THE UNIVERSITY OF MANITOBA

POPULATION TRENDS AND THE SCHOOLS OF WESTERN CANADA

BEING A THESIS SUBMITTED TO THE COMMITTEE ON POST-GRADUATE STUDIES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

BY

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ABSTRACT

POPULATION TRENDS AND THE SCHOOLS OF

WESTERN CANADA

The Problem -

The problem of this demographical study was twofold: (1) to reveal population trends in the four Western Provinces of Canada pertinent to the schools; and (2) to project these trends to 1965. That is, on the basis of the population trends from 1901 to 1956, what will be required of the school to the end of the year 1965?

Delimitations -

This report has the following delimitations: (1) the assumption was made that the intelligence distribution for the school population of Western Canada was similar to the intelligence distribution found in Dr. Baker's book Introduction to Exceptional Children; (The writer incorporated some data on intelligence distribution into one of the appendices and showed that the error in making this assumption was small.) (2) the figures showing the university attendance for 1956 were not complete; and (3) the factors changing the pattern and functions of the family were taken from literature on the subject and not from the writer's own original research in this area.

Method of Investigation -

The trends in: (1) the number of people in each province; (2) urbanization; (3) age and sex distribution; (4) attendance at school and

university; (5) marriage, birth, divorce, and death rates; (6) size of family; (7) the number of mothers gainfully employed outside of the home; (8) factors changing the pattern and functions of the family; and (9) economics and the school were investigated. The data were tabulated and charts were drawn to show the data graphically. Several of the foregoing trends were projected to the year 1965.

Major Conclusions -

Some of the major conclusions were: (1) the population in all four provinces is increasing at a steady rate; (2) urbanization in all four provinces is proceeding so rapidly that by 1965 about 75% of the population of Western Canada will be living in urban areas; (3) the dependent population is increasing, and increasing most rapidly, in British Columbia; (4) the sex ratio has decreased from a high of 235:100 for the (20-44) years of age group in British Columbia in 1911 to 102:100 for the (20-44) years of age group in Manitoba in 1956 and appears to remain at about unity; (5) marriage, birth, and death rates are decreasing and divorce rates are increasing; (6) the size of the family has changed very little - there are fewer very large families, but also fewer childless families; (7) most of the mothers gainfully employed outside the home have no family respensibilities; (8) school and university attendance is increasing, and the special education program, particularly, in rural Western Canada should be expanded; (9) centralization of school facilities is progressing rapidly and appears to be more economical than comparable facilities in smaller schools; and (10) more financial aid from the government seems to be necessary.

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INTRODUCTION

Purpose of the Study

The purpose of this demographical study is twofold: (1) to reveal population trends in the four Western Provinces pertinent to the schools; and (2) to project these trends to 1965. That is, on the basis of the population trends from 1901 to 1956, what will be required of the schools to the end of the year 1965?

The importance of making such a study periodically is shown by the words of the dominion statistician:

> For example, the findings for the country as a whole, or for the province, may be applied to smaller areas, and departures from or similarities to the national or provincial average interpreted in terms of local conditions. Statistics on marital status emphasize the close relationship between marriage rates and economic condition. The proportions married or single reflect also the unequal distribution of the sexes in local areas. Demographically, a study of marital status brings out the significance of trends in marriage for future population growth.[1]

It is dangerous to project population trends into the future. The Director of Research of the Department of Education of British Columbia warned the writer not to take the projection of the public school enrolment of British Columbia to the year 1964 too seriously because he said: "Look how far out we were in 1953."[2] American experts on population trends

[1] Census of Canada, Volume X, General Review of Intercensasl Period 1941-51. p. 69.

[2] From correspondence with the Office of the Director Division of Tests, Standards, and Research, Department of Education, Victoria, British Columbia.

are also confounded by the population trends in the United States.[3] It was felt, however, that aprojection of the population trends into the future was necessary to make this study worthwhile.

The geographical area concerned in this study includes the four Western Provinces of Canada.

Procedure and Source of the Data

This study is divided into nine chapters. In Chapter II, a brief review of the literature on population trends is given. In Chapter III, the "Composition of the Western Canadian Population" is discussed. The data collected for Chapter III deal with: (1) number of people in each province; (2) urbanization; (3) occupation of the Western Canadian people; (4) age and sex distribution; and (5) a few educational implications. Age pyramids were drawn to show the low birth rate during the depression and the high birth rate after World War II.

In Chapters IV, V, and VI the "Analysis of the School Population in 1941, 1951, and 1956" respectively is dealt with. The population of school age was divided first into age groups and then grouped according to ability. This was designed to show, on the basis of the intelligence curve, the large number of exceptional children and adults at both ends of the intelligence scale and, therefore, the need for special education. Charts showing comparisons of the percentage of high school students and university students being reached by these institutions were prepared for each year. A comparison between urban and rural populations by years of schooling is included in Chapters IV and V.

In Chapter VII the Western Canadian family is dealt with. The per cent of the population under five, five to nineteen, twenty to forty-four, forty-

3 ,"Experts Confounded," Winnipeg Free Press, (January, 1950).

five to sixty-four, and sixty-five and over was calculated. Next the sex ratios and marriage ratios were calculated. A final section dealing with changes in the pattern of family life concludes this chapter.

In Chapter VIII the Economics and the School is dealt with. This includes school organization, provincial productivity, school finance, a comparison of the amount spent for education and volume of retail business done per capita.

Finally, in the last chapter, the writer has projected several trends to 1965, and on the basis of these projections, has made certain recommendations. The projections into the future were based almost wholly on graphs rather than on statistical calculations. As a result, the predictions have not been proved mathematically.

The data for Chapter II were taken from: (1) an article by A. H. LeNevue and Miss Y. Kasahara; (2) two articles prepared for the Bank of Nova Scotia; (3) a leading newspaper from each of the four Western Provinces; (4) reports of the Gordon Commission and the Royal Commission on Home Life and Family in Rural Saskatchewan; and (5) the Winnipeg Free Press library files on population trends.

The data for the "Composition of the Western Canadian Population" were gathered from the Canada Census books and Canada Yearbooks. These sources were also used in Chapters IV, V, VI, and VIII. The data for the 1956 school and university attendance were obtained from the registrars of the universities and the Departments of Education.

The data on school finance were taken from the Reports of the Departments of Education and the Statute Books for the respective provinces. These data were augmented by Mr. C. H. Chappell, Assistant Deputy Minister of

Municipal Affairs.

Explanations of Terms and Delimitations

Any terms with multiple meanings are explained when they appear in the body of the study. However, the term, "School," shall mean:

> any place for instruction in any branch of knowledge; also the institution or collective body of teachers and learners in such a place.[4]

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[4]A. Merriam-Webster, Webster's Collegiate Dictionary. (Second Edition). Toronto, Ontario: Thomas Allen, Limited, 1941. p. 889.

CHAPTER II

A REVIEW OF WESTERN CANADIAN POPULATION TRENDS

Introduction

This brief digest of some of the literature on population trends deals with the major trends during the 1905-56 period. This digest supplements the writer's own conclusions drawn from the data which will be presented in the next six chapters.

Literature on Population Trends

The dominion statistician reports that urbanization began in the 1930's in the Prairie Provinces and earlier in British Columbia. This trend is continuing, and according to the Gordon Report, agriculture today employs fifteen per cent of the labour force, but by 1980 it will employ only seven per cent of the labour force. The net agricultural wealth will decline, by 1980, from thirteen per cent to six per cent of the national wealth. One of the latest pamphlets published by the Bank of Nova Scotia indicates that two-thirds of the Canadian population is now classed as urban.[1] The population of Canada is increasing, but the number living on farms is decreasing.

During the early settlement of the Prairie Provinces and British Columbia there was a pronounced excess of males over females. However, the female population began to increase until by 1946 the females outnumbered the males particularly in urban centers. In rural areas, however, the males predominated. By 1946, the male population in rural Manitoba comprised 54.7% of the rural population. The male population in rural Saskatchewan and rural Alberta comprised 55.3% and 55.4% of the rural population, respectively. By 1941, about

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1 , "Another look at Canada's Population," Monthly Review, The Bank of Nova Scotia, (August, 1957), p. 1.

54% of the population in British Columbia was already classed as urban. (There was no 1946 Census of British Columbia.)

The following data taken from the report of the Gordon Commission indicates that males in rural Canada outnumber the females in rural Canada. It is reported that in the rural areas the males outnumbered the females five to four, but that in the overall labour force the females outnumbered the males. By 1980, according to the report of the Gordon Commission, the female labour force will still exceed the male labour force. The labour force in 1955 consisted of 5,245,000 males and 5,280,000 females; in 1980 it will consist of 9,200,000 males and 9,310,000 females. Even though the labour force is expected to double, the difference between the female and male labour force is expected to treble.

Aging of the population is a further trend revealed by population statistics of the Prairie Provinces. In 1916, the average age of the population in Manitoba was 24.7 years. This average age had advanced to 31.4 years by 1946. In 1906, 2.2% of the population in Manitoba was sixty-five years of age and over, whereas, by 1946, 7.3% was sixty-five years of age or more. The group seventy years of age and over had increased by 38.7% for all of Canada by 1956.

The median ages at marriage in 1931, 1941, and 1951 were 25.3, 23.3, and 22.9 years respectively. This trend is shown by the decrease in the percentage of single persons fifteen years of age and over and a corresponding increase in the number of married people.

An increase in the number of married people results in an increase in the number of widowed or divorced people. Divorce and death of one of the marriage partners produce abnormal families. In 1941, 88% of the Canadian families were classed as normal by the dominion statistician. These families were responsible for 90% of all the children living in Canada. By 1951, 92%

of all the children in Canada came from normal families. This means that about one out of twelve children comes from an abnormal family.

According to mortality statistics, marriage at too young an age is dangerous for the female. The danger seems to disappear if the female marries when she is past twenty years old. The female age group of fifteen to nineteen years of age, when married, and single females of all age groups have a higher mortality rate than married females who married after they were twenty years old. Childbirth is sometimes a traumatic experience for the females. Nevertheless, most females are not adversely disposed towards assuming parental roles. Lillian Cooper, in a study of male and female students' predisposition towards parenthood, showed that the foregoing is, by and large, true.[2] Families are becoming smaller, but the number of childless families is proportionately decreasing. Proportionally, fewer parents have ten or twelve children, but many parents have one or two children. The latter is shown by Figure 1. In 1929, 41% of all parents had either one or two children. In 1956, 50% of all parents had either one or two children. In 1929, about 13% of all parents had eight children or more. In 1956, about four per cent of all parents had eight children or more.[3]

Siz of family appears to be a function of occupation, years of schooling, and income. Census figures show that: (1) two-child families increase with increase of income; (2) three-child families increase gradually with increase of income; (3) four-child families and five to nine-child families decrease with increase of income. Size of family varies with the following five accupations as follows: (1) loggers - 4.7; (2) farmers - 4.5; (3)

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[2]Lillian Cooper, as reported in the Sociology and Social Research, Volume 42, No. 1, University of Southern California, (September - October) 1957, Pp. 31 - 36.

[3]Monthly Review, The Bank of Nova Scotia, (August, 1957), op. cit., pp. 1 - 6.

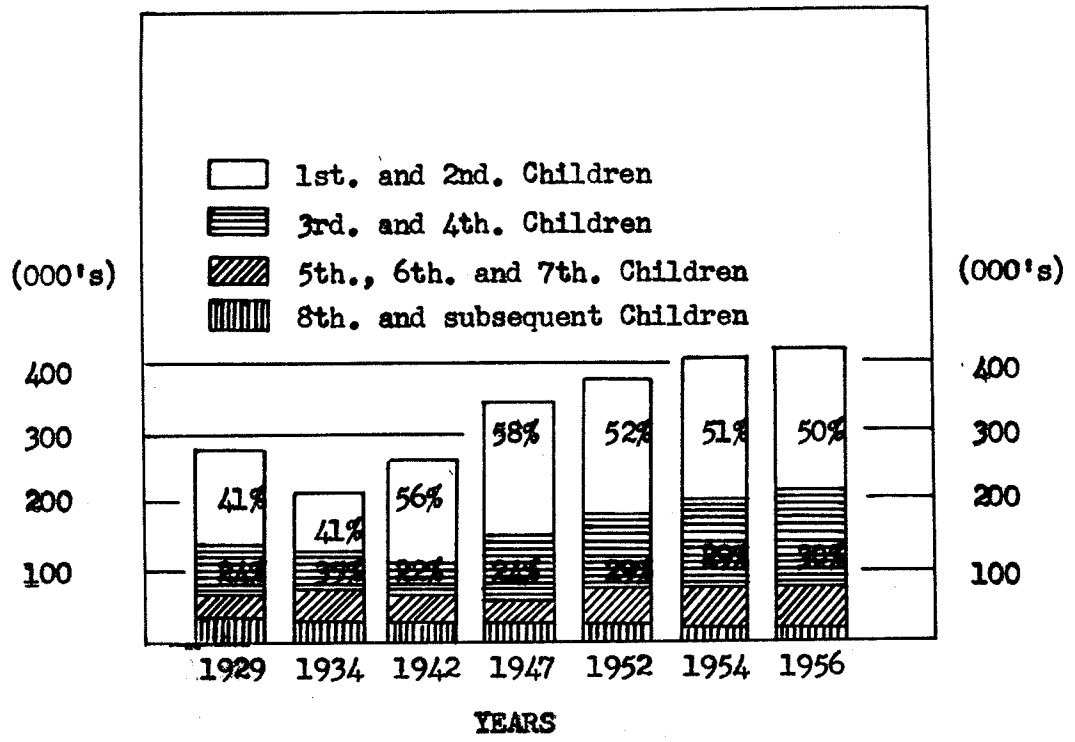

Fig. 1 - Showing Births according to the place in the family. (Newfoundland and the territories not included.)

doctors - 3.7; (4) teachers - 3.6; and (5) real estate agents and dealers - 3.2 members respectively.

As indicated, years of schooling tend to have a negative effect on the size of the family. Two extremes exist. Some parents with no schooling suffer most from infertility and some have large families. Thirty-nine and one-half per cent reported no children on the 1951 Census and 1.3 per cent reported families of more than nine children. Size of family decreases with increased years of schooling, but the per cent of childless families where father or mother is educated also decreased.[4] Approximately half of the educated families have at least one or two children, but only .2% have nine or more children.

Data on years of schooling were not obtained prior to the 1956 Census.

[4]See Appendix A, Table I, p. 197.

But during the decade, 1936 -1946, a suggestion of a trend towards increased schooling is present. During the decade, 1941 - 1951, the percentage of children fifteen to twenty-four years of age, single, at home and attending school increased by five per cent for all of Canada. This topic is dealt with more fully in Chapters IV to VI.

The Monthly Reviews prepared by the Bank of Nova Scotia have already been mentioned. In order to show that the foregoing trends began to gain momentum after the war, the following exerpts were taken from the July, 1954 issue:

> In the past few years the Canadian population has been growing at the rate of around 2½% per annum, a faster rate of growth than that of the United States and indeed one of fastest in the world.
>
> ..., this rapid growth is due to the high postwar birth rates, to a record low death rate, and to a substantial flow of immigration.
>
> With the boom in marriages, the number of families has naturally been increasing at a considerably faster rate than the population as a whole.
>
> Implicit in this mushroom growth are heavy demands on transportation systems and needs for extended gas, electric, water and telephone services, for shopping centres, schools, churches, hospitals and other facilities and services. ... The baby carriage on the front porch is the hallmark of suburban civilization.[5]

The following year, in July, 1955, the Monthly Review published by the Bank of Nova Scotia dealt with the trend towards urbanization. The growth around the fringes of the cities resulted in the emergence of large Canadian suburban areas. As a result of the emergence of these large suburbs, the demand for public utilities, shopping centres, schools, hospitals, and

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5 , "Canada's Changing Population," Monthly Review, The Bank of Nova Scotia, (July, 1954), pp. 1 - 6.

churches remained strong.[6] This migration towards urban areas continued through 1955, 1956, and 1957.

Urbanization was again dealt with in the 1957 August publication of the Bank of Nova Scotia. In it is reported that half of the increase in Canada's population from 1951 to 1956 had moved to the fifteen census metropolitan areas, and a further ten per cent had moved to twenty-one other major areas across the country each having over 35,000 people.[7] From this publication, one might draw the following additional conclusions: (1) the marriage rate was levelling off; (2) the natural increase in population was still increasing as a result of the continuing high birth rate and the dropping death rate; (3) the increase of the population in the four Western Provinces was uneven; (4) farms were adopting mechanized methods of farming at an increased rate, thus contributing to the mushroom growth of urban areas; and (5) the large number of children born just after 1945 provides a "built-in" growth of the Canadian economy for the 1960's ahead.[8]

In the Review, "The Impact of Leduc," the impetus given to the economy of Alberta is illustrated.[9] The oil industry attracted twenty-seven per cent of Canadian and private investment to Alberta in 1953. This caused industrial employment to rise by fifty per cent between 1946 to 1953, and it caused personal income to double. As a result emigration all but ceased and the

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6 , "Trend to Bigger Cities," Monthly Review, The Bank of Nova Scotia, (July, 1955), pp. 1 - 6.

