spend his total salary for six years to repay the expense incurred by society in rearing him for his first eighteen years.

In the provinces where there are more children in proportion to the rest of the population, their cost must fall more heavily on the comparatively smaller adult population. This is reflected in the shorter average schooling of children in these provinces. Quebec, which has the largest proportion of its population under 18 years of age (43.27 p.c.) has the lowest average school attendance (7.78 years), while British Columbia and Ontario, with only 30.11 and 34.67 p.c. of their respective populations under 18 years of age have an average length of attendance of 9.15 and 9.20 years respectively.

Rural families are larger in size than are urban, (3.22 children per average rural family to 2.68 per urban) but many rural children go to the cities as they reach maturity. This trend is a steady one, 50.14 p.c. of the population at 10 years of age living in rural districts as compared with 41.26 p.c. at the age of 30. It would appear that about 15 p.c. of the rural-raised children become urban dwellers. Since schooling amounts to only 13 p.c. of the total cost of raising children, it is of interest to note that if urban dwellers paid the entire cost of schooling all rural children, they would only be paying the equivalent of the cost of rearing those who in adult years become their residents and supporters.

No. 188. Wed. April 6, 1938 -- The Cost of Schooling

Although it amounts to only one-seventh of the total cost of raising a child, the cost of schooling is the part which receives the most attention, probably because it is made out of public funds.

Estimates, based upon two entirely different standards of measurement, indicate that Canada's National Income in 1930 was somewhere between \$4,600,000,000 and \$4,750,000,000. Hence, \$165,000,000, the sum spent annually on the schools in recent years, amounts to only 3.5 p.c. of the annual national expenditure. About 55 p.c. of our annual income seems to be spent on satisfying the primary wants of man-- food, clothing and shelter-- including a certain amount of indirect taxes. Direct taxes, from which the greater part of school funds are obtained, amount to 7 p.c. Allowing 8 p.c. put aside as savings, 30 p.c. remains for expenditure on other things, including indirect taxes on them. The amount spent for churches, motion pictures, health, etc. is included.

The estimated value of Canadian schools and universities is approximately \$600,000,000, a sum equal to about 2 p.c. of our total estimated national wealth. The indebtedness of the schools amounts to more than half their estimated value.

On making a comparison of the cost of education in 1913, the last entirely pre-War year, with that of 1931, an increase of 160 p.c. is noted, \$54,000,000 being spent in the former year on publicly-controlled elementary and secondary schools in contrast to the \$140,000,000 spent in the latter. Since the population increased by only 40 p.c. in the same period, it might appear that education is more expensive now than formerly, but on closer examination, it is seen that such a conclusion, based on a comparison of dollars, is misleading.

#### No. 189. Thurs. April 7, 1938 --- More Instruction

Among the factors tending to exaggerate the rise in the cost of education is the changed value of the dollar. The price index in Canada rose from 66 in 1913 (1926 = 100) to 89.6 in 1931. Thus, in inverse proportion to the lower purchasing value of the dollar, the cost of schooling rose 91 p.c. and not 160 p.c. Still another factor is the failure to take into consideration the increase in enrolment from 1,438,000 to 2,214,000 which lowered the average cost per pupil by 30 p.c. Average daily attendance rose from 942,000 to 1,756,000, which viewed in the light of the other two factors, the "real" value of the dollar and the increase in annual enrolment, shows a net increase in cost of 2 p.c. over an eighteen-year period. The school year was lengthened by 10 days which made schooling in 1931, in terms of the reduced purchasing value of the dollar, even cheaper than it was in 1913. Lastly, in comparing the quality of schooling given for those two years, we must consider the increased proportion of pupils who are obtaining secondary schooling. It costs twice as much per year to educate a pupil in the high school as in the elementary school. Therefore, education, in terms of "real" dollars, amount of schooling received and type of services rendered, was 10 p.c. cheaper in 1931 than in 1913.

In addition to the pupils getting more instruction per dollar, they are probably getting a better quality of instruction. The teachers' qualifications are much higher. In an examination of the statistics on teachers' professional standing, it is seen that whereas only 17 p.c. of the teachers in 1913 had first class certificates, 38 p.c. were in possession of them in 1931. The proportion of teachers holding second class certificates rose from 50 to 55 p.c., while certificates of the third class or lower were held by only 7 p.c. of the teaching body in contrast to the 33 p.c. in 1913. Of the latter class 9 p.c. had no recognized professional standing in 1913 whereas almost all the teachers had a recognized standing in 1931. This higher standard is not only evident in the certification but also in the higher qualifications required to obtain the same certificates. Higher academic standing, more normal school



training and summer school courses have all contributed to improve the teachers' professional equipment. The tendency of teachers to stay in the profession for a longer time, as well as better buildings, equipment and facilities must have tended to improve the quality of education given to the modern younger generation.

Although the pupil was given a better deal for his money in 1931 both in quantity and in quality, it does not mean that it was easier for the taxpayer to support the schools. In terms of the purchasing power of the dollar, school costs went up 91 p.c. in the period. Although there were more gainfully occupied persons to share this burden, it cost the average gainfully occupied person 41 p.c. more in the later year.