7 Monthly Review, The Bank of Nova Scotia, (August, 1957), op. cit., pp. 1 - 6.

8 Ibid., pp. 1 - 6.

9 , "The Impact of Leduc," Monthly Review, The Bank of Nova Scotia, (September, 1954), pp. 1 - 4.

population of Alberta grew even faster than that of British Columbia. With the growth of the population came such a demand for schools, housing, hospitals, and schools that capital construction in 1953 caused investment to rise by 180% above that of 1948. Manitoba and Saskatchewan shared in the gains made possible by the discovery of Leduc, but theirs was a much smaller share. All of Canada shared in the economic gains made possible by the discovery of Leduc, since this discovery was responsible for the building of two trunk pipelines, numerous branch lines, several oil refining plants, and many subsidiary plants producing such materials as yarns, plastics, oil-drilling machinery, pipe, and many other articles.

In another issue of the Monthly Review is a brief survey of the development of the Prairie Provinces with particular emphasis on Saskatchewan and Alberta during the fifty year period prior to 1955. The article discusses the efforts being made to diversify the economy of the Prairie Provinces so that the people in this area will not have to be entirely dependent on agriculture. The development of uranium and oil industries might provide this needed diversification.[10] A slower pace in Canadian business may make this diversification difficult.[11] Nevertheless, since prices for food products are dropping and production of these same products is increasing, diversification is necessary if the West shall develop continuously.[12] The availability of natural gas and hydro-electric sites makes such diversification possible.[13]

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10 , "The Last Best West," Monthly Review, The Bank of Nova Scotia, (September, 1955), pp. 1 - 6.

11 , "Slower Pace in Canadian Business," Monthly Review, The Bank of Nova Scotia, (December, 1957), pp. 1 - 4.

12 , "Canadian Agriculture in 1957," Monthly Review, The Bank of Nova Scotia, (January, 1958), pp. 1 - 4.

13 , "Electric Power in a Growing Economy," Monthly Review, The Bank of Nova Scotia, (February, 1958), pp. 1 - 4.

Finding markets for the finished products may be difficult. The inability to find markets makes it difficult for people in agriculture to obtain a fair share of the national income.[14] Surplus wheat stocks have accumulated in the face of increased consumption and reduced acreage.

In the issues of the Monthly Reviews, covering the period from June, 1958, the Canadian business trends in the pulp industry and foreign trade, and business trends in general are discussed. One of these issues emphasizes the rapid development of the minerals, forests, and agriculture in the "Peace River Country" in particular.[15]

The foregoing issues of the Reviews covered the vital statistics and the economy of Western Canada. An attempt was made to include in this chapter a review of a least one recent Canadian article on the Western Canadian family. One such article is "The Home and Family in Rural Saskatchewan." [16] Some of the findings were as follows: (1) poor roads and communication are causing urbanization to proceed rapidly; (2) rural areas have larger families than urban centres; (3) rural areas are far behind in acquiring certain amenities of everyday living - electricity, running water, furnaces, and bathrooms; (4) education seems to drive the youth from the farms; (5) the patriarchal type of family is disappearing; (6) children's time is too occupied by activities; especially after four o'clock; and (7) old family values have been lost in the modern changing environment, The following quotation from a

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14 , "Too Much Wheat," Monthly Review, The Bank of Nova Scotia, (May, 1958), pp. 1 - 6.

15 , "The Peace River Country," Monthly Review, The Bank of Nova Scotia, (october, 1958), pp. 1 - 6.

16 Province of Saskatchewan Royal Commission on Agriculture and Rural Life, Report No. 10, The Home and Family in Rural Saskatchewan, 1956, v - 198. Regina, Saskatchewan: Queen's Printer, 1956.

brief presented to the commission probably sums up the feeling of people of rural Saskatchewan:

> Humanity is passing through an age of tumult and upheaval. Nowhere is this felt more acutely than among those engaged in agriculture. The ancient custom of the family home handed down from generation to generation has gone. The patriarchal type of family life where the father was master and dictator is no more. ... These additions (mechanization, cheap credit, leisure time) to human knowledge react upon ancient beliefs in religion, in ethics, and in moral standards. Many are not able to think their way through to a satisfactory philosophy of life. Lack of a basic philosophy coupled with leisure and the dissolution of ethnic mores combine to produce an unsettled and to a certain extent an unstable and frustrated population.[17]

The Royal Commission discovered that eight out of a hundred and sixty families reported that the father punished the children, and eighteen out of the hundred and sixty families reported that the father gave the youngsters permission to go out.[18] The mothers were in charge of the other families.

Another report reviewed by the writer was given by A. H. LeNevue and Miss Y. Kasahara to the Canadian Political Science Association in June, 1957. Following are a few of the trends noted by the authors: (1) the "baby boom" began soon after the war; (2) four-fifths of the population increase from 1941-1956 was due to natural increase; (3) this high natural increase was due to a high birth rate and a low death rate; (4) there was a rise in immigration (This trend has now tapered off); (5) migration increased the population of British Columbia and Alberta, reduced the population of Saskatchewan and held the population of Manitoba steady; (6) sex distribution was abnormal due to migration; (7) one or no-child families were declining in num-

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[17] From a brief as reported by the Province of Saskatchewan Royal Commission on Agriculture and Rural Life, Report No. 10, The Home and the Family in Rural Saskatchewan, 1956, op. cit., pp. 6 - 7.

[18] Ibid., p. 73.

ber and four-child- families were increasing; (8) urbanization was proceeding strongly; (9) age-structure of the population was changing (This increased the dependent population); (10) an unofficial projection into the future showed that the 15-19 years of age group would increase twice as fast as the rest of the population in the future; and (11) more women than ever are seeking employment outside the home.[19] They conclude that:

> ... More research is needed on the extent of alterations in vital trends, the pattern of population movement to be expected at various stages of economic growth, and relations between demographic and economic changes.[20]

A review of the writings in several daily papers on population trends was made to supplement what has already been said and to verify the presence of some of the trends revealed by the tabulated data below. From the Winnipeg Free Press, The Winnipeg Tribune, The Regina Leader Post, and from The Toronto Globe and Mail, the writer took the following information. The daily newspapers mention that the population of Canada is increasing and that cities are growing in size. In October, 1954, demographers predicted that the population of Canada would be sixteen million by 1956.[21] The greatest proportion of this increase was due to natural increase. In Manitoba, in 1954, one out of 35.7 persons was an immigrant; in Saskatchewan, one out of 69.9 persons was an immigrant; in Alberta, one out of 27.8 persons was an immigrant; and in British Columbia, one out of 28.5 persons was an immigrant.[22]

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[19] A. H. LeNevue and Miss Y. Kasahara as reported in The Canadian Journal of Economics and Political Science, Vol. 24, February, 1958, No. 1, pp. 9 -20. Toronto, Ontario: University of Toronto Press, 1958.

[20] Ibid., p. 20.

[21] , "Sixteen Million Population Seen in Canada By '56," Winnipeg Free Press, (October 4, 1954).

[22] , "Canada Population To Be 16 Million?," Winnipeg Free Press, (September 28, 1954).

The population of Canada increased at the rate of 2.5% in 1953,[23] and was expected to double in thirty years from 1954.[24] The West, which had lost people since the depression,[25] was expected to have a tenfold increase in population in the future.[26] This increase was supposed to follow a vigorous program of industrialization which, according to the newspapers, should have begun long ago.[27, 28] However, by 1956, the increase in industrialization was already slowing down.[29] This happened as a result of the economic lag of 1953 to 1954 and 1956. But in 1958, Canada again recorded a record increase in the population in spite of a slowing down of the industrialization program during that year.[30,31]

Another trend mentioned in the newspapers is urbanization. People tend to move into suburbs around the big cities. Urbanization is a current trend

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23 , "Canada Population Increasing 2.5% Anmually," Winnipeg Free Press, (September 17, 1953).

24 , "Canada Population To Double In Thirty Years," Winnipeg Free Press, (May 4, 1954).

25 , "Prairie Population," The Winnipeg Tribune, (December 4, 1952).

26 , "Tenfold Population Seen For West's Drought Area," Winnipeg Free Press, (March 25, 1954).

27 , "West Rapped For Lethargy On Population," Winnipeg Free Press, (June 27, 1953).

28 , "The Empty West 2, Resources Lag For Want of the Three I's - Immigration, Irrigation, and Industrialization," The Toronto Globe and Mail, (January 24, 1952).

29 , "Population Increase Rate Drops," Winnipeg Free Press, (September 10, 1956).

30 , "Record Climb In Population," Winnipeg Free Press, (August 19, 1957).

31 , "Population Increase at Record Rate," Winnipeg Free Press, (January 3, 1958).

in all four Western Provinces.[32, 33, 34, 35] It is most rapid, however, in British Columbia. In 1956, 70% of the population of British Columbia was classed as urban.[36] In Manitoba, the population shift is towards Winnipeg,[37,38] and towards industrial town sites.[39] The population of Virden doubled in a five-year period.

The impact of the discovery of the Leduc oil fields on the population of Alberta has already been mentioned. Uranium City may have a similar effect on the population of Saskatchewan once cheap nuclear power for domestic use becomes a reality.[40] Cities, such as Saskatoon and Regina, are also growing rapidly.[41] Saskatchewan, an agrarian province, is rapidly becoming urbaniz-

32 , "Revolution In Living Habits - Shift To Suburbs," Winnipeg Free Press, (July 6, 1950).

33 , "Fewer Countrymen," Winnipeg Free Press, (November 10, 1956).

34 , "Sharp Rise In Urban Population," Winnipeg Free Press, (August 20, 1956).

35 , "Census Reflects Suburban Boom," Winnipeg Free Press, (September 25, 1956).

36 , "The Cities' Growth," Winnipeg Free Press, (October 17, 1958).

37 , "Shift To Suburbs in Winnipeg," Winnipeg Free Press, (October 4, 1951).

38 , "Greater Winnipeg Growing Greater," Winnipeg Free Press, (March 29, 1952).

39 , "Virden Doubles Its Size In Five Years," Winnipeg Free Press, (August 23, 1956).

40 , "Uranium City, The Showplace of Saskatchewan," The Winnipeg Tribune, (December 24, 1958).

41 , "Fringe Areas Swell Saskatoon Population," Winnipeg Free Press, (January 4, 1955).

ed.[42, 43, 44] This rural depopulation poses serious school problems for those who stay behind on the farms. A thousand rural schools were closed in Saskatchewan over a twelve-year period.[45] In Alberta, Calgary and Edmonton, were growing faster than any other Canadian city.[46] In British Columbia, 60,000 persons were added to Victoria during 1958. This increased the population of Victoria to 1,500,000.[47]

Economists view this trek towards the cities with optimism.[48, 49] It means that food production techniques now are so efficient that a few men can feed a large populace.

Besides urbanization and population increase, the change in age patterns in the population was mentioned in the daily newspapers. The dependent population - those people under twenty and over sixty-five years of age - is

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42 , "Farmers' Trek Swelling Cities, Farm Prices Too High," Winnipeg Free Press, (April 26, 1952).

43 , "Saskatchewan Grows Apace - Rapid Urbanization," The Leader Post, (January 30, 1956).

44 , "Farm Population Drops," Winnipeg Free Press, (November 11, 1957).

45 , "1,000 Rural District Schools Close In Saskatchewan In Past Twelve Years," Winnipeg Free Press, (May 3, 1952).

46 , "Edmonton and Calgary Fastest Growing Cities," Winnipeg Free Press, (November 6, 1956).

47 , "Victoria Population Increased By 60,000 Since January 1, 1958," Winnipeg Free Press, (December 24, 1958).

48 , "City Dwellers Outnumber Farm Folk," Winnipeg Free Press, (August 14, 1952).

49 , "More Machines, Fewer Men, Farm Population Drop," Winnipeg Free Press, (December 4, 1951).

increasing in number.[50, 51] This poses particular social problems for the school and social welfare agencies.[52]

A few people are viewing the foregoing trends quite optimistically. Some claim that Canada could feed a hundred million people.[53] Others claim forty million people would be enough for Canada.[54] The world population, according to estimates, will double itself by the year 2,000.[55] Canada, with the present rate of immigration and natural increase, is expected to have fifty-four million people by the year 2,000.[56] Many demographers, like Rev. T. R. Malthus, are concerned about over-population.[57]

In addition to the foregoing articles, the newspaper writers dealt with school organization and school finance in a few articles. Writers agreed that the federal government should make larger grants of money for education to

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50 , "Canada's Under - 20 Population Rises," Winnipeg Free Press, (June 13, 1957).

51 , "Canada Has 5.4 Million Children Under Fifteen," Winnipeg Free Press, (August 28, 1957).

52 , "Changes In Age Pattern Pose National Problems," Winnipeg Free Press, (May 17, 1950).

53 , "Canada Should Have A Hundred Million Population - Drew," Winnipeg Free Press, (December 1, 1951).

54 , "Canada Needs More People," Winnipeg Free Press, (November 3, 1955).

55 , "This Tight Little World," Winnipeg Free Press, (June 3, 1958).

56 , "Fifty-four Million People By The Year 2,000," Winnipeg Free Press, (May 5, 1958).

57 Reader's Guide, May 1947 to April 1949, The H. W. Wilson Company, New York, New York, 1949, p. 1581.

the provinces.[58, 59, 60, 61, 62] Saskatchewan should get $28,000,000 from the Ottawa grant to the Provinces and the government should carry half of the operating costs and half of the capital construction costs.[63]

Leading men in education regard the organization of the larger unit of school administration as a step in the right direction to solve some of the financial problems which many rural school districts are facing. However, even though districts with a low assessment benefit from the larger unit of school administration, the larger unit does not answer all the problems of education.[64]

The larger unit of school administration has been very well received in Alberta. Since the advantages of the larger unit of school administration have been, by and large, recognized by the public, educators are discussing the following: (1) uniform salary schedules for the whole Province; (2) curricula; (3) the students' failure to learn to write, read, and spell accu-

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58 , "Bigger Gov't Grants For Education Needed To Cushion City Costs," The Calgary Herald, (December 24, 1958).

59 , "Cities Ask Gov't To Run Schools," The Vancouver Sun, (January 2, 1959).

60 , "Education Grant Change Suggested," The Leader Post, (December 16, 1959).

61 , "Wealthy Areas Get No School Grants," The Vancouver Sun, (January 8, 1959).

62 Ibid, (January 8, 1959).

63 , "Saskatchewan Education Grants Niggardly Cameron Charges," Winnipeg Free Press, (December 16, 1955).

64 Winnipeg Free Press, (May 20, 1950).

rately; and (4) teaching methods. In addition to the foregoing, the writers, who contributed to The Calgary Herald, stressed the importance of the economy to the expansion of Alberta.[65, 66, 67, 68]

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[65] , "City Growth Reflected In School Expansion," The Calgary Herald, (December 29, 1958).

[66] , "143 Oil-Drilling Rigs Standing Idle In West," The Calgary Herald, (December 12, 1958).

[67] , "Industry Emphasis Seen For Pincher Creek," The Calgary Herald, (January 2, 1959).

[68] The Calgary Herald, (December 16, 1958).

CHAPTER III

COMPOSITION OF THE WESTERN CANADIAN POPULATION

Introduction

The purpose of this study, as has already been stated, is to determine how the schools can meet the demands of a dynamic population. In order to do this satisfactorily, it is necessary to know what the characteristics of the population are. Consequently, the following five characteristics were studied: (1) the number of people in each of the four Western Provinces; (2) the number living in rural and urban areas; (3) the number working in each of the ten major occupations; (4) the number in each age group; and (5) the number of people of each sex.

Number in Each Province

Table I shows the number of people in each of the four Western Provinces for the decennial Censes from 1901 to 1951 and for 1956. (The Prairie Provinces only have had quinquennial Censes till 1946. But now that electronic computing machines are used by the Dominion Bureau of Statistics the Census for all of Canada was taken in 1956). Table I also shows the percentage increase or decrease for the years listed. The population of three provinces, Manitoba, Alberta, and British Columbia, has always been increasing. This increase has not been uniform over the period under study. The increase slowed down in Manitoba and Alberta during the decade after the first world war. The population in British Columbia continued to increase quite rapidly. People from the Orient may have, partially, been the cause of this rapid growth.[1]

[1]See Table V, p. 200.

TABLE I

POPULATION AND PERCENTAGE INCREASE OF POPULATION OF THE FOUR WESTERN PROVINCES 1901, 1911, 1921, 1931, 1941, 1951, 1956

Year	Manitoba		Saskatchewan	
	Population	P. C. Increase	Population	P. C. Increase
1901	255,211		91,279	
1911	455,614	78.52	492,432	439.48
1921	610,118	33.91	757,510	53.83
1931	700,139	14.75	921,785	21.67
1941	729,744	4.22	895,992	-2.79
1951	776,541	6.41	831,728	-7.17
1956	850,040	9.46	880,665	5.88
	Alberta		British Columbia	
	Population	P. C. Increase	Population	P. C. Increase
1901	73,022		178,657	
1911	374,663	413.08	392,480	63.71
1921	588,454	57.06	524,582	33.91
1931	731,605	24.32	694,263	32.34
1941	796,169	8.82	817,861	17.80
1951	939,501	18.00	1,165,210	42.47
1956	1,123,116	19.54	1,398,464	20.18

Alberta and Saskatchewan received a great influx of settlers during the decade from 1901 to 1911. This influx may have been affected by the availability of cheap farm lands immediately after they received provincial status in 1905. The increase during the foregoing period was 439.5% for Saskatchewan and 413.1% for Alberta. Both Manitoba and British Columbia did not have such a great increase.