Due to the unequal distribution of population and of children, educational costs fall more heavily on the shoulders of the rural population. Violent fluctuations in the prices of primary products affect the smaller urban and the rural communities more acutely than they do the large urban centres depending on a more diversified economy. The only solution to this problem seems to lie in the creation of a larger unit of school support with the cost equalized over all the communities in the unit, urban and rural, large and small. Although the province would be the most effective unit, two things stand in the way-- the hesitancy of the local school boards to yield their autonomy to Provincial Governments and the inability of the provinces to assume the greater financial burden involved. A redistribution of responsibilities or powers of taxation among municipalities, provinces and Dominion may be necessary to solve the latter problem.

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No. 190. Fri. April 6, 1938 -- Influence of Mother

Children living with their mother only have a slightly better school attendance than children living with both parents, in contrast to which, children living with their father only have a poorer attendance record. While the literacy of children living with their mother only is not as good as that of children residing with both parents, it is nevertheless superior to that of children living with their father only.

Where the parents are both literate, there is a high degree of literacy among their offspring. When only one of the parents is literate, illiteracy is fifteen times as great as when both parents can read and write, but when both parents are illiterate, there is forty times as much illiteracy as in the first case.

Children of immigrant parents, including those who came from Continental Europe, are less illiterate than are native Canadians. Those whose parents are from the British Isles have the best record, with those of United States parentage coming next.

The distribution of guardianship children among the provinces varies, the Maritimes having a higher proportion of children who are not living with their own parents than the other sections of Canada. Among the factors which affect the distribution are the differing rates of illegitimate births, maternal mortality, rural-urban distribution of population and the extent to which orphans can be accommodated in the different provinces. The age distribution reveals that there are more orphans in the higher age brackets than in the lower, a natural occurrence.

Children living with their own parents have a better school attendance record

than have guardianship children; there is also less illiteracy to be found among the former group. Relatives give their wards a better schooling than do strangers, while women are better guardians in this respect than men, and older men have a better record than young men who have to care for their younger brothers and sisters.

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No. 191. Sat. April 9, 1938 -- Influence of Guardianship

There is more illiteracy among children of illiterate guardians than among literate ones. Since close to one-tenth of the guardians are illiterate, this tendency is significant. Children with guardians coming from the British Isles have the best record of schooling, while native Canadian guardians are most neglectful in educating their wards.

Children living in institutions such as orphanages, hospitals and shelters are more numerous at school ages than at younger ages. They are fewer in number than those living with foster parents. Quebec has relatively more than the other provinces, possibly because of the existence of a larger number of such institutions in that province.

The special 1931 Census of Institutions shows that there were approximately 35,000 children under the care or supervision of charitable institutions of whom two-thirds were under 15 years of age. Of these 35,000, 19,643 were in residence at these institutions, 7,085 were working for wages and were living in private homes while being under the surveillance of the institutions, 3,479 were quartered in private homes free of charge, while 2,300 had their board in private homes under supervision of the Children's Aid Societies. The same census disclosed 2,731 under the age of 15 in the mental hospitals of Canada while the reformatories housed almost 1,000 children who were under that age.

Orphanages account for a large proportion of those living in institutions, and there is more detailed information on the schooling of their protégés. Some conduct schools while others send the children to the ordinary publicly controlled schools. A comparison of the age-by-grade records seems to show that orphanage children do not make out as well as other children in their school work. Their average grade falls more and more behind the average for others as they become older, but this is probably because the brighter children tend to be placed in private homes.

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No. 192. Sun. April 10, 1938 -- Youthful Dependency Resulting from Defects

A certain proportion of youth is dependent to an exceptional degree, by reason of defects. Blindness is first considered but it is not often an affliction of the young. There were only 634 people blind under the age of 20 in 1931; among older persons there were 6,679. Less than one-fifth of the blind were gainfully occupied with the average earnings among men being between \$500 and \$600 and those of women between \$300 and \$400. That blindness incapacitates most individuals to the degree that they become entirely dependent is to be seen from the fact that only 37 p.c. of the blind between the ages of 25 and 49 are gainfully occupied. Special schools and special classes have contributed greatly to increase literacy among the blind,



as well as to prevent those with poor vision from becoming entirely blind.

Of the 6,767 deaf-mutes recorded in the 1931 Census, 6,000 had suffered from the inability to speak or hear before they had reached the age of 5 while 4,093 had been born deaf and dumb. Almost one-third of the deaf-mutes were in gainful occupations. Not only did the deaf-mutes have a higher percentage of gainfully occupied than the blind in the best earning years but they also earned more. Despite these higher proportions, they were insufficient to make the group as a whole independent.

Schools for the deaf are provided by the Provincial Governments and have a combined enrolment of 1,400 pupils. Special classes for the hard-of-hearing are also contributing to the alleviation of the inconvenience and distress suffered by those handicapped by auditory disabilities.

Although there are no census data on the number suffering from other physical defects, such as loss of the use of limbs and constitutional weaknesses, statistics on special classes in schools and hospitals indicate that they are as numerous as those suffering from defective hearing. In addition to those attending special classes, many, unable to attend these schools, are taking correspondence courses offered by six of the provinces.

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No. 193. Mon. April 11, 1938 -- The Mentally Sick

Two-thirds of the patients in mental hospitals in 1931 were admitted before they had reached middle life. There are now several institutions for children. Illiteracy is more common among those admitted to the hospitals in their earlier years than among those who have reached maturity prior to admission. This indicates that the causes for incarceration of the younger people are different from those affecting the older people, constitutional defects being a greater factor in the former case, environmental factors in the latter. Almost half of the female inmates are married, but only about one-fourth of the males, a condition which probably has significance in regard to hereditary types of mental cases.

Special classes for mentally defective children are now being conducted in cities from coast to coast, and though they are more expensive per pupil than other classes, it is claimed that the results obtained justify the investment.

Delinquency is to juvenile behaviour what crime is to that of the adult. When leading to incarceration it means dependency. It is more prevalent in urban districts than in rural, with the large city having relatively many more youthful misdemeanours than the town or village. The annual number of convictions for major delinquencies is over 5,000. There has been some increase in proportion to population though not as much as in the case of adult crime. The number under the age of 18 continuously confined to corrective institutions is approximately 2,500, roughly three-fourths boys and one-fourth girls.

No. 194. Tues. April 12, 1938 --- Deeply Rooted Problem

In the Dominion as a whole youth has for fifty years constituted a decreasing proportion of the total population. In 1931 there were only 51 persons under the age of 16 for each 100 older, whereas in 1881 there had been 68 per 100. But if we consider the older ages to which young people now remain children, economically speaking, the change in ratio is in the other direction. It is recalled that they were dependent until 18 in 1931, whereas twenty years earlier dependency had ended at 16. Considered in this way, the ratio of children to adults in post-War years has probably been higher than ever before. At the same time that the real ratio of youths to adults increases, so does the ratio of aged adults to those in middle life.

Old age pensions have been a recognition of the increase in dependency at the upper end of life, but there has been no comparable measure directed against the change at the lower end, even though Canadian industry in the last ten years has absorbed only the youth who have come of age in nine years, and in the last twenty years only those who have come of age in eighteen years. The fact that industry for so long has come 10 p.c. short of using the biological supply of youth, should make it clear that the youth situation is not just a depression phenomenon but a deeply-rooted problem.

Among the better-known solutions that have been attempted or recommended, here or in other countries, are compulsory military service, labour camps, forced retirement of older workers, restrictions on immigration and employment of women. It is hardly possible for this study to express preference among such controversial solutions but a lesser known remedial measure can be described.

In Great Britain a special service to youth is conducted through the medium of the employment service. There is a juvenile section in each employment office which works in close co-operation with the schools, advising young people before as well as after leaving school. For juveniles above school age who are without work, there is in each city a "junior instruction centre," quite distinct from the ordinary school system, being under the supervision of the Department of Labour. Effort is not confined to finding jobs, but attempts to find for each young person the position for which he is best fitted. In short, vocational guidance for youth is organized on a national scale. It might be to the advantage of employers as well as young people in Canada, if it received more attention here.

No. 195. Wed. April 13, 1938 --- Social Welfare Trends

Since the opening of this century, there has been a fairly steady expansion in the assumption, as a public liability, of the welfare needs of the people. This development seems part of a world-wide tendency following upon the fundamental changes in community and social life which the Industrial Revolution began and which the war and technological change have accelerated in recent decades.

In Canada, this development has meant a rapid growth in public expenditures on the social services, particularly in the fields of public health and public welfare, by municipal, provincial and even federal authorities. At the same time, this expansion in public costs has not been accompanied by any marked contraction in the disbursements of private philanthropy. As a matter of fact, in the field of social services proper, voluntary philanthropy has probably expended more funds and efforts



in most Canadian communities during the last decade than in the preceding two decades. Especially in connection with hospitals and charitable and benevolent institutions, voluntary effort continues to discharge a very large share of responsibility in day-to-day management, even where statutory provisions assure the larger part of operating costs from public funds.

These tendencies, already evident in the post-war period, have been intensified in this decade of economic distress, with the result that not only has the participation of provincial and municipal authorities in public welfare changed in nature and extent, but the Dominion Government has assumed liabilities beyond the concept of fifteen years ago.

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No. 196. Thurs. April 14, 1938 -- Contributory Social Changes

The social changes contributory to these developments have been accompanied by equally significant changes in the nature of the services provided. Traditionally, the Poor Law of England provided the basis of public welfare administration in Canada, and under its influence the provinces, settled for the most part by British people, relegated to municipal responsibility the custodial care of the needy and distressed. The practice of the French-speaking parish was essentially similar, but modern trends have moved away from such concepts. Mothers' Allowances, the granting of aid to the needy mother and children in their homes, superseded care in children's homes, orphanages or almshouses; Old Age Pensions substituted similar care for institutional care of the aged; while the out patient department and the provision for medical care of persons living in their own homes is an equally significant development in respect to hospitalization care. Recent unemployment relief and other provisions have been away from the almshouse. Even where institutional care is needed, admission is but a step to observation, treatment and placement again in the community if at all possible. This is the basis of "shelter care", increasingly recognized in the care given by children's homes and orphanages.

While these services are provided as definite and permanent features of community life, the care given therein is not necessarily accorded on a permanent basis. In children's agencies the turn-over is likely to be rapid, though the total population in care may be fairly comparable over a period of years. Care in homes for the aged or for incurables, on the other hand, is on a more continuing basis.