Of the four Western Provinces, Saskatchewan is the only one that has actually lost people. During the twenty-year period from 1931 to 1951, the population decreased from 921,785 to 831,728. This represents a decrease of 2.79% for the 1931 to 1941 period and a decrease of 7.2% for the 1941 to 1951 period. The Toronto Globe and Mail stated that the reason for this depopulation was the lack of immigration, irrigation, and industrialization.[2] Lack of immigration is, probably, caused by lack of irrigation and industrialization. A review of the statistics of the leading industries of the Province of Saskatchewan showed that the income of British Columbia from industry was approximately nine times as great as that of Saskatchewan, the income of Manitoba from industry was four times as great as that of Saskatchewan, and the income of Ontario from industry was fifty times as great as that of Saskatchewan.[3] However, the 1956 Census shows that the population of Saskatchewan is increasing again. The foregoing population data are shown more graphically by Figure 2. This figure shows the percentage change only.

Several maps, prepared by the Dominion Bureau of Statistics show the density of the population of Canada. Figure 3 shows the "Density of Population by Counties or Census Divisions of Canada, 1941." This shows the densi-

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[2] , "The Empty West 2 - Resources Lag for Want of the Three I's - immigration, irrigation, and industrialization," Toronto Globe and Mail, (January 24, 1952).

[3] See Tables II and III. pp. 197 - 199.

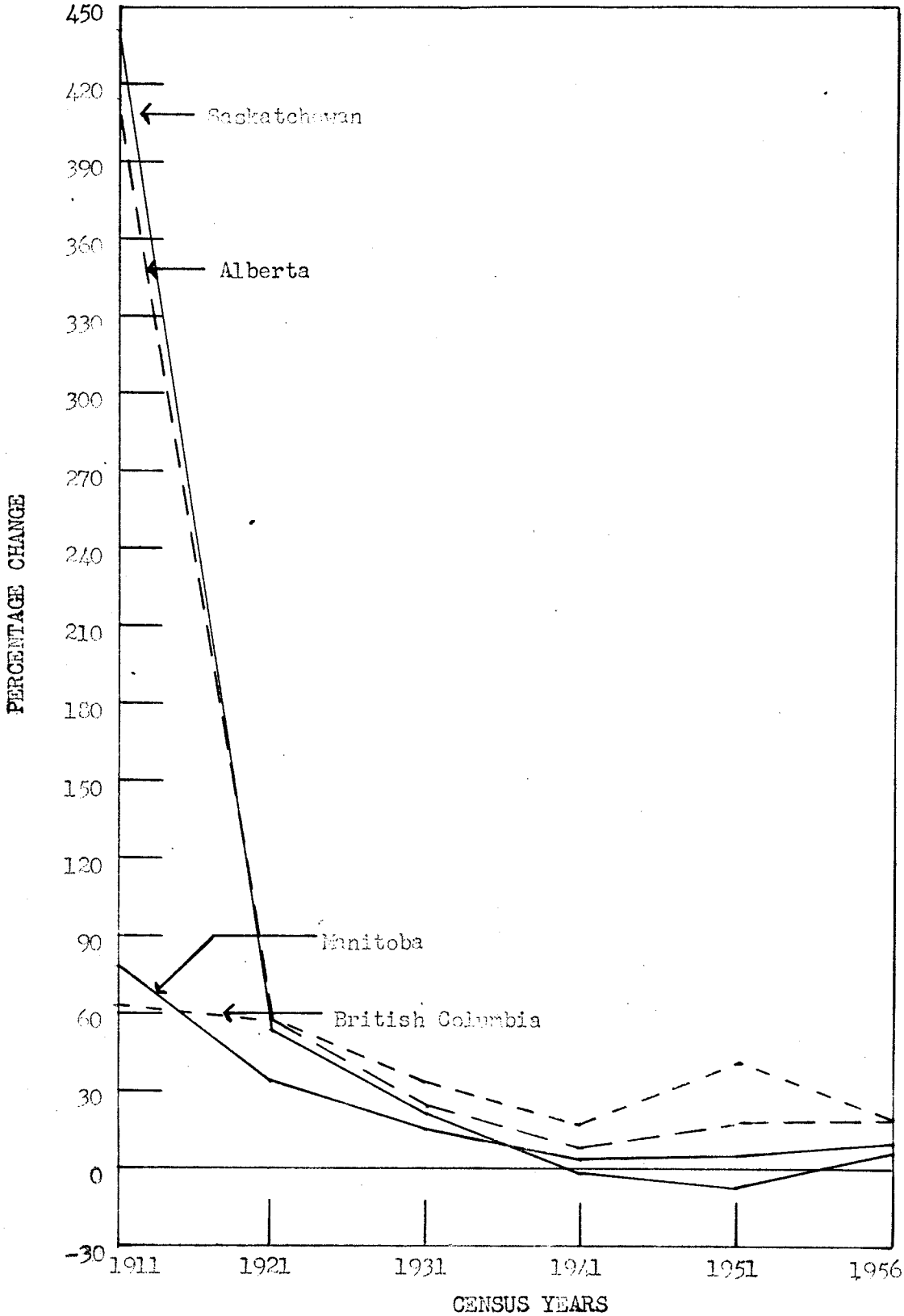

Fig. 2 - Showing Percentage Increase of Population of the Four Western Provinces 1911, 1921, 1931, 1941, 1951, 1956.

ty per square mile. A glance at the map shows that large areas in all four Western Provinces have fewer than one person per square mile. Only Manitoba and British Columbia have sections with 75 - 200 persons per square mile. Most areas have only one to five persons per square mile or five to ten persons per square mile. Large sections of the four Western Provinces are uninhabited at present. In view of the large water areas in the Central Provinces,[4] at least, and the harsh climate they will, probably, remain sparsely settled.

Figure 4 shows the "Density of Population by Counties or Census Division of Canada, 1951." There is little change from the 1941 population density map. One change has taken place in "Central British Columbia Census Division 8." In that division the population density has increased from one to four persons per square mile. Saskatchewan is the only one of the four Western Provinces whose average population density has decreased from 3.77 to 3.50 persons per square mile. The other provinces show a slight gain in population density per square mile.

Depopulation affects not only representation of the West in the federal government, but affects the school directly, especially rural schools. During the twelve-year period prior to 1952, a thousand rural school districts closed their schools in Saskatchewan.[5] Two reasons for this are depopulation of the province and urbanization. Urbanization began later in Alberta and Saskatchewan, but is gaining momentum now according to the Regina Leader Post[6] and the Winnipeg Free Press.[7]

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[4]See Appendix A, Table IV, p. 200.

[5]See Chapter II, p. 17.

[6]See Chapter II, p. 17.

[7]See Chapter II, p. 16.

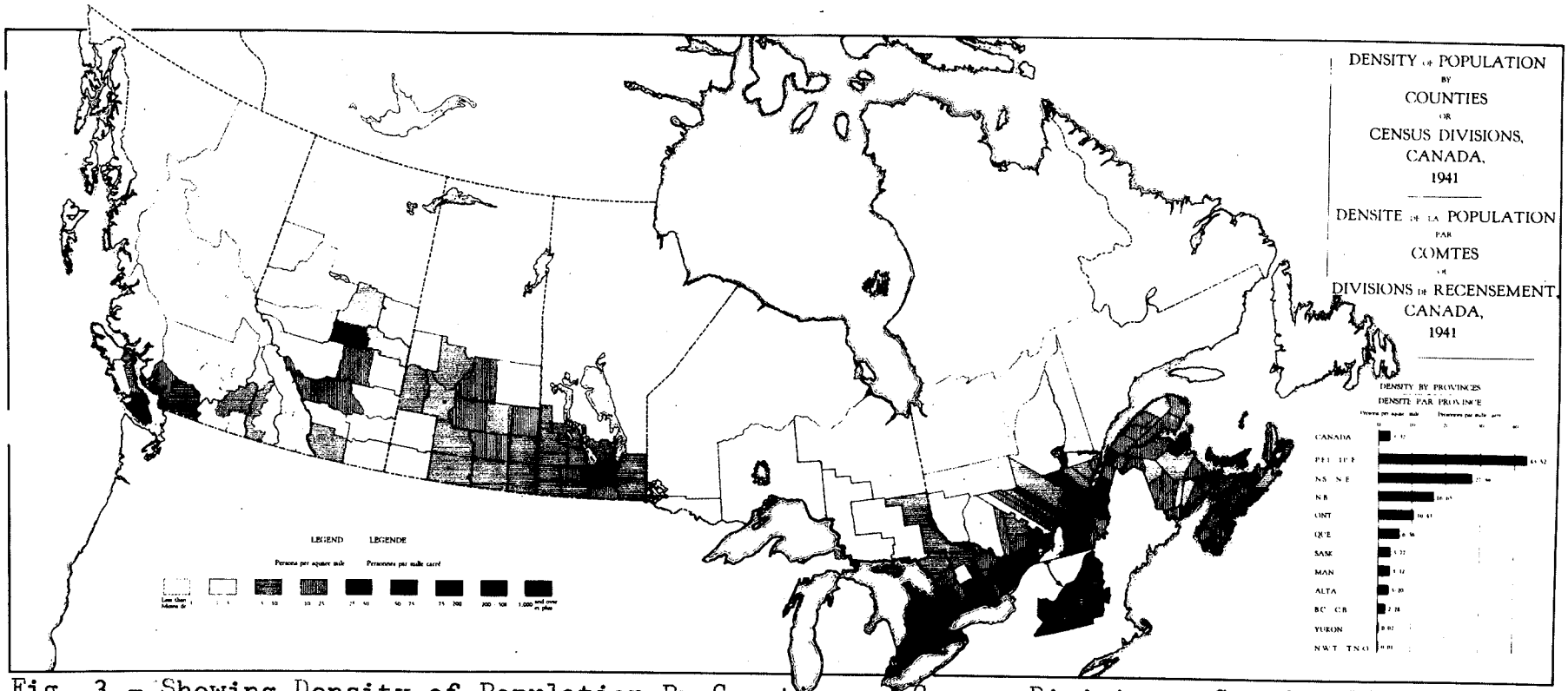

Fig. 3 - Showing Density of Population By Counties or Census Divisions, Canada, 1941.

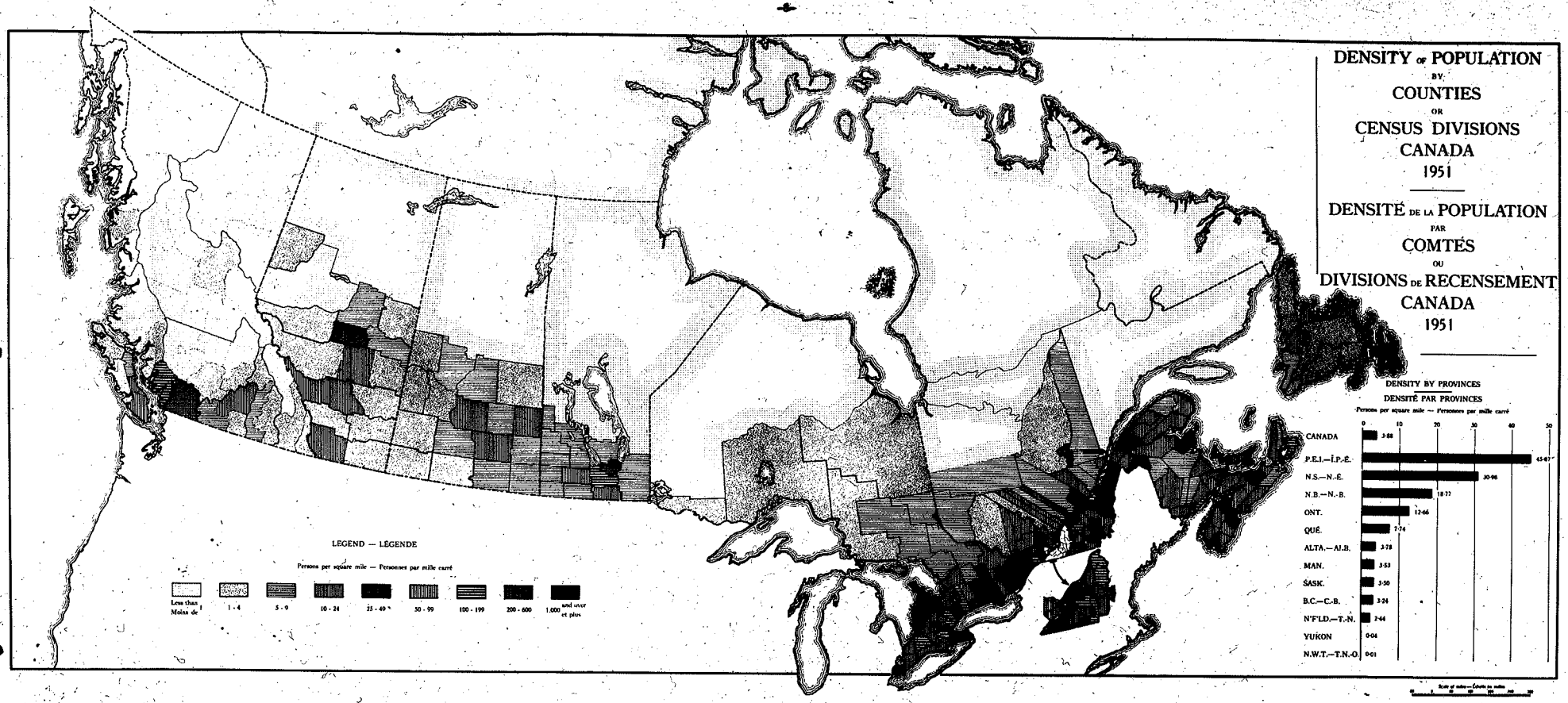

Fig. 4 - Showing Density of Population by Counties or Census Dvisions, Canada, 1951.

Individual maps of the four Western Provinces showing the population density for 1931, 1941, and 1951 were taken from censes maps. The 1951 maps are included in thisechapter and the others have been incorporated into the appendices.[8] A dot represents 1,000 people. The population of the cities is shown by a disc proportionate in area to a dot, and their population is additional to the dot distribution. These maps also show that the people in all four provinces congregate near the forty-ninth parallel. The size of the discs representing the urban population also show that urbanization is proceeding rapidly in all four Western Provinces.

Urbanization

Economists believe urbanization is desirable.[9] They argue that urbanization is a sign that food production in the counrty is becoming more efficient. People are leaving the farms and moving into urban centres. This is shown by Table II and also by newspaper articles.[10, 11, 12] Table II shows the number living on farms and in urban centres and the per cent of the people living in urban centres. Until 1901, urbanization had proceeded most rapidly in British Columbia. Slightly over fifty per cent of the people was classed as urban. Saskatchewan, relying on agriculture economically, was only 15.62% urbanized. Alberta and Manitoba were 26.00% and 27.59% urbanized respectively.

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[8] See Appendix B, pp.

[9] , "City Dwellers Outnumber Farm Folk," Winnipeg Free Press, (August 14, 1952).

[10] , "More Machines, Fewer Men, Farm Population Drop," Winnipeg Free Press, (December 4, 1951).

[11] , "Farmers' Trek Swelling Cities, Farm Prices Too High," Winnipeg Free Press, (April 26, 1957).

[12] , "Sharp Rise in Urban Population," Winnipeg Free Press, (August 20, 1956).