The last five years have brought a new group of custodial services into existence in some of our larger cities-- hostels and shelters which care particularly for the non-resident man and, in some cases, for women similarly placed. This type of care arising out of the depression has been provided largely on an emergency basis and at the public cost.

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No. 197. Fri. April 15, 1938 -- Lumber Drying

Research conducted by the Forest Products Laboratories of the Department of Mines and Resources, and similar organizations in other countries have played an important part in improving lumber drying. The drying of lumber for different purposes and for export markets is one of the most highly scientific processes in the

manufacture of lumber.

A drying treatment must be worked out for each species as no two kinds of timber contain the same amount of moisture. For example, a thousand feet of Canadian yellow birch when freshly sawn weighs about 4,700 pounds, of which about 2,000 pounds is water. When this wood is dried for use such as furniture, the 2,000 pounds of water is reduced to about 190 pounds. Some species contain even higher proportions of water and some, much lower proportions. Douglas fir, a particularly dry wood in the standing tree, contains only about 900 pounds of water per thousand feet.

For commercial use it is not necessary or desirable to remove all water, for if this were done the lumber would take up moisture from the surrounding air. In order that wood used for furniture, and other purposes, may not shrink or expand unduly, it is necessary that the wood be dried to the proper degree. If the drying is not done carefully, losses of twenty per cent or more of the value of lumber may result from checking, warping and bowing. In a year's operations, these losses may amount to, in Canada, from five to ten million dollars, if seasoning conditions are not favourable. The requisite amount of drying varies greatly in different countries, depending on whether the climate is as a rule dry or humid.

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No. 198. Sat. April 16, 1938 -- Nepheline Syenite

Marked progress is reported by Canada's nepheline syenite industry with the value of production in 1937 amounting to \$121,481 compared with \$37,426 in 1936. Production of the new ceramic material was begun in 1936.

Established to produce material for the domestic glass-making industry, the industry has been a success from the start, and has found a ready sale for its entire output. Last year the capacity of the processing plant at Lakefield was increased from an initial rate of twenty tons daily to forty tons daily, and extensions were made to the quarry plant, which brought the producing capacity of the present installation up to 400 tons of shipping rock daily.

Active prospecting of the same general region has been carried on, and several deposits of promise have been located. Three of these properties were operated in 1937, with a total output of about 2,000 tons of crude syenite.

According to the Department of Mines and Resources, Ottawa, the large deposits of nepheline syenite which occur in Peterborough, Hastings and Haliburton counties have been known for many years, but it is only in recent years that their economic importance was established. Although interest in the mineral at present is centred chiefly in its use in the glass industry, research has shown that it is suitable for several other ceramic uses, including semi-vitreous and sanitary ware, and sheet-steel enamels, and it is probable that the field of use will be still further extended.

Nepheline syenite from the Ontario deposits has already become a serious competitor to straight feldspar, which mineral it may progressively supplant for various ceramic uses.

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No. 199. Sun. April 17, 1938 -- Ants As A Nuisance

The tiny active insects known as ants are especially numerous in the summertime and are frequently unwelcome intruders in homes and gardens. There are many species of them, all are social in their habits, and live together in colonies. The majority of the ants in a colony and the ones most commonly seen are wingless undeveloped female workers, which are incapable of reproducing their kind.

A common and troublesome household species is the tiny reddish-yellow Pharaoh's ant, which originated in the tropics but is now widespread in Canada. The common large black carpenter ant is normally an outdoor species nesting principally in decaying wood, but frequently occurs in dwellings, particularly frame houses and summer cottages, and may cause damage to woodwork. A third common species is the small yellowish-brown lawn ant, which nests in lawns and gardens and often enters houses in search of food.

According to the Division of Entomology, Science Service, Department of Agriculture, Ottawa, the most satisfactory material for destroying ants is sodium fluoride, sold by druggists in the form of a fine white powder. This powder should be scattered or blown with an insecticide puffer or dust-gun in places where the ants occur, and should not be removed until the insects have disappeared. Sodium fluoride is a poison and should not be exposed in places where children or pets may have access to it. Another method, recommended as particularly effective against Pharaoh's ants, consists of using a poisoned-bait trap. This is made by punching several holes in the sides of a small tin can with a tight lid, and placing in it a small piece of sponge and a small quantity of syrup prepared by mixing 4 ounces of sugar and  $\frac{1}{4}$  ounce of honey in one-half pint of hot water, and adding  $\frac{1}{2}$  gram of sodium arsenite. The worker ants are greatly attracted to the bait and take it to their nests to feed the larvae and queen. Thus the whole colony is destroyed. Sodium arsenite is very poisonous to humans.

The nests of the ant colonies may be destroyed by puncturing holes in the surface and pouring in a small quantity of carbon bisulphide. Heavy gas is given off by this liquid and its effect may be increased by covering the nest with an old coat or sack. Care should be taken not to expose carbon bisulphide near fire as it is very inflammable.

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No. 200. Mon. April 18, 1938 -- Railway Transportation

John Ruskin described railways as "the loathesomest form of devilry now extant; animated and deliberate earthquakes, destructive of all nice social habits or possible natural beauty; carriages of damned souls on the ridges of their own graves".

The view of that great writer corresponded with that of the unsophisticated Nova Scotian farmer who, when he saw for the first time a locomotive rushing along in the darkness of a moonless night, scattering sparks above and hot cinders below, declared it was "hell on tracks".

Today a model locomotive and train of cars is a cherished plaything and few small boys are satisfied until they run a train of cars; to them it is something majestic. Ruskin notwithstanding, the traveller of today marvels at the comfort of modern transportation equipment, and glories in the rounded contours of the hills, the beauty of the valleys and the landscape of our rivers and lakes as he journeys by rail.

Until the year 1785 the methods of transportation in vogue in America were

almost as primitive as they were two hundred and fifty years before when Jacques Cartier sailed up the St. Lawrence. Canoes, rafts, flatboats, barges and small sailing craft, the horse and mule, the oxcart and covered wagon, and in some small degree the stage coach, were the only means by which persons and property could be transported from place to place. Trails and roads were at times hazardous, if not impassable, and always expensive and slow. Water routes often involved portages around rapids and falls and between head-waters of streams.

The invention of the steam engine by James Watt in 1773 attracted the attention of advanced thinkers to a possible steam locomotive. Erasmus Darwin, the grandfather of Charles Darwin, in one of his poems made this remarkable prediction:

"Soon shall thy arm, unconquered steam! afar  
Drag the slow barge or drive the rapid car."

Contrast this with the solemn warnings of contemporary scientists who said that human beings would suffocate on a vehicle travelling faster than fifteen miles per hour.

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No. 201. Tues. April 19, 1938 -- The First Canadian Railway

The first charter granted to a railway in Canada was that of the Company of the Proprietors of the Champlain and St. Lawrence Railroads, in 1832. This railway, only sixteen miles in length, and with a gauge of five feet six inches, was built from Laprairie on the St. Lawrence River to St. Johns on the Richelieu with the object of securing speedier communication between Montreal and New York by a mixed rail and water route. It has the distinction of being the first passenger railway in Canada and was opened in 1836. On the occasion of the opening, the train consisted of four cars drawn by horses and the following year the locomotive "Dorchester", more familiarly known as the "Kitten", was put into service. The first railway president was the Hon. Peter McGill and the first railway return presented to the Legislature of Canada was that of this railway and is to be found in the Legislative papers in 1845. For the year 1842 the return showed 27,000 passengers and nearly 8,000 tons of freight. The gross receipts were \$68,000 and the expenditures \$53,000.

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No. 202. Wed. April 20, 1938 -- Development of our Railway System

The real start in railway construction began at the middle of the last century. A score of railways were opened from Nova Scotia to Western Ontario, and while they have since largely lost their original names they nevertheless form in most cases a part of the two present large railway systems.

Railways had much to do with the development of the Confederation plan. In 1867 the provinces of Ontario, Quebec, Nova Scotia and New Brunswick were welded into a national entity-- the Dominion of Canada-- and, as one of the prices paid for the entry of the Maritime Provinces into Confederation, the Intercolonial was started. Later on, the bargain for the entry of British Columbia, was the building of the Canadian Pacific to the coast. Important links were also made with the United States.



The early years of the present century formed a period of feverish activity. The newly born Canadian Northern and the Grand Trunk extended their systems. The second year of the Great War, 1915, was marked by the completion of the Grand Trunk Pacific to Prince Rupert and that of the Canadian Northern ending at Vancouver.

As the world war opened the railways of Canada spanned the continent by means of six different routes, three situated for the full distance in Canada except the C.P.R. link across the State of Maine and the Canadian Northern along the north-eastern edge of Minnesota. The desperate financial condition of the Canadian Northern, Grand Trunk and Grand Trunk Pacific led to their incorporation with the Inter-colonial and National Transcontinental and the other government railways into the Canadian National system controlled by the Dominion Government, the last step of which was taken fourteen years ago. Following this the principal railway extensions in Canada have been the Hudson Bay Railway, which reached its terminus at Churchill, and the Temiskaming and Northern Ontario, which reached the waters at James Bay, named after its discoverer three hundred years before.

Railway mileage in Canada has increased from 16 miles in 1836 to over 42,000 in 1936, or exactly one century later. The population per mile of railway is about 245.

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No. 203. Thurs. April 21, 1938 -- A Good Record

Railroads are justly proud of their safety record. In a period of remarkable developments in all forms of transportation, riding in a passenger train is about the safest thing one can do. Last year there was but one passenger killed in three and a half million passengers carried whereas over twelve hundred deaths resulted from automobile accidents, or over one death per thousand registered motor vehicles.

Railways have always been very progressive and, according to report, what we may look forward to, now that streamlining has become an accomplished fact, is the electrically welded continuous steel rail. This will eliminate the click-click, one click for each car wheel and each thirty-nine feet of rails. It will mean smoother riding for the passengers and longer life for the rolling stock.

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No. 204. Fri. April 22, 1938 -- "Spare The Rod and Spoil The Child"

One afternoon a while ago as we were doing some tall thinking in order to make a start on an evening's radio talk, a visitor walked into the office, and, after the usual friendly salutation, inquired what the next broadcast was to be about:

"Spare the rod and spoil the child", he was told.