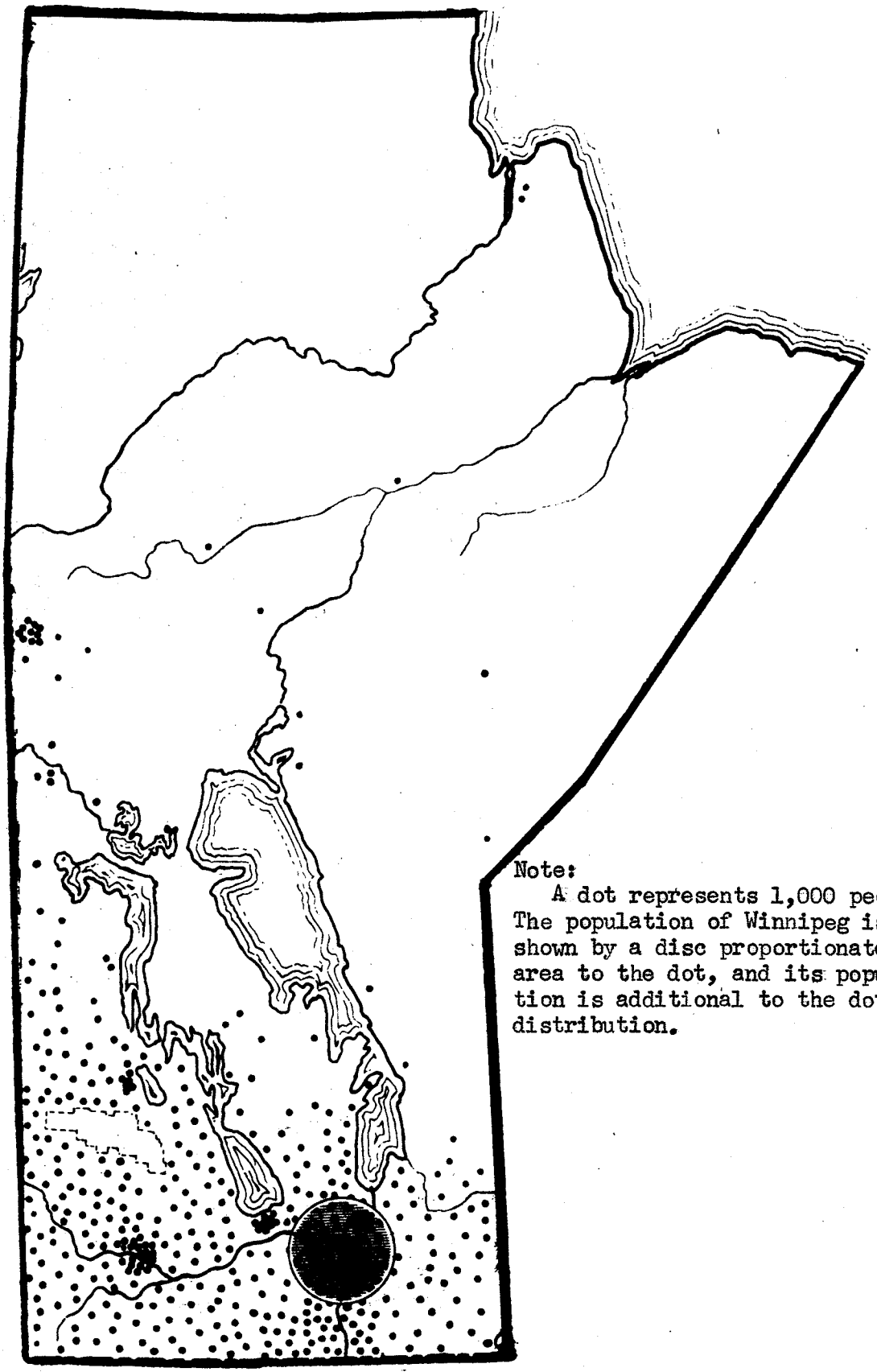


Fig. 5 - Showing population density for Manitoba in 1951.

Note:

A dot represents 1,000 people. The population of the bigger cities is shown by little discs proportionate in area to the dot, and their population is additional to the dot distribtuion.

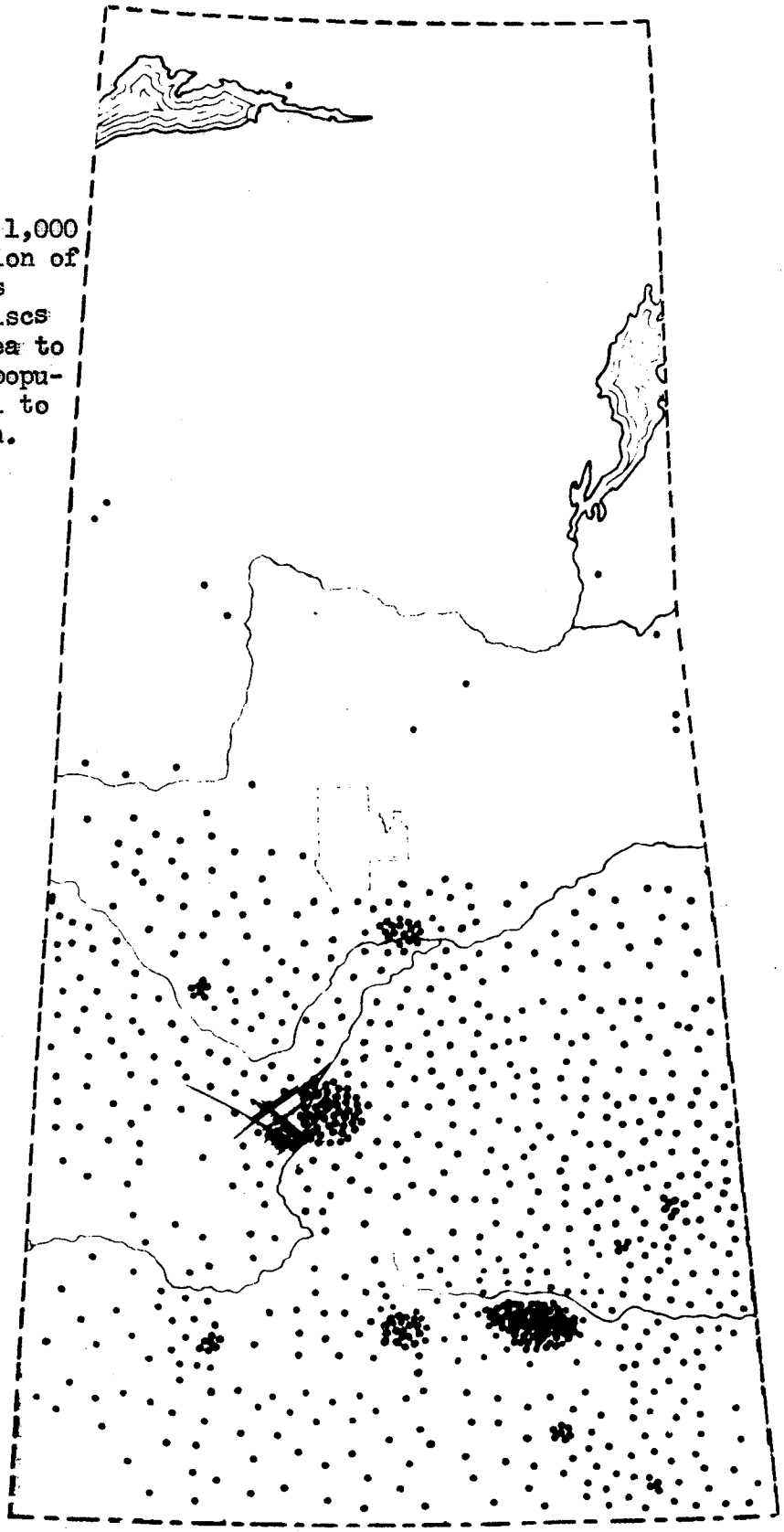
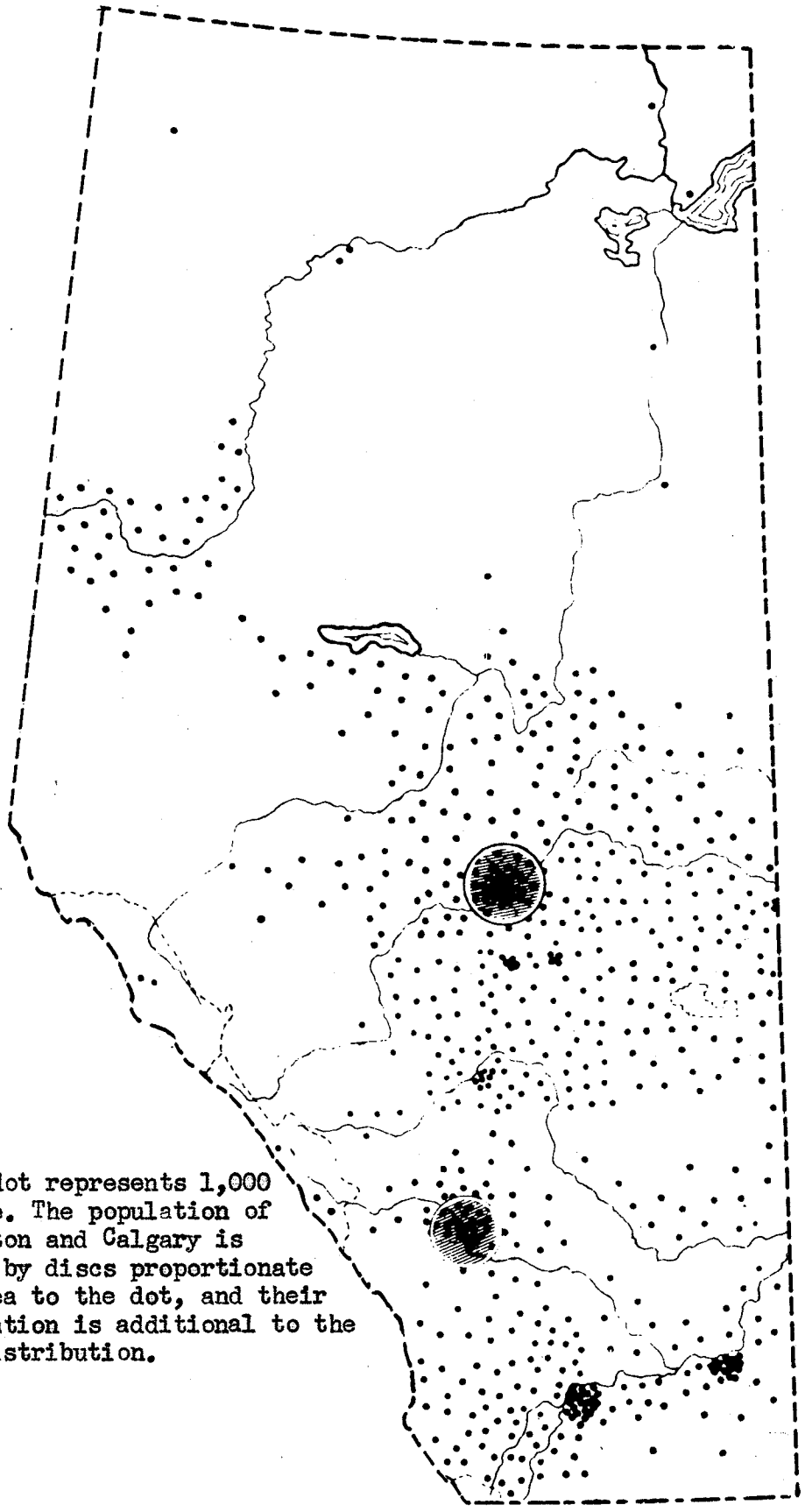
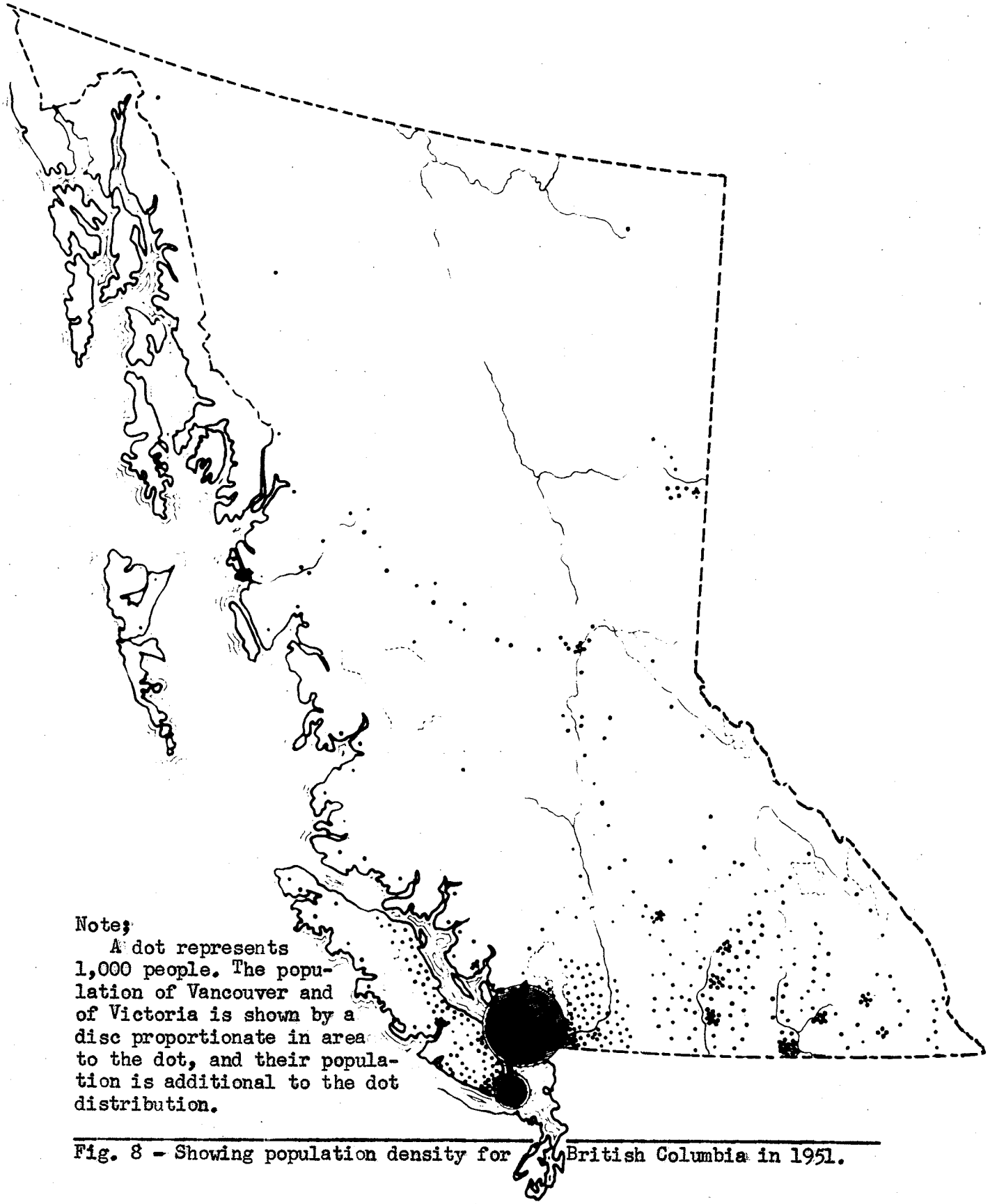


Fig. 6 - Showing population density for Saskatchewan in 1951.



Note:
A dot represents 1,000 people. The population of Edmonton and Calgary is shown by discs proportionate in area to the dot, and their population is additional to the dot distribution.

Fig. 7 - Showing population density for Alberta in 1951.



Note;
A dot represents 1,000 people. The population of Vancouver and of Victoria is shown by a disc proportionate in area to the dot, and their population is additional to the dot distribution.

Fig. 8 - Showing population density for British Columbia in 1951.

TABLE II

RURAL AND URBAN POPULATION AND RATIO OF URBAN TO TOTAL POPULATION, 1901 1911, 1921, 1931, 1941, 1951, 1956

Province and Year	Rural	Urban	Total	Per cent Urban to Total
1901				
Manitoba	184,775	70,435	255,211	27.59
Saskatchewan	77,013	14,266	91,279	15.62
Alberta	54,033	18,989	73,022	26.00
British Columbia	88,478	90,179	178,657	50.48
1911				
Manitoba	255,249	200,365	455,614	43.98
Saskatchewan	361,067	131,365	492,432	26.76
Alberta	232,726	141,937	374,663	37.88
British Columbia	188,796	203,684	392,480	51.89
1921				
Manitoba	348,502	261,616	610,118	42.88
Saskatchewan	538,552	218,958	757,510	28.90
Alberta	365,550	222,904	588,454	37.88
British Columbia	277,020	247,562	524,582	47.19
1931				
Manitoba	384,170	315,969	700,139	45.13
Saskatchewan	630,880	290,905	921,785	31.55
Alberta	453,097	278,508	731,605	38.06
British Columbia	299,524	394,739	694,263	56.85

TABLE II (CONT'D)

Province and Year	Rural	Urban	Total	Per cent Urban to Total
1941				
Manitoba	407,871	321,873	729,744	44.11
Saskatchewan	600,846	295,146	895,992	30.71
Alberta	489,583	306,586	796,169	38.76
British Columbia	374,467	443,394	817,861	54.21
1951[13]				
Manitoba	336,961	439,580	776,541	56.61
Saskatchewan	579,258	252,470	831,728	30.35
Alberta	489,826	449,675	939,501	47.86
British Columbia	371,739	793,471	1,165,210	68.09
1956				
Manitoba	339,457	510,583	850,040	60.06
Saskatchewan	558,667	322,003	880,665	36.56
Alberta	487,292	635,824	1,123,116	56.67
British Columbia	371,997	1,026,467	1,398,464	73.39

[13]Prior to the 1951 Census, the population residing within the boundaries of incorporated cities, towns, and villages regardless of size, was classified as urban and the remainder as rural. In the 1951 Census the aggregate size of population rather than provincial legal status was the main criterion for the rural-urban definition. The urban population in 1951 includes all persons residing in cities, towns, and villages of 1,000 and over, whether incorporated or unincorporated, as well as population of all parts of census metropolitan areas.

Ninth Census of Canada 1951, Volume I, Population - General Characteristics. Ottawa, 1955. p. XV.

By 1911, urbanization in Manitoba had increased to 43.98%, in Saskatchewan, to 26.76%, and in Alberta, to 37.88%. Urbanization in British Columbia remained largely unchanged. During the three decades approximately as many people settled in rural areas as settled in urban areas in all four Western Provinces. (A revision of the definition of urban centres increased the percentage urbanization in all provinces except in Saskatchewan.) By 1956, three-fifths of all the people of Manitoba were classed as urban, and three-quarters of all the people of British Columbia were classed as urban. The population of Alberta showed the greatest increase, namely from 47.86% to 56.67%. The foregoing information is shown more graphically by Figure 9. The line for Alberta shows that the per cent of the people classed as urban did not change from 1911 to 1941. Then the change in the definition of urban dwellers raised the per cent of urbanization for British Columbia, Alberta, and Manitoba, but it left the per cent for Saskatchewan unchanged.