"There is nothing in that", the visitor commented. "I never got a licking from my father."

The obvious retort was: "Now, if you had, a better man you might have been."

So far as our experience goes, it is unusual to come across a man approaching

middle age who has never been spanked. If it was right that he should have escaped the tawse, then he must have been a model boy-- or his father a man who believed other methods more effective.

No philosopher has had so much influence on the thinking of the Western world as Solomon-- leaving aside the Divine, of course. No thinker or writer has swayed opinion so powerfully as **has done the great solon** of Israel. He must have had a marvellous experience with children. The records tell us definitely about his huge household of wives, but omit any calculations as to the number of children in his nursery. It would be interesting to know just how many he had. We cannot tell, but it seems perfectly safe to say that no man in mediaeval times, or since then, has been the acknowledged father of so many youngsters as he **must** have had.

What did Solomon say? Here it is, plainly set out: "He that spareth his rod hateth his son, but he that loveth him chasteneth him **betimes**."

There you are. If you are so inclined you can call Solomon's rod symbolical and take it that he meant punishment in any form that that very wise man considered most likely to be effective in correcting a wayward child.

Without allowing ourselves to be mixed up in any argument on the subject of parental discipline in the school or in the home, or getting into a discussion upon the merits of this or that method in general or what should be done in particular cases, there are some facts that can be cited from statistics which show what happens when errant youth is not rigidly disciplined in some way or another.

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No. 205. Sat. April 23, 1938 -- Criminal Statistics Make It Clear

It will be admitted that Canadian children of today, generally speaking, are not subjected to the same stern corporal punishment for wrong doing that used to be the lot of Canadian youth. The change has been quite pronounced in the last quarter of a century. We have seen a schoolmaster, the chap who belongs to the one profession outstanding among all those that try the patience-- we have seen a schoolmaster hauled into court for giving a hiding to a young devil of a boy who had created an unendurable situation. A clever lawyer made the poor schoolmaster look like a savage monster. We have seen community feuds worked up over such a trivial incident. Public opinion seems to be against corporal punishment except in extreme cases. A great many school teachers have themselves taken that stand.

So if we assume that the birch rod is simply a symbolic term for punishment or discipline, we shall understand clearly what criminal statistics reveal. You can substitute for "spare the rod and spoil the child" something like this: "He that neglects discipline will ruin his child; he that withholdeth discipline is an enemy of his boy or girl."

Our Criminal Statistics Branch makes this very positive when it says: "While reasons for Juvenile Crime have never been compiled, due to the fact that this kind of information is difficult to get, as it is not given at all in the returns of Magistrates, and very scantily covered by some Juvenile Courts, still the lack of discipline at home is a big, perhaps the outstanding reason for Juvenile Crime."

"In one Maritime City, out of 97 cases for which the reason for a Juvenile being arrested was given, 73 cases, or roughly 75 per cent, were attributed to lack of



discipline at home. In another Maritime city, lack of parental control was shown as the underlying reason for delinquency in 100 per cent of all given cases.

"In a group of five Ontario cities, reasons for 240 delinquencies were given, out of which 130 were attributed to lack of parental control.

"One Ontario City shows that 58 out of 62 delinquencies were stated by the authorities as being due to lack of discipline at home."

Pity the poor children - especially the child in the small family. The small family, to very many people, has become the dominant view of domestic happiness. The one-child family enables parents to have more leisure for pleasure-seeking social activities. The mother, in these more regimented days of domestic duties, can leave her home more frequently than the mothers of a generation ago, with their larger families, were able to do. The constant outing becomes a fixed habit. The child is neglected—often left in the care of unskilful and irresponsible domestic help, and more often left alone. The child runs the streets, in touch with influences that are not good.

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No. 206. Sun. April 24, 1938 -- Passing the Buck

Parental responsibilities have been passed on, to some extent, to the courts, and particularly to the juvenile courts. It has been found that the establishment of juvenile courts, more especially in the cities, leads almost invariably to a decline in the number of juveniles brought before the courts and convicted. The records show that 8,425 children were found guilty of various offences in 1930 and six years later the number had dropped to 7,210. That was a betterment of over one thousand. Of course a great many more than that were before the courts.

Before the establishment of Juvenile Courts, juveniles were tried in the regular manner, sentenced to reformatories, etc., but a large number were given suspended and other sentences, which just put them back into the homes or under the same influences which caused them to stray into crime in the first place.

In England many years ago, the Criminal Law showed but little tenderness towards children. Up to the age of seven, a child was presumed incapable of felonious intent but a youngster of eight years who had "with malice, revenge, craft and cunning" set fire to a barn, was convicted of felony and duly hanged. Even as recently as 1833 a boy of nine years was sentenced to death for stealing an article of the value of four cents.

Children were in all respects treated by the criminal law as adults. Thrown into gaol to await trial they came in contact with hardened criminals. If finally declared innocent, there could have been little innocence left after a prison experience. The use of the rod was such an obsession in olden times that Royal families kept a "whipping boy" who carried out the abominable duty. Read "The Fortunes of Nigel."