Occupations of the Western Canadian People

The occupation of the people of Western Canada was the third characteristic of the people of Western Canada to be studied. Table III shows the number, both male and female, working in all occupations and in fifteen different classes of occupations each of which in the Census was broken up into sub groups. Agriculture is not included in any of the fifteen groups. The figures for the 1956 Census were not available. However, the 1954 indices using the 1959 index as 100 are shown in Table IV. These indices include most of the occupations listed in Table III. They represent, however, all of Canada. They, nevertheless, serve to indicate where demand for employess has been strong.

The line showing all occupations in Table III shows the number of people in the labour force, both male and female, for each of four Western Provinces. British Columbia, the most highly industrialized province of the four pro-

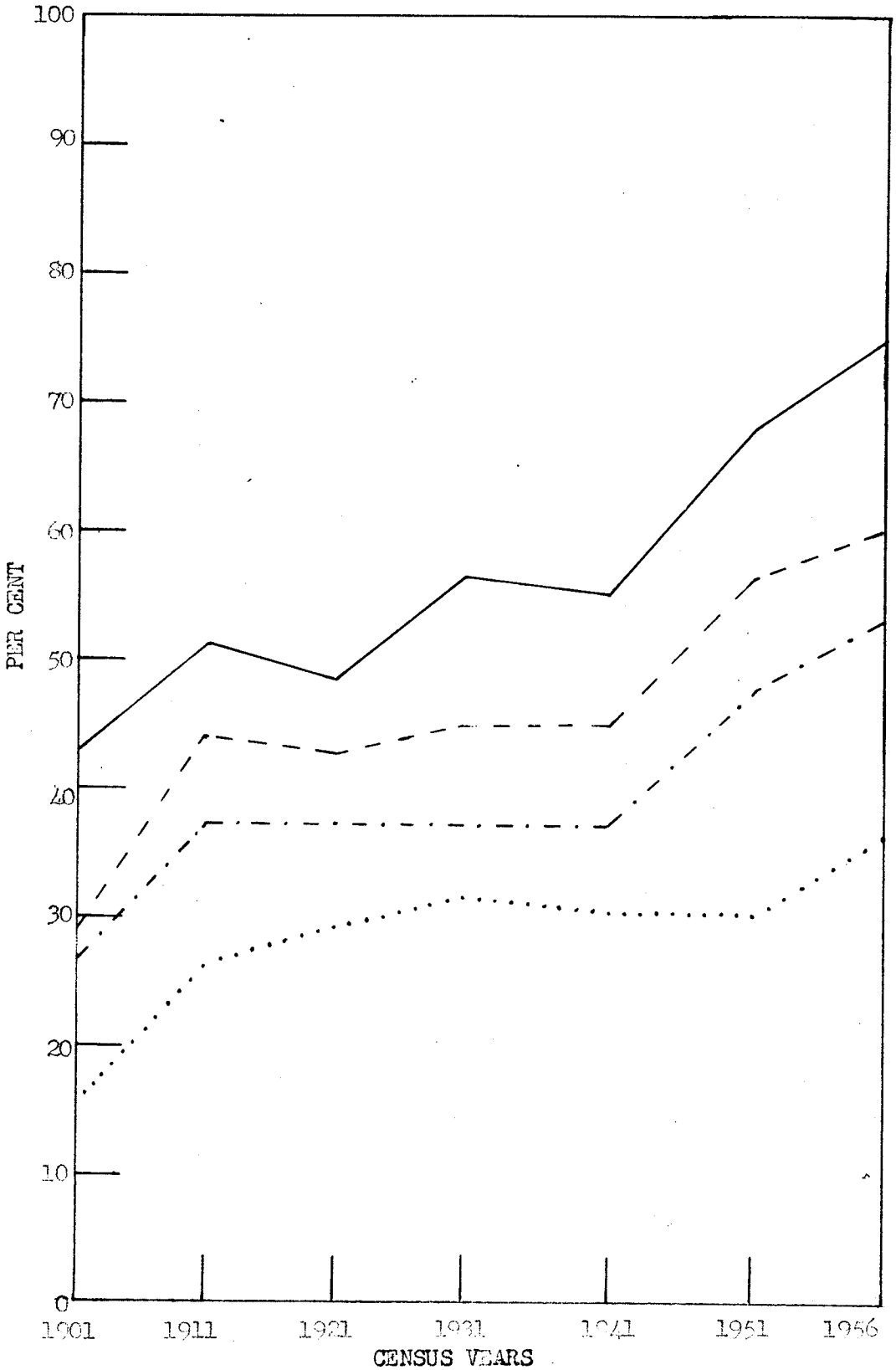


Fig. 9 - Showing Percent Rural Population to Total Population in Western Canada 1901, 1911, 1921, 1931, 1941, 1951, 1956. (- - - - Manitoba; ..... Saskatchewan; - . - . - Alberta; _____ British Columbia).

TABLE III

STATISTICS SHOWING THE TYPE OF WORK DONE BY MALES AND FEMALES IN WESTERN CANADA 1951

Occupation	Manitoba		Saskatchewan	
	Males	Females	Males	Females
All Occupations	232,296	66,205	251,077	51,035
Proprietors and Managers	20,103	1,658	18,711	1,425
Professional	9,938	8,548	8,768	10,017
Clerical	14,221	20,044	7,435	11,270
Fishing, Hunting, and Trapping	1,524	12	1,346	18
Logging	1,293	-	590	-
Mining and Quarrying	2,154	-	849	-
Manufacturing and Mechanical	26,970	6,933	12,839	1,180
Electric Lighting, Stationary Engineers	2,364	-	1,437	-
Construction	14,999	75	8,123	12
Transportation	19,474	204	17,100	68
Commerce	2,489	1,393	1,873	1,394
Commercial	10,655	7,706	10,407	4,965
Finance	1,597	77	1,035	39
Service	15,546	14,876	8,831	14,217
Labours	16,771	738	8,787	214
Not Stated	1,768	544	1,210	372

TABLE III (CONT'D)

Occupations	Alberta		British Columbia	
	Males	Females	Males	Females
All Occupations	291,269	62,629	346,374	97,978
Proprietors and Managers	24,356	1,992	35,247	4,279
Professional	13,233	10,152	19,369	13,928
Clerical	11,745	17,554	18,336	30,565
Fishing, Hunting, and Trapping	948	5	5,193	58
Logging	1,348	-	17,952	12
Mining, and Quarrying	7,475	-	7,261	8
Manufacturing and Mechanical	22,906	2,586	52,432	6,407
Electric Lighting, Stationary Engineers	2,891	-	8,213	-
Construction	18,760	54	28,258	58
Transportation	22,483	209	35,849	469
Commerce	2,189	1,370	3,618	3,635
Commercial	12,900	7,435	17,553	11,896
Finance	2,149	105	4,024	327
Service	18,270	16,856	30,364	22,367
Labourers	16,318	465	30,816	1,233
Not Stated	1,553	495	5,015	1,170

vinces, has 8.8% of her labour force working as proprietors or managers. Alberta and Manitoba each have approximately 7.4% in this category. British

Columbia also has the greatest per cent of her labour force classed as professionals. She has 7.4% of her labour force in the foregoing category. Alberta has 6.6% of her people classed as professionals. Saskatchewan is the only province which has a greater number of professional females than males, and yet she has the lowest number of females in the labour force. All four provinces have more females than males working as clerks. The major occupa-

TABLE IV

ANNUAL AVERAGE INDEX NUMBERS OF EMPLOYMENT BY INDUSTRIAL DIVISIONS AND GROUPS 1950-1954

Industry	1950	1951	1952	1953	1954
Forestry	100.8	138.6	123.9	100.0	95.1
Mining	105.5	110.6	116.8	111.7	109.8
Manufacturing	100.9	108.0	109.3	113.3	107.7
Construction	102.4	110.2	122.5	118.6	110.7
Transportation, and Storage	99.9	106.1	110.9	111.3	107.0
Public Utilities	101.3	103.4	107.5	112.1	115.7
Trade	103.2	107.4	109.9	113.2	114.6
Finance, Insurance, and Real Estate	105.4	115.2	121.9	122.4	127.4
Service	101.0	103.1	106.6	108.7	111.4
Ind. Companies	101.5	108.8	111.6	113.4	109.9

tions appear to be: (1) proprietors and/or managers; (2) professions; (3) clerking; (4) manufacturing and mechanics; (5) construction; (6) transportation; (7) commerce; and (8) serving.

Table IV indicates in which occupations the index numbers of employment

have increased. This increase in the index numbers shows that employment in public utilities, trade, finance, insurance, real estate, and service have increased steadily. The foregoing occupations appear to have demanded a constant increase in personnel. According to the index numbers the greatest layoffs have occurred in the forestry business. The index-numbers vary from a high of 138.6 in 1951 to a low of 95.1 in 1954. Employment in mining, manufacturing, construction, commerce, and real estate has varied a little, but more people were employed in each of the foregoing occupations in 1954 than in 1950.[14]

Age and Sex Distribution

Age and sex distribution are two important demographic characteristics. Since this study is concerned with educational implications of population trends and since education is a provincial responsibility, the age and sex distribution is given for each province separately. This necessitated a series of long tables of figures. In order to show the trend in the age distribution several age distribution pyramids were constructed. The forty-five year period 1911 to 1956 was divided into two periods. The first period covered the years from 1911 to 1941. The 1941 age distribution figures were superimposed on the figures for 1911. The second period covered the years from 1941 to 1956 and the figures for 1956 were superimposed on the figures for 1941. This was done; firstly, because it was felt that 1941 marked a change in family habits. That is, the age of marriage was lower and the size of families greater. This would result in more children ready for high school after 1956. Secondly, the Second World War terminated the economic depression.

Table V shows the age distribution of the people of Manitoba by sex for the decennial Censes from 1911 to 1951 and for 1956. The first figure for

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[14] Canada Yearbook 1956. Dominion Bureau of Statistics, Ottawa. pp. 740.

TABLE V

AGE DISTRIBUTION OF THE PEOPLE OF MANITOBA BY

1911, 1921, 1931, 1941, 1951, and 1956

Age	1911	1921	1931	1941	1951	1956
0-4	32,232	39,443	33,773	31,349	46,059	51,148
	31,358	38,401	32,833	30,310	43,918	49,219
	63,590	77,844	66,606	61,659	89,977	100,367
5-9	26,092	40,558	38,206	31,657	37,195	46,617
	25,577	39,676	37,536	30,567	35,399	44,843
	51,669	80,234	75,742	62,224	72,594	91,460
10-14	22,097	33,461	38,972	34,095	30,645	37,297
	21,493	32,573	37,522	33,001	29,498	35,219
	43,590	66,034	76,494	67,096	60,143	72,516
15-19	22,834	27,582	38,667	36,675	28,555	30,469
	21,123	26,944	38,387	36,718	28,633	29,958
	43,957	54,526	77,054	73,393	57,188	60,427
20-24	28,981	23,992	32,695	34,898	28,437	28,983
	21,737	23,960	31,680	34,375	30,315	28,691
	50,718	47,952	64,375	69,273	58,752	57,674
25-29	28,923	25,492	27,695	32,252	29,829	29,678
	20,214	24,597	24,765	31,940	32,590	29,857
	49,137	50,089	52,460	64,192	62,419	59,535
30-34	23,220	26,602	24,374	26,973	28,750	30,327
	16,392	22,716	21,669	26,115	29,611	31,746
	39,612	49,318	46,043	53,088	58,361	62,073

TABLE V (CONT'D)

Age	1911	1921	1931	1941	1951	1956
35-39	17,653	26,272	24,517	24,230	28,797	28,597
	12,829	21,118	22,607	22,445	28,597	29,943
	30,482	47,390	47,124	46,675	57,394	59,413
40-44	14,180	21,125	25,568	21,284	24,722	28,286
	10,212	16,218	20,734	20,149	23,868	27,697
	24,392	37,343	46,302	41,433	48,590	55,983
45-49	11,156	16,223	23,924	21,825	21,718	24,591
	8,218	12,214	18,323	19,866	20,000	23,446
	19,374	28,437	42,247	42,691	41,718	48,037
50-54	9,029	12,802	18,997	22,597	19,133	20,807
	6,593	9,617	14,100	18,347	18,001	19,097
	15,622	22,419	33,097	40,944	37,134	39,904
55-59	6,053	9,265	13,272	20,051	17,883	18,092
	4,481	7,193	9,905	15,582	16,673	16,910
	10,534	16,458	23,177	35,633	34,556	35,002
60-64	4,386	7,360	10,059	15,358	17,684	16,098
	3,201	5,719	7,743	11,434	14,563	14,984
	7,587	13,079	17,802	26,792	32,247	31,082
65-69	2,715	4,849	7,709	10,649	15,094	15,675
	2,175	3,838	5,892	8,390	12,253	13,565
	4,890	8,687	13,601	19,039	27,347	29,240
70-74	1,722	2,918	5,149	7,039	10,355	12,312
	1,392	2,349	4,282	5,795	8,772	10,736
	3,114	5,267	9,431	12,834	19,127	23,048

TABLE V (CONT'D)

Age	1911	1921	1931	1941	1951	1956
75-79	1,567	1,567	2,744	4,149	5,767	7,364
	837	1,347	2,407	3,659	4,963	6,472
	2,404	2,914	5,151	7,808	10,730	13,836
80-84	690	690	1,189	2,048	2,734	3,445
	390	690	1,074	1,952	2,621	3,197
	1,080	1,380	2,263	4,000	5,355	6,642
85-89	267	267	440	733	1,098	1,406
	145	272	445	790	1,074	1,489
	412	539	885	1,523	2,172	2,895
90-	59	99	115	217	363	413
	73	109	170	230	374	493
	132	208	285	447	737	906

each group shows the number of males, the second figure shows the number of females, and the third figure shows the total persons in each age group. The format of the tables in the Census book has been changed to make the tables of more convenient size.

From Table V it is evident that 1941 marked the transition point. The number of children (0 - 4) years of age increased during the decade from 1911 to 1921, then decreased during the next two decades and then increased again during the last fifteen-year period. The five to nine age group shows a similar fluctuating pattern. The foregoing figures are shown more clearly in Figures 10 and 11. Figure 10 shows the age distribution of 1941 superimposed on the age distribution on the age distribution lo 1911. There has

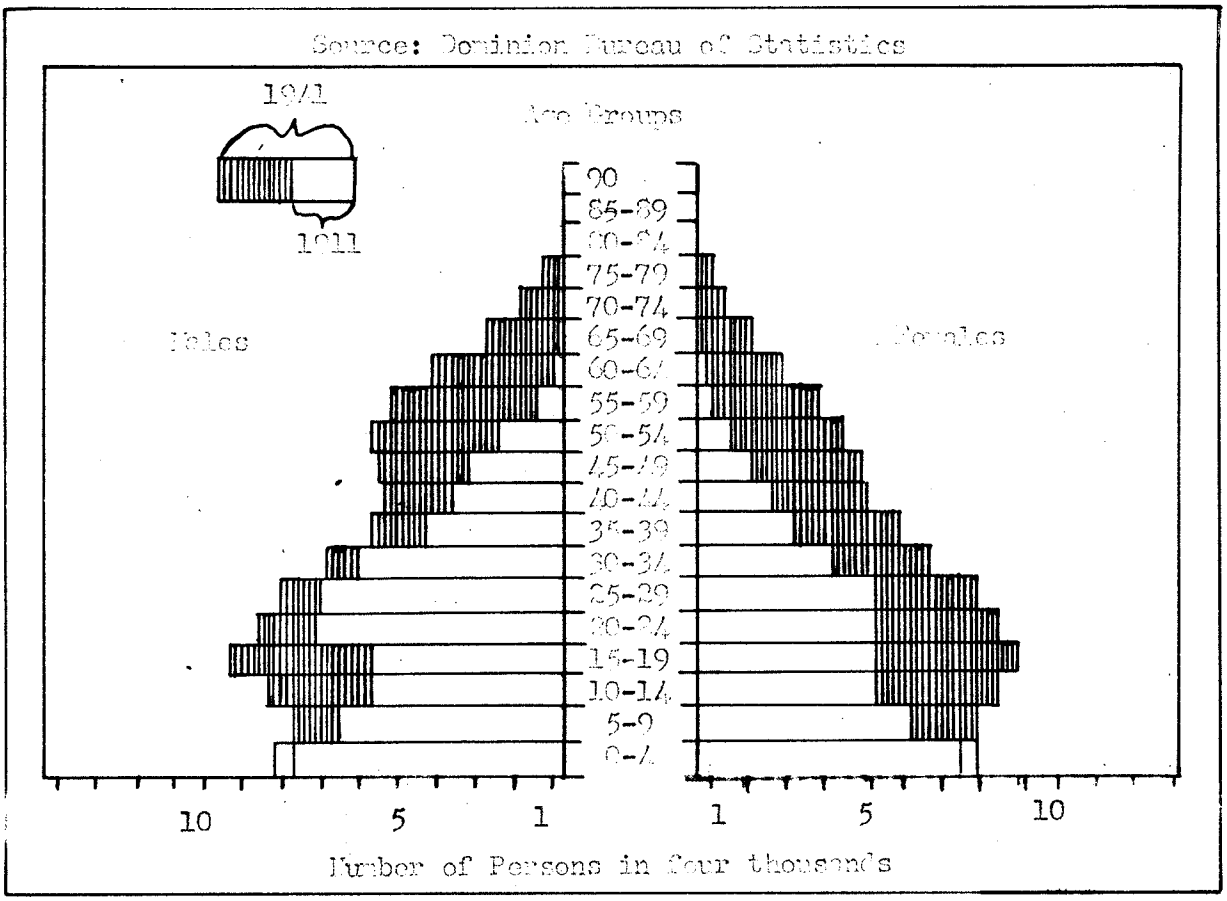

Fig. 10 - Showing Age Structure of the Population of Manitoba. (Figures for 1941 superimposed on those for 1911).

been a decrease in the number of children four years of age and under. The other age groups all show an increase. The females have increased more regularly than the males. The pyramid does not show the number in the last three age-groups. This was done because there were considerably fewer than a thousand in each age group. Figure 11 shows the 1956 age distribution superimposed upon the age distribution for 1941. Both males and females in the under four age-group have increased to about fifty thousand. The low birth rate during the depression years is reflected in the fifteen to twenty-five years of age groups. The increase in all the other age groups has not been very great. Again the last two age groups were not shown because there were fewer than two thousand in each of these groups.

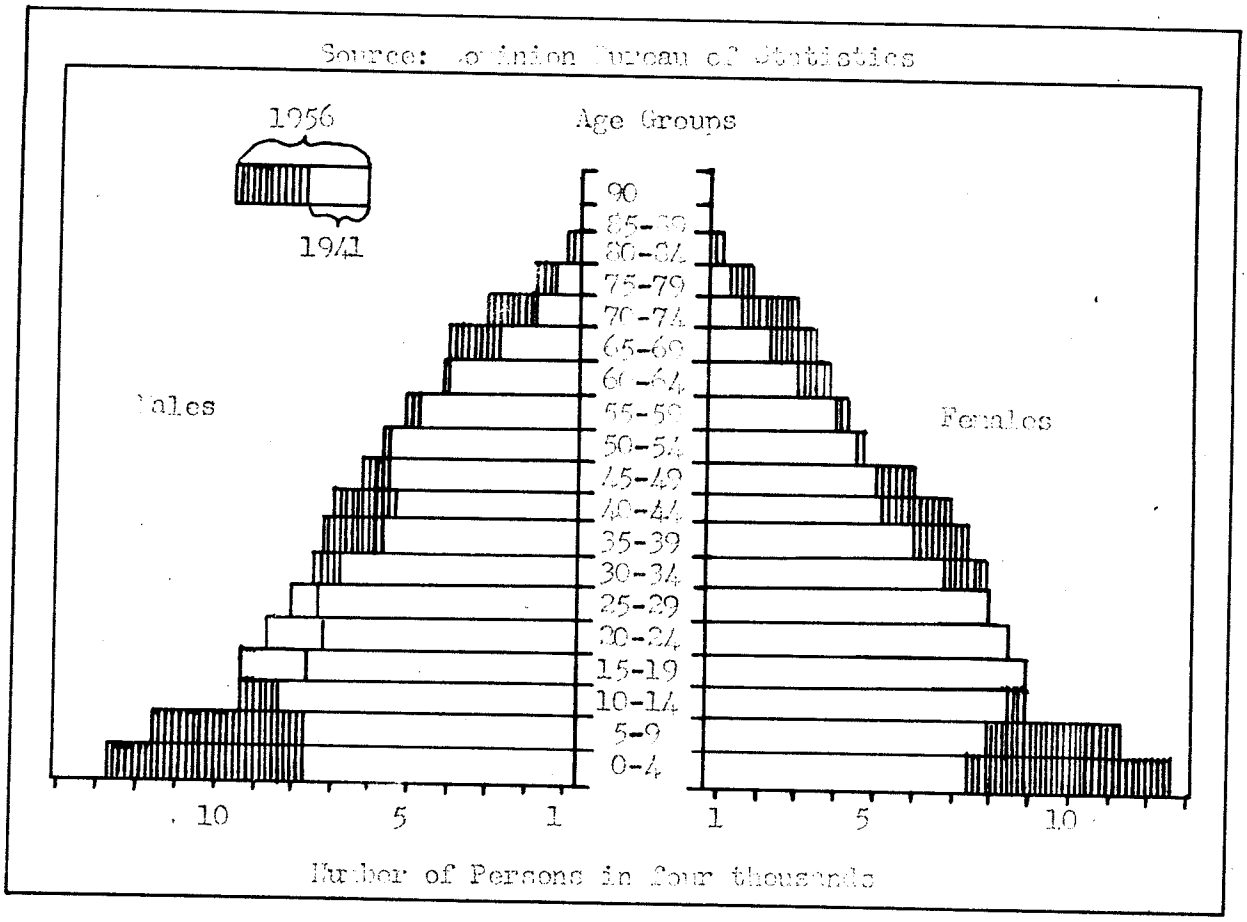

Fig. 11- Showing Age Structure of the Population of Manitoba. (Figures for 1956 superimposed on those for 1941.)

Table VI shows the age distribution data for Saskatchewan from 1911 to 1956. The first row for each age group shows the number of males, the second row shows the number of females and the last row shows the total. These data are more graphically portrayed by Figure 12. In spite of the years of depression, the under four years of age-group shows some increase. The following three age groups show an increase in numbers. The males in the twenty to thirty-five years of age-groups have not increased very much. The males in the other age groups have increased quite rapidly. One notices again how steadily and regularly the females have increased in all age groups, but the females are still outnumbered by the males. In 1941 there were about eight males for seven females, whereas in 1911 the males outnumbered the females

TABLE VI

AGE DISTRIBUTION OF THE PEOPLE OF SASKATCHEWAN

IN 1911, 1921, 1931, 1941, 1951, and 1956

Age	1911	1921	1931	1941	1951	1956
0-4	36,245	57,190	53,476	43,312	50,841	56,078
	35,096	56,028	51,760	41,641	49,014	53,525
	71,341	113,218	105,236	84,953	99,855	109,603
5-9	27,593	54,134	56,367	44,683	41,837	49,884
	26,411	52,358	54,850	43,550	39,945	48,069
	54,004	106,492	111,217	88,233	81,782	97,953
10-14	21,635	41,422	55,613	48,231	37,564	40,538
	20,719	39,765	54,434	46,659	36,051	38,676
	42,354	81,187	110,047	94,890	73,615	79,214
15-19	23,263	32,943	51,673	48,857	34,538	34,633
	18,081	30,453	49,385	47,152	33,944	33,726
	41,344	63,396	101,058	96,009	68,482	68,359
20-24	38,765	29,961	43,980	44,204	31,377	29,909
	19,984	27,114	37,935	40,893	31,236	29,083
	58,749	57,075	81,915	85,097	62,613	58,992
25-29	40,316	34,553	37,936	37,324	31,113	30,747
	19,940	27,842	29,540	35,114	31,147	29,133
	60,256	62,395	67,476	72,438	62,260	59,880
30-34	30,816	37,192	31,727	31,526	30,349	30,404
	16,423	26,565	26,206	28,231	29,993	29,898
	47,239	63,757	57,933	58,757	60,342	60,302

TABLE VI (CONT'D)

Age	1911	1921	1931	1941	1951	1956
35-39	22,072	36,963	32,998	28,383	29,535	29,893
	12,264	24,253	26,341	24,293	28,201	29,478
	34,336	61,216	59,339	52,676	57,736	59,371
40-44	15,449	27,993	34,686	24,842	26,188	28,550
	9,091	18,029	24,199	21,887	23,293	26,705
	24,540	46,022	58,885	46,729	49,481	55,255
45-49	11,162	19,875	32,349	26,582	22,829	25,320
	6,910	12,423	20,741	21,259	19,300	22,445
	18,072	32,307	53,090	47,841	42,129	47,765
50-54	9,057	14,141	24,401	28,355	19,787	21,529
	5,690	9,395	15,650	20,002	17,272	18,057
	14,747	23,536	40,051	48,357	37,059	39,586
55-59	6,012	9,754	16,206	25,575	19,538	18,481
	3,808	6,937	10,092	16,331	15,886	16,115
	9,820	16,691	26,298	41,906	35,424	34,596
60-64	4,282	7,719	10,830	18,768	19,782	17,224
	2,776	5,349	7,388	12,086	13,955	13,919
	7,058	13,068	18,218	30,854	33,737	31,143
65-69	2,497	4,874	7,763	12,351	17,458	17,361
	1,671	3,444	5,624	7,997	11,645	12,747
	4,168	8,318	13,387	20,348	29,103	30,108
70-74	1,359	2,786	5,510	7,401	11,419	14,177
	945	2,018	4,095	5,294	8,077	9,950

TABLE VI (CONT'D)

Age	1911	1921	1931	1941	1951	1956
	2,304	4,804	9,605	12,695	19,496	24,127
75-79	696	1,371	2,769	4,185	6,231	8,328
	506	1,058	2,161	3,256	4,596	6,079
	1,202	2,429	4,930	7,441	10,827	14,407
80-84	346	576	1,129	2,091	2,805	3,674
	245	493	067	1,848	2,221	2,940
	591	1,069	2,096	3,939	5,026	6,614
85-89	121	181	418	708	1,072	1,305
	92	187	362	705	1,002	1,243
	213	368	780	1,413	2,074	2,548
90-	44	72	104	185	305	393
	50	90	120	231	382	449
	94	162	224	416	687	842

two to one.

Figure 13 shows the 1956 age distribution for Saskatchewan superimposed on the 1941 age distribution. This figure shows that Saskatchewan lost many of its able-bodied people who were in their prime years, namely between ten and forty years of age. Only the pensioners and young dependents increased. The number of males and females married increased in spite of the exodus. This increase in families is reflected by the increase in children under five years of age. Therefore, it appears that, in the main, single people only emigrated. This is borne out by the data in Table VI.[18]

[18]See Table VI, p. 46.

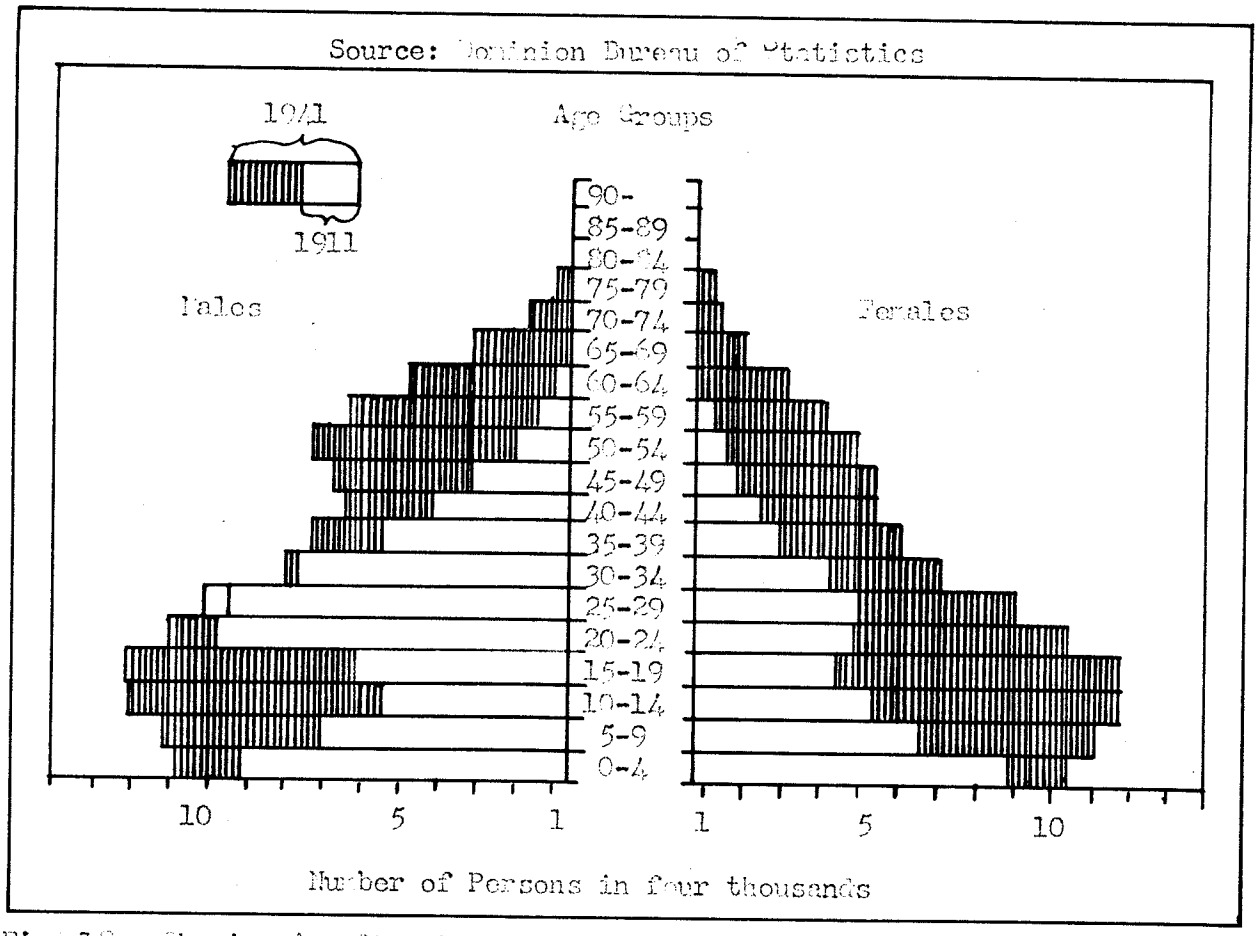

Fig. 13 - Showing Age Structure of the Population of Saskatchewan. (Figures for 1941 superimposed on those for 1911.)

Both Figures 12 and 13 do not show the number in the age groups from eighty to ninety years of age since there were too few to show an accurate picture.

TABLE VII

AGE DISTRIBUTION OF THE PEOPLE OF ALBERTA IN 1911,

1921, 1931, 1941, 1951, and 1956

Age	1911	1921	1931	1941	1951	1956
0-4	24,844	39,820	39,650	37,975	59,409	76,937

TABLE VII (CONT'D)

Age	1911	1921	1931	1941	1951	1956
	23,843	38,728	38,728	36,926	57,437	72,760
	48,687	78,589	78,378	74,901	116,846	149,697
5-9	20,446	35,518	40,717	38,425	47,528	64,443
	19,316	37,344	40,393	37,423	45,535	61,377
	39,762	75,862	81,110	75,848	93,063	125,820
10-14	16,770	30,279	40,462	39,198	39,008	49,696
	15,777	28,996	39,028	38,505	37,889	47,622
	32,547	59,275	79,490	77,703	76,897	97,318
15-19	17,607	25,409	37,687	39,335	37,882	40,772
	14,061	23,319	36,479	39,023	36,059	39,714
	31,668	48,728	74,166	78,358	73,941	80,486
20-24	28,765	23,705	34,710	37,524	38,333	42,361
	14,368	21,099	30,401	36,090	37,194	40,481
	43,133	44,804	65,111	73,614	75,527	82,842
25-29	30,549	27,114	32,897	33,684	38,022	45,763
	14,743	21,992	25,052	31,836	38,693	42,138
	45,292	49,106	57,949	65,520	76,715	87,901
30-34	24,227	30,439	28,577	30,271	36,031	42,934
	12,910	21,594	22,267	26,747	35,920	42,640
	37,137	52,033	50,844	57,018	71,951	85,574
35-39	17,923	30,647	28,300	29,614	34,040	40,261
	10,105	19,934	21,782	23,525	32,469	38,693
	28,028	50,581	50,082	53,139	66,509	78,954

TABLE VII (CONT'D)

Age	1911	1921	1931	1941	1951	1956
40-44	13,318	23,843	29,594	25,510	30,330	35,895
	7,547	15,559	20,147	20,288	26,641	33,485
	20,865	39,402	49,741	45,798	56,971	69,380
45-49	9,592	17,395	27,446	25,040	27,959	31,574
	5,785	11,144	17,588	19,083	22,187	27,528
	15,377	28,539	45,034	44,123	50,146	29,102
50-54	7,946	13,303	21,273	25,845	23,698	27,662
	4,607	8,345	13,478	17,628	18,636	22,015
	12,553	21,648	34,751	43,473	42,334	49,677
55-59	4,856	8,821	14,105	23,081	20,865	22,733
	2,952	5,839	8,818	14,684	16,136	18,278
	7,808	14,660	22,923	37,765	37,001	41,011
60-64	3,337	6,832	9,925	16,858	20,360	18,929
	2,000	4,590	6,441	10,810	14,297	15,198
	5,337	11,422	16,366	27,668	34,657	34,027
65-69	1,807	4,102	6,804	11,150	17,536	18,252
	1,197	2,811	4,718	7,353	11,903	13,544
	3,004	6,913	11,522	18,503	29,439	31,796
70-74	946	2,266	4,598	6,757	11,270	14,385
	710	1,581	3,272	4,761	8,283	10,667
	1,656	3,847	7,870	11,518	19,553	25,052
75-79	548	1,062	2,182	3,735	6,096	8,148
	353	763	1,712	2,807	4,568	6,295

TABLE VII (CONT'D)

Age	1911	1921	1931	1941	1951	1956
	901	1,825	3,894	6,542	10,664	14,443
80-84	203	447	918	1,733	2,648	3,643
	151	395	755	1,481	2,218	3,063
	354	842	1,673	3,214	4,866	6,706
85-89	79	166	279	570	907	1,281
	52	136	265	591	940	1,252
	131	302	544	1,161	1,947	2,533
90-	29	40	75	153	270	352
	26	36	82	150	304	445
	55	76	157	303	574	797

Table VII shows the age distribution figures for Alberta from 1911 to 1956. The first row for each age group shows the number of males, the second row shows the number of females and the last row shows the total. These data are shown more clearly by Figures 14 and 15. Alberta did not suffer any of the population upheavals found in Saskatchewan. One notices, again, that the females have increased more steadily and at a faster rate than the males. At birth the increase is about equal for both sexes, but then a disparity sets in. In Figure 15, one notices that the sexes increased about equally fast. The females, nevertheless, are still outnumbered by the males in Alberta. Both pyramids, however, are still quite symmetrical.