But that has all been changed. Children who have broken the law are summoned to appear at a juvenile court where a sympathetic judge tries to gain their confidence by a friendly, personal talk. The causes and circumstances leading to the misbehaviour are receiving attention. Punishment is not going to correct home

conditions or some physical or mental defect.

The establishment of juvenile courts and the attendant probation systems includes the study of family relations by the courts through their clerks and probation officers.

Thus many cases, where lack of discipline at home due to carelessness, trouble between parents, death of one or both parents, was the cause of crime, are now placed under the control of probation officers, of Boy Scouts, Big Brothers, Big Sisters and other social work organizations, where much of the discipline, etc. lacking formerly, is given, with the result that many potential criminals, due to the example and discipline of those organizations, do not come back to the courts.

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No. 207. Mon. April 25, 1938 -- What Statistics Tell Us

To show the situation clearly let us compare the record of 1936 with that of 1935. There was a marked decrease in the number of cases brought before the courts. The decrease totalled over six per cent. There were increases in Nova Scotia and Ontario but these were more than neutralized by decreases in all the other provinces. There were 8,768 cases brought before the courts in 1936 and 9,397 in 1935; 4,970 were convicted of major offences compared with 5,514. Of these 4,970 convictions for major offences in 1936, 4,774 were boys and 196 girls. There were 1,950 boys convicted in Ontario alone.

About half of the children charged with major offences were released on probation under supervision of the court, while 36 were returned to their parents, 559 were sent to industrial schools and 57 were given corporal punishment. The small number given the lash illustrates the trend in our attitude towards corporal punishment. The courts, quite apparently, do not believe that it is an effective remedy in very many cases, comparatively speaking. Over 400 of the children were simply reprimanded, and no doubt the wise judges saw that the experience of arrest and appearance in court was a sufficient deterrent.

Among the major offences, theft and robbery were by far the most numerous. These accounted for over four thousand. Next in order came wilful damage to property. Fifteen were convicted of arson and over one hundred for assault. There were fewer than one hundred found guilty of charges which had to do with immoral conduct. One boy was guilty of manslaughter. Some boys tried to wreck trains.

Repeaters of major offences in 1936 were more than for the average year. One out of every three had been in court before. One out of every seven had had one previous conviction and one out of every six had been more than once convicted by the courts. These were probably the incorrigibles.

Thirty-four boys and one girl committed major offences at the early age of seven. Of the 46 boys who were in Grade 1 at school, four were 13 years old and 10 were 7. About one thousand of them gave no degree of education at all.

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No. 208. Tues. April 26, 1938 -- Major and Minor Offences

The line of demarcation between what we call major offences and minor offences is very thinly drawn. Some of these minor offences we are accustomed to regard as quite serious in children. Cruelty to animals, carrying fire-arms, disorderly conduct, drunkenness, gambling, indecent conduct, profane language, setting fires, ringing false fire alarms, all these come under the category of minor delinquencies. So do some other things such as riding a bicycle on the sidewalk, having no light or bell on the bicycle, playing ball in the street, driving a car under age. These do not occur to us as serious and the mere checking of them is usually sufficient to prevent repetition.

Last winter a boy was given an air gun as a birthday present by his father. The boy proceeded to plug holes in the storm windows of a neighbour's house. Was the father not more to blame than the boy? We started out by saying "spare the rod and spoil the child". Pity the children.

Although it is to the United States that the credit of developing the system of Children's Courts is mainly due, the earliest enunciation of the general principle has been traced to Switzerland. There are now eleven European countries which have established Children's Courts and others are quickly following. The age up to which they exercise jurisdiction varies. In Spain, for example, the age is 15; that age in Spain marking a degree of physical development equivalent to 18 in northern countries. In Europe, as in America, the balance of experience and opinion favours the age of 18.

Even in India, where we consider children as being ushered into adulthood far too soon, the question of children's courts has been taken up zealously.

With the world as a whole taking this problem seriously it will not be possible for an affectionate mother to come to the hospital and say, "Our Emily can't tell the truth because she has got adenoids", and if she were right, what then?

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No. 209. Wed. April 27, 1938 -- Is This a Portent?

The Prairie Census of two years ago presented us with something new in the movement of population, which may or may not be a portent of the future. It may simply be a reflex of temporary conditions which were in existence during and because of the great depression. It was at any rate enlightening to discover that the population of the urban centres had been decreasing since the census of 1931 and that of the rural districts had been increasing. Whether it has been a real back-to-the-land movement, time alone will tell. Yet there are indications enough that the future of country, or farm life to put it more nearly correct, is going to exhibit some remarkable changes in practice and, no doubt, also in outlook.

The change that has taken place in the Prairie Provinces is very different from what has been the experience of older Canada. In the early days when Canada was young, and it was a country almost entirely of farmers and hunters, particularly along the banks of the St. Lawrence, the great farms were split up until they could be divided no longer. With the arrival of the machine age, the question of hired help became less pressing, the villages and small towns stood still or decayed, and the young men and women moved to the cities for employment.

The machine age had made changes in the cities. Factories began to thrive as never before. All business was expanding and there was a call for workers. The country was being depopulated.

Once the situation became stabilized, the rural population in older Canada continued big enough to be equal to the demands the agricultural holdings made upon it. Broadly speaking, the country population has been maintained in recent years.