Table VIII shows the age distribution figures for British Columbia. The format is the same as that of the other three tables. Figures 16 and 17 show

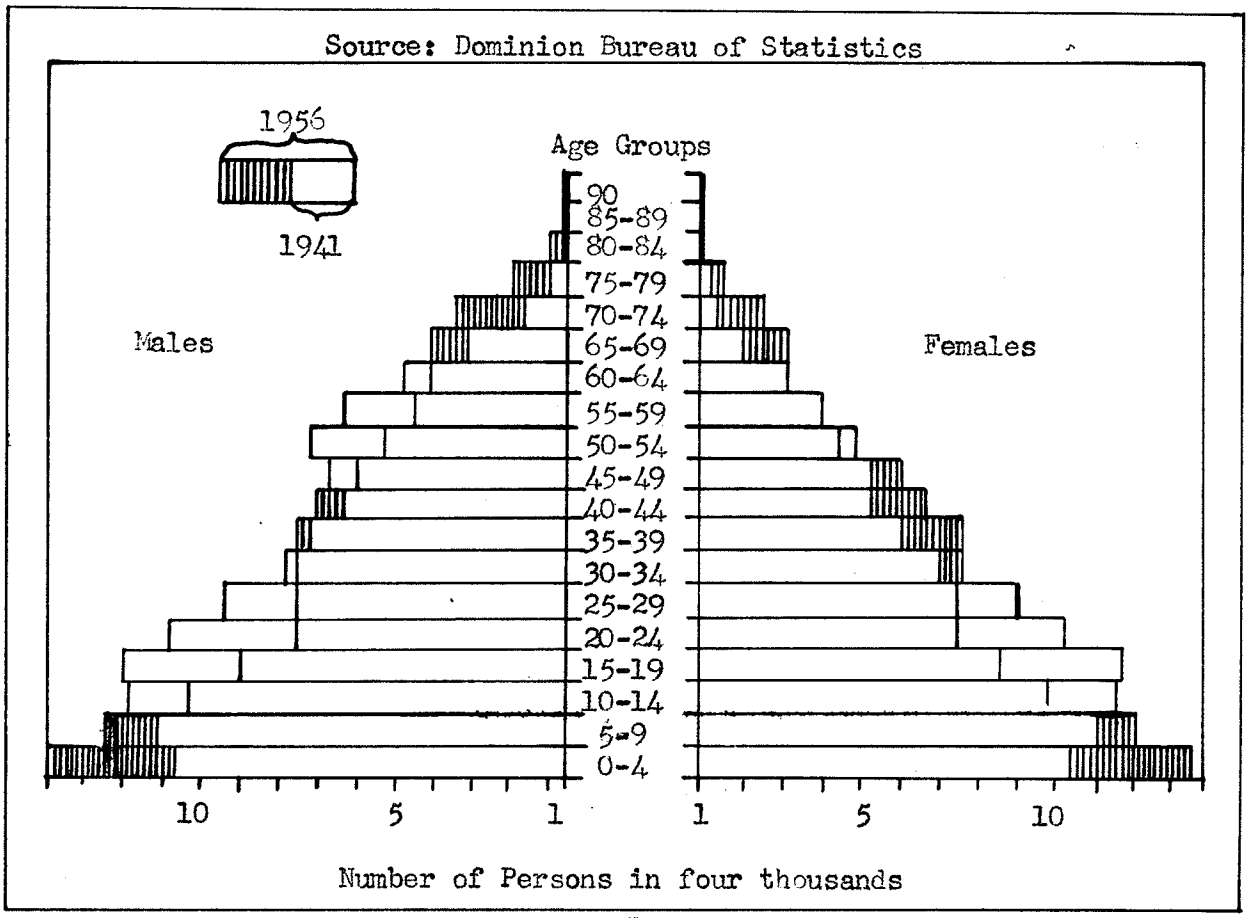

Fig. 13 - Showing Age Structure of the Population of Saskatchewan. (Figures for 1956 superimposed on those for 1941.)

the population distribution data more clearly. The female section again shows a more consistent increase than the male section. The twenty-five to twenty-nine years of age-group has decreased by about three thousand people. Figure 17 shows that the birth rate has gone up in British Columbia too. The number of children under five years of age almost tripled in the fifteen year period from 1941 to 1956. The middle aged people also increased indicating that British Columbia received a large percentage of the immigrants coming from foreign countries and the other parts of Canada. The pension groups appear to have increased quite rapidly too. Both pyramids for British Columbia are quite symmetrical. There are no excessive bulges

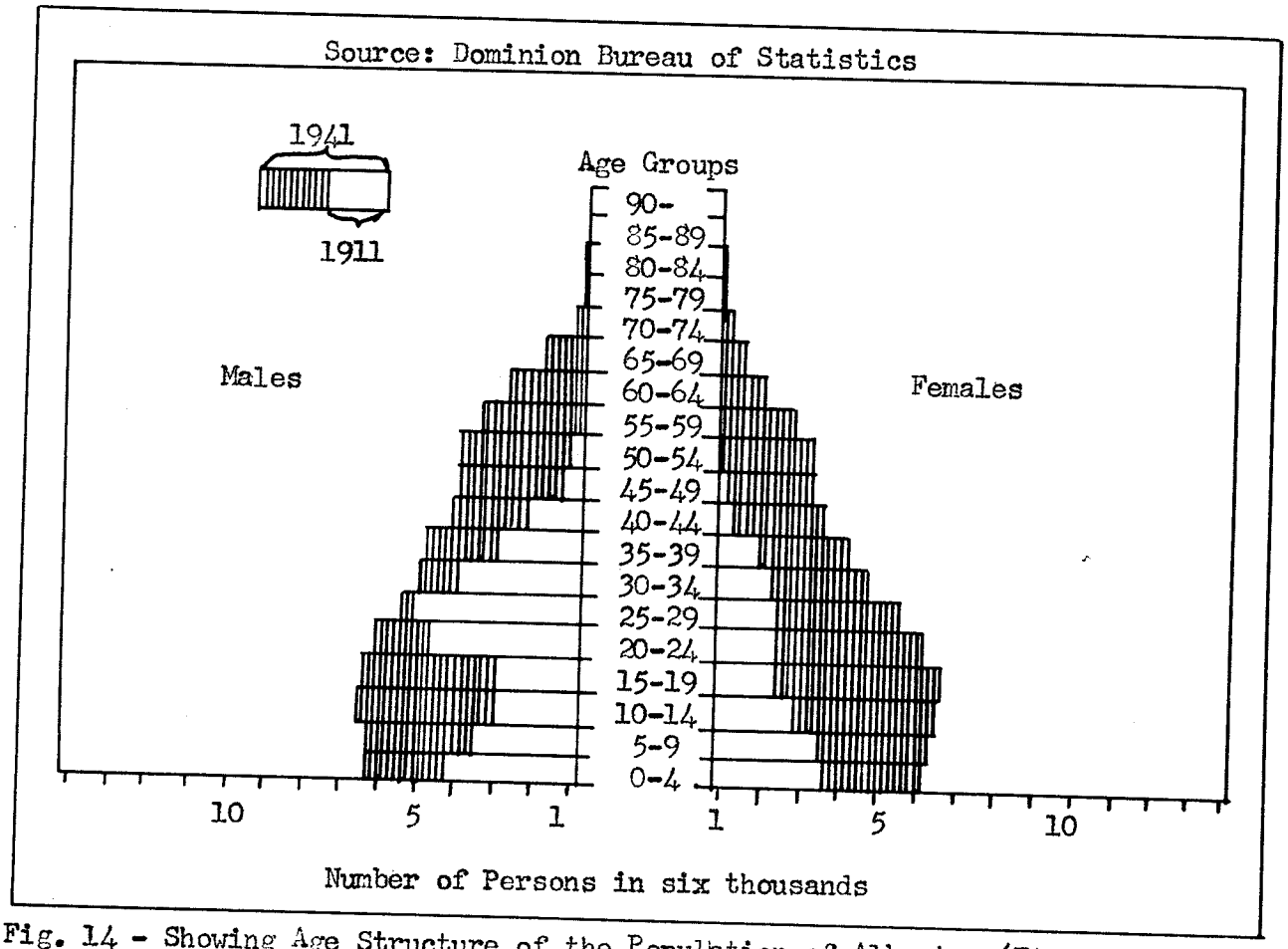

Fig. 14 - Showing Age Structure of the Population of Alberta. (Figure for 1941 superimposed on those for 1911.)

TABLE VIII

AGE DISTRIBUTION OF THE PEOPLE OF BRITISH COLUMBIA

IN 1911, 1921, 1931, 1941, 1951, and 1956

Age	1911	1921	1931	1941	1951	1956
0-4	18,073	25,019	26,213	30,118	64,176	80,002
	18,045	24,922	25,833	29,394	61,710	76,757
	36,118	49,841	52,046	59,512	125,886	156,759
5-9	15,199	27,391	30,155	27,969	50,996	71,493

TABLE VIII (CONT'D)

Age	1911	1921	1931	1941	1951	1956
	14,411	26,893	29,073	26,946	48,896	69,095
	29,610	54,284	59,228	54,915	99,892	140,588
10-14	13,107	22,819	30,252	30,580	39,838	55,441
	12,421	22,516	29,652	30,126	38,771	53,077
	25,528	45,335	59,904	60,706	78,609	108,518
15-19	15,699	19,189	31,928	33,727	35,767	44,152
	12,011	18,529	30,559	32,893	34,463	42,281
	27,710	37,718	62,487	66,620	70,230	86,433
20-24	30,854	18,204	29,165	34,153	39,407	45,658
	13,886	17,775	26,758	35,094	40,417	40,739
	44,740	35,979	55,923	69,247	79,824	86,397
25-29	39,109	21,520	28,922	35,845	43,677	52,642
	15,246	19,121	22,642	36,057	47,915	47,922
	54,355	40,641	51,564	71,902	91,592	100,564
30-24	33,013	28,055	26,386	32,514	42,892	52,462
	13,999	20,229	21,653	29,560	47,886	53,710
	47,012	48,284	48,029	62,074	90,778	106,172
35-39	25,245	31,874	27,689	30,791	45,223	50,475
	11,162	20,932	23,005	24,929	46,078	52,883
	36,407	52,806	50,694	55,720	91,301	103,358
40-44	20,251	28,372	33,507	27,144	40,381	50,084
	8,793	17,093	22,752	23,532	37,137	48,565
	29,044	45,465	56,259	50,676	77,518	98,649

TABLE VIII (CONT'D)

Age	1911	1921	1931	1941	1951	1956
45-49	14,542	21,963	34,610	26,655	35,885	43,505
	6,668	12,963	21,625	23,274	29,877	38,973
	21,210	34,913	56,235	49,929	65,762	82,478
50-54	10,642	17,488	28,922	31,086	30,994	36,862
	5,006	10,055	17,902	23,449	27,937	30,848
	21,210	34,913	46,824	54,535	58,931	67,710
55-59	6,000	11,564	20,059	30,446	27,507	30,498
	3,479	7,079	12,321	21,075	25,706	27,767
	9,479	18,643	32,380	51,521	53,213	58,265
60-64	4,610	9,287	15,272	25,119	30,259	26,224
	2,308	5,448	9,305	17,313	25,278	25,570
	6,918	14,735	24,577	42,432	55,537	51,794
65-69	2,387	5,273	10,312	17,266	29,945	29,077
	1,451	3,437	6,935	12,327	22,982	25,001
	3,838	8,710	17,247	29,593	52,927	54,078
70-74	1,540	3,001	6,563	11,223	21,189	26,187
	1,011	2,226	4,741	8,196	16,839	21,773
	2,551	5,227	11,304	19,419	38,028	47,960
75-79	754	1,427	3,364	6,385	11,351	15,514
	508	1,193	2,479	4,876	9,404	13,042
	1,262	2,620	5,843	11,261	20,755	28,556
80-84	416	646	1,377	2,801	5,257	7,044
	299	608	1,093	2,543	4,571	6,506

TABLE VIII (CONT'D)

Age	1911	1921	1931	1941	1951	1956
	715	1,254	2,570	5,344	9,828	13,550
85-89	113	221	403	970	1,767	2,520
	107	193	463	926	1,762	2,555
	220	414	866	1,896	3,529	5,075
90-	65	96	120	239	450	676
	50	74	153	320	620	884
	115	170	273	559	1,070	1,560

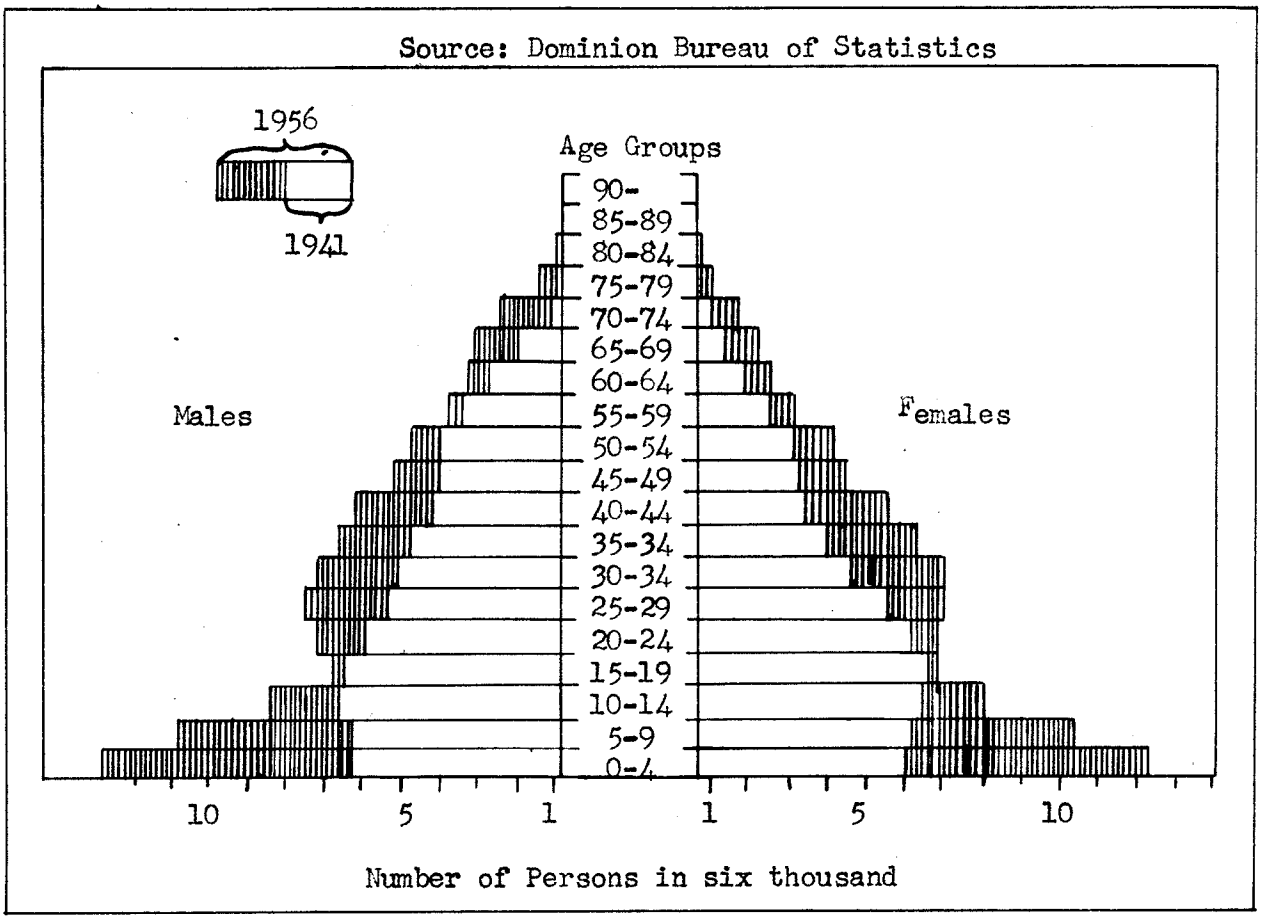

Fig. 15 - Showing Age Structure of the Population of Alberta. (Figures for 1956 superimposed on those for 1941.)

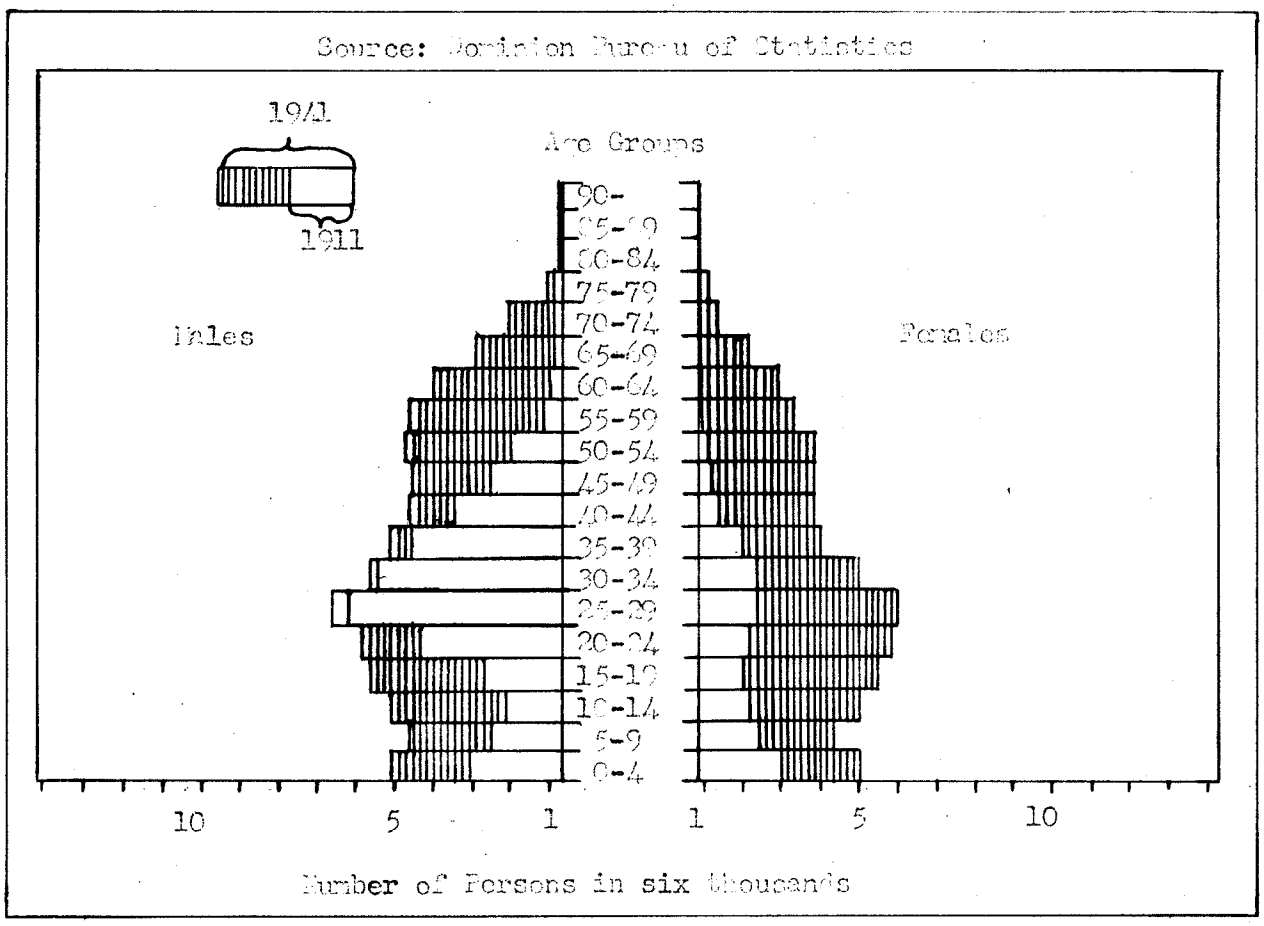

Fig. 15- Showing Age Structure of the Population of British Columbia. (Figures for 1941 superimposed on those for 1911.)

or concaves. However, in 1941 there were about sixty-six thousand children under nine years of age but in 1956 there were about three hundred thousand children under nine years of age. This foregoing statement is shown to be true by Figures 16 and 17.

Educational Implications

The population of Western Canada has increased from 598,169 in 1901 to 4,252,285 in 1956. That means an increase of around seven hundred per cent. Educational facilities have had to be greatly expanded. The population expansion has affected education from the primary grades through to the universities. Along with a demand for improved educational facilities came the need

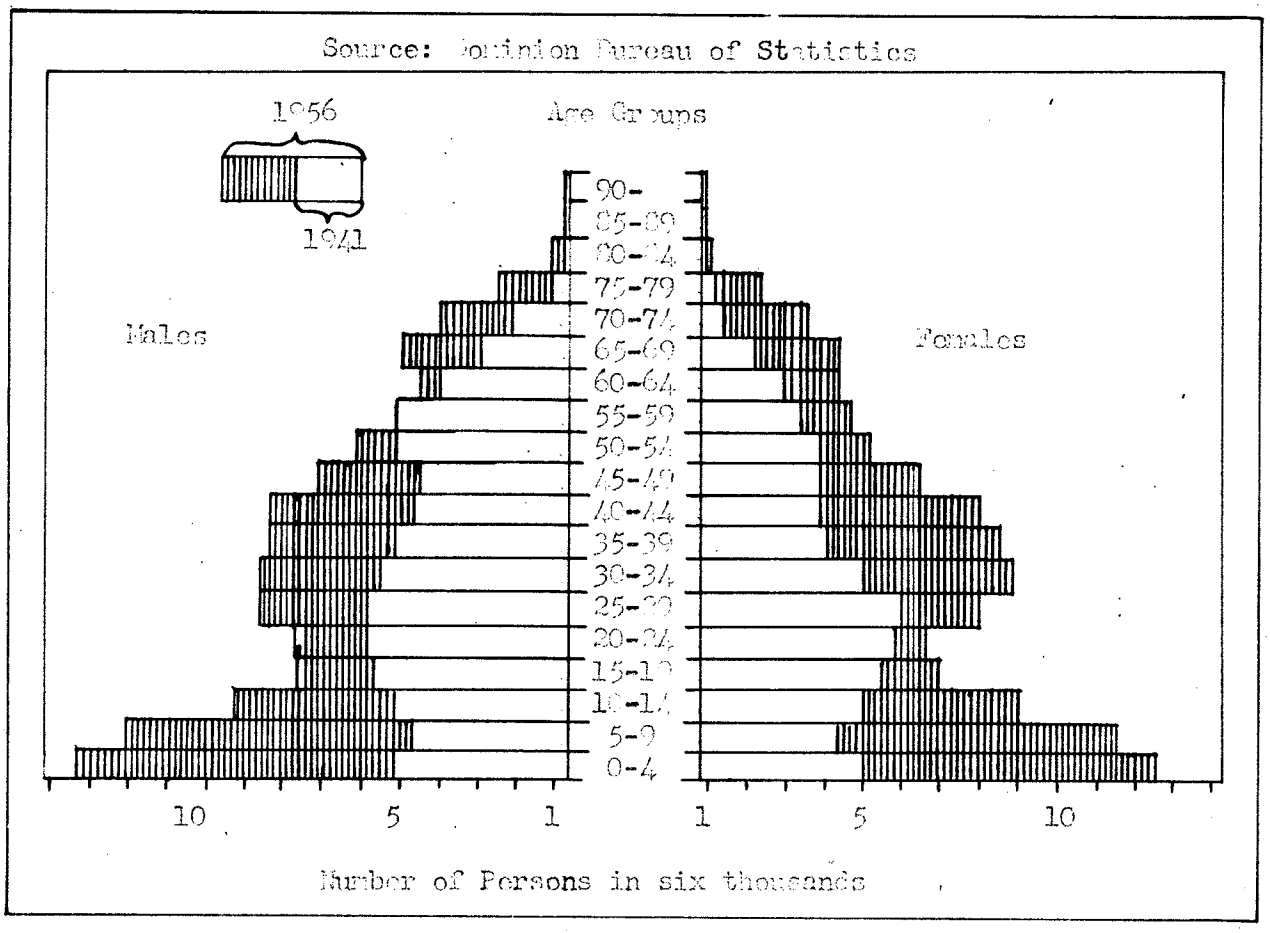

Fig. 17 - Showing Age Structure of the Population of British Columbia. (Figures for 1956 superimposed on those for 1941.)

to build more schools, colleges and universities; and to train better teachers and more of them. More people means not only more people in school, but also a greater variety of them. More and more children appeared in the groups at both ends of the intelligence scale. This necessitated special classes for the mentally retarded as well as for the gifted. With an increase in population came an increase in the number of handicapped children. This increase coupled with a saner attitude towards the handicapped children has resulted in classes for the hard of hearing, for those with partial loss of sight and for those with orthopedic handicaps. The foregoing classes of pupils were al-

ways present but in insufficient numbers to warrant establishing special classes for them.

A concomitant of an increasing population was industrialization which resulted in a rapid trend towards urbanization. This resulted in the closing down of many rural schools and, probably, helped in discovering the incidence of exceptional children among the average children. Urbanization ushered in the era of juvenile delinquency. This created the need for supervised recreational centres. It made administrators aware of the tremendous need for guidance of the young adolescent. (The teaching of guidance is made difficult by the large gap between "what ought to be" and "what is" in society. Possibly the schools are attempting to do too much of the training of the young people thereby depriving the parents of the obligation to train their children.)

Urbanization and immigration have brought together people from many nations. They have had to adjust themselves to each other. The concept of being brothers can be fostered in the schools. However, textbooks must than cater to all groups. The thief in a story must not always be the Negro or the ditch digger, a Slav.

The increase in preschool children will necessitate the building of more and more schools and the training of more and more teachers. Some of the Western Provinces are better able to finance this program of expansion than others. Those provinces that are unable to finance their own educational needs will, probably, need outside financial help. This is discussed more fully in a later chapter in this study.

CHAPTER IV

ANALYSIS OF SCHOOL POPULATION - 1941

Introduction

In the next three chapters, the 1941, 1951, and the 1956 populations of school age will be analyzed. The year 1941 was chosen because the economic depression had largely ended in Western Canada. Therefore, more parents should, probably, be financially able to send their children to high school and to university, and school districts could, probably, have obtained financial aid to expand their school facilities.

One purpose of these analyses of the 1941, 1951, and the 1956 populations of school age was to show whether or not a greater per cent of those children capable of completing the high school and the university courses was going to high school and university. Graphs showing the per cents of the 1941, 1951, and the 1956 populations of school age going to high school and to university were plotted to show the foregoing purpose more clearly.

In addition to the foregoing purpose, the purpose of this chapter is twofold: (1) to analyze the school population of Western Canada; and (2) to compare the rural population with the urban population of Western Canada with regard to years of schooling. The analysis of the school population will include the preschool group (0-4), and the population from five to twenty-four years of age. The comparison of the rural population with the urban population with regard to years of schooling will include the entire population of Western Canada.

An effort was made to find out how many: (1) preschool children; (2) how many children of elementary and junior high school age; (3) how many young people of high school age; and, (4) how many young people old enough to go to university there were in each province. An attempt was also made to calculate how many persons in each division would be exceptional and how many persons in each division would be average. The exceptional persons included were: (1) the gifted; (2) the mentally retarded; (3) the feeble-minded; (4) the genera; (5) the slow-learning; and (6) the rapid learning. The calculation for the number of persons in each of the foregoing groups was based on the per cents shown in Figure 18. The classification of the population shown in Figure 18 is based to some extent on intelligence, but Dr. Baker writes:

> In terms of general differences, individuals may be divided into several groups. While these classifications are based to some extent upon intelligence, many other factors such as personality, health, and cultural background enter into any well planned classification for instructional purposes.[1]

But, according to the diagram, the people are classified as follows: (1) genera - 1% and institutional feeble-minded - 1%; (2) gifted - 2% and mentally retarded - 2%; (3) rapid-learning - 20% to 25% and slow-learning - 20% to 25%; and (4) average - 50% to 55%. Scattered through all these groups will be those with diverse physical handicaps. Estimates of the incidence of physical handicaps show that twenty per cent of all children have defective vision,[2] about fourteen per cent of all children have defective hearing,[3] about two and six-tenths per cent of the general population

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[1]Harry J. Baker, Ph. D., Introduction to Exceptional Children. (Revised Edition). New York, New York: The Macmillan Company, 1953, p. 239.

[2]Ibid., p. 29.

[3]Ibid., p. 82.

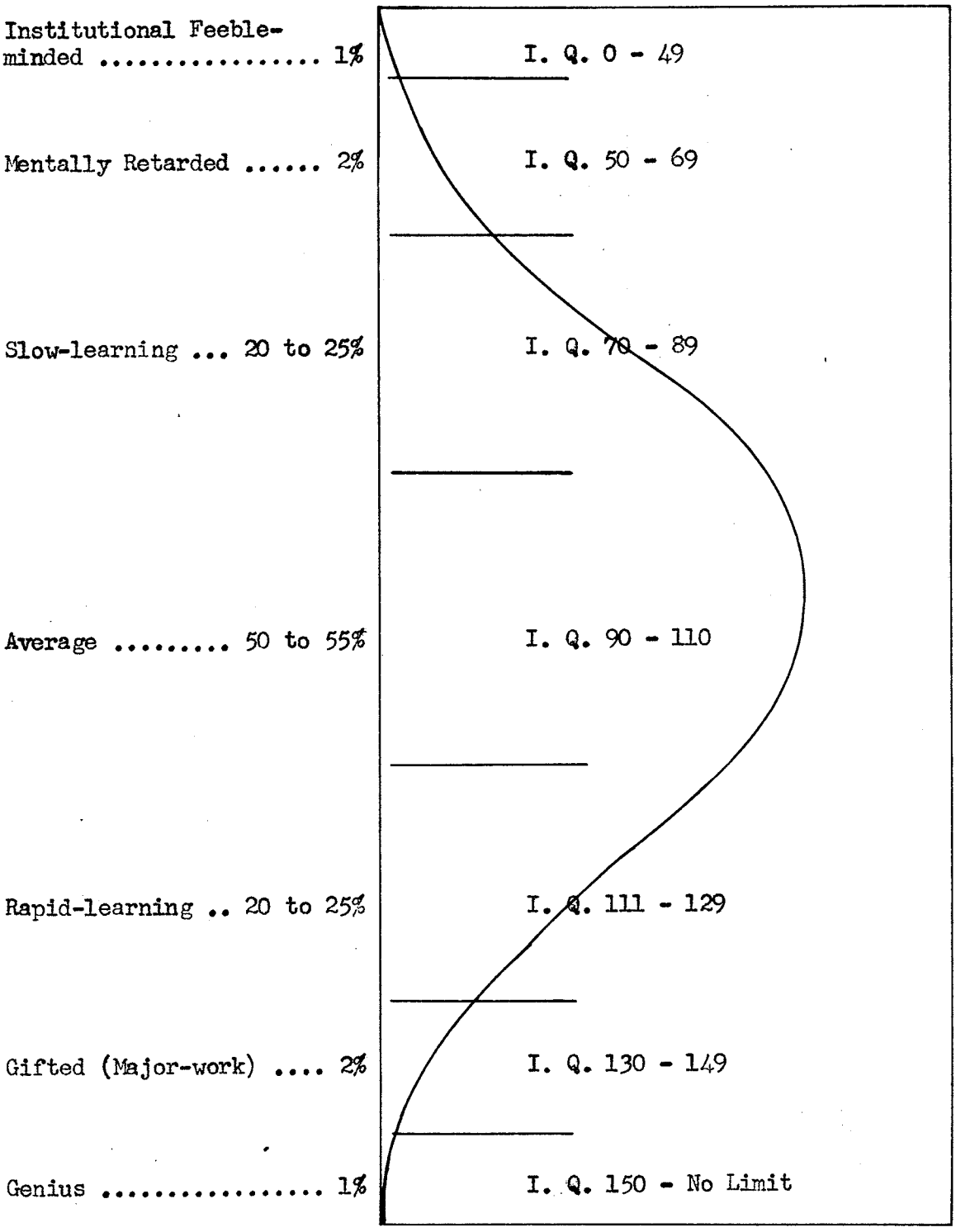

Fig. 18 - Showing the Distribution of Intelligence.[4]

[4]Ibid., p. 239.

suffers from orthopedic handicaps.[5] The incidence of some physical handicaps appears to be higher among groups of children of below average intelligence than among those children with above average intelligence.[6] Furthermore, children with multiple handicaps are not uncommon.

Number in Each Major Classification - Preschool, Elementary and Junior High, Senior High, and University

In order to calculate the number of people in each division of intelligence, the population under twenty-five years of age was divided into preschool, elementary and junior high, senior high, and university groups. This was necessary because many children in grades five or six would probably be more than ten years old.

In 1941, Manitoba, Saskatchewan, Alberta, and British Columbia had 61,659; 84,953; 74,901; and 59,512 preschool children, respectively. In the group five to fourteen years of age, there were 129,320; 183,123, 153,551; and 115,621 children in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively. Manitoba, Saskatchewan, Alberta, and British Columbia had 73,393; 96,009; 78,358; and 66,620 young people, respectively in the group aged fifteen to nineteen years of age. The foregoing data and the data for the number of young people old enough to go to university are summarized