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No. 210. Thurs. April 28, 1938 --- A Reversal

The experience of late in the Prairie Provinces is a reversal of what happened in older Canada. Whereas in the East people left the country and went to the city, in the West many people are leaving the city and going to the farm. The movement is so pronounced that there is no doubt about it.

During the five years prior to the Prairie Census of 1936, the number of country dwellers in Manitoba increased by 16,000, in Saskatchewan by 30,000 and in Alberta by the very large number of 34,000. Incidentally the rural inhabitants of these three provinces far exceed the urban dwellers, so that agriculture is in a very real sense the basic industry.

Of course, underlying economic conditions should be kept in mind in interpreting the changes in population recorded by the census. There has been a movement of rural population from southern Saskatchewan to the northern part of the arable belt in that province and a pronounced movement to the northern agricultural areas of Alberta. Alberta has shown the greatest population increase and the increase was largely rural.

Indeed in all three provinces the proportion of urban population has declined, due to the effect of the agricultural depression upon the commerce and industry of urban communities, while the rural population has increased, in spite of the conditions of hardship and privation experienced over some wide areas.

Probably the depressed condition of the basis agricultural industry in the Prairie Provinces during the five years prior to the latest census, accounts for the evident exodus of men from Manitoba and Saskatchewan. In these two provinces the increase of population in the five-year period has been accounted for by the increase of females. There was an actual decrease of males in Saskatchewan. In Alberta, the increase of 41,000 in the total population was accounted for by an increase of 18,000 males and 23,000 females. In all three provinces, while there was still an excess of males over females, the proportion of the sexes has been brought more nearly to a balance. There are about 677,000 men working on farms in these three provinces, that is, including members of the family who work on the land, including temporary help, and fewer than 26,000 women.

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No. 211. Fri. April 29, 1938 -- Hard Hit

In recent years some districts of the Prairie Provinces have been hard hit by misfortune in the shape of drought, rust and locusts. The wheat lands have suffered and overcome vicissitudes from the very beginning. The Selkirk settlers were the pioneers. Crofters from the old land, short of implements, worked over the prairie sod with a hoe, and their first harvests were endangered in the autumn by the birds of the air. Huge flocks of birds, including the now extinct Passenger Pigeon, settled in the fields and considerably diminished even such small crops as had been produced. However, after years of fighting nature and their fellow men, the pioneers of the West were able to establish farms. The population of the Red River Settlement in 1822 was 681. There were 128 horses. In that year they sowed 236 bushels of wheat, 143 of barley, 13 of Indian corn, 570 of potatoes and 18 bushels of peas. That was the beginning of the world's granary. Today over two-thirds of the field-crop acreage of Canada is concentrated in these three Provinces. Wheat is the predominant grain.

During the last few years these parts which have suffered from drought are still potential producers of great crops and the faith of the people has never faltered. It is exemplified by the issue of a newspaper called "The Prairie Optimist" by some young lads in south-western Saskatchewan which replaces what was formerly known as the "Dry Belt Weekly". Surely there could be no greater tribute to courage than that.

Apparently there is very real reason for optimism. Agricultural scientists have been busy in discovering cures for the evils that have struck the West. A rust-resistant wheat has been found. A tremendously fibrous-rooted forage plant has been created which will bind the soil that has been drifting. The plant is said to thrive on the minimum of moisture. Trees are being planted as windbreaks and for holding moisture.

Then there are the great irrigation schemes which are under way and being planned.

Altogether the prospects seem to justify the faith that was in the early settlers. The troubles of certain sections of the vast prairie lands are being overcome and large rural populations will continue to be built up.

It is a definite contrast, even now, with what happened in the rural districts of Eastern Canada years ago--- a complete reversal.

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No. 212. Sat. April 30, 1938 -- Some Odds and Ends

As a result of the rapid improvement in general economic conditions last year, the farmers of Canada spent about 60 per cent more on farm implements and equipment than they did in 1936. The domestic sales at wholesale prices amounted to 30 million dollars.

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Deaths from automobile accidents in 1937 amounted to 1,611, which was almost 300 more than in 1936. It was about 450 more than the deaths from smallpox, typhoid, scarlet fever, diphtheria and infantile paralysis combined.

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The consumption of coke is increasing in Canada. It is used very largely as a domestic fuel, as well as in blast furnaces and cupolas, manufacturing, mining and smelting. Ontario uses nearly twice as much coke as the rest of Canada combined.

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Apart from the United Kingdom, Canada's best customer for cheese lately was the Island of Jamaica, with the United States, Newfoundland and Trinidad coming close behind. The total amount sold in a recent month was worth \$570,000, with Great Britain buying over half a million dollars' worth.

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Canada's export of beef cattle to the United States has dropped about one million dollars from a year ago to \$271,000, but to the United Kingdom has risen from \$25,000 to \$468,000.

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There were six thousand more deaths in 1937 than there were in 1936; one thousand fewer births and nearly seven thousand more marriages. This made the natural increase in Canada's population seven thousand less than it was for 1936.

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Fuel prices generally have displayed a moderate but persistent downward movement dating from 1921. The percentage decrease in that interval has been roughly 22 per cent. Coal showed a decline of 22 per cent, wood 30, gas 31 and electricity 7.

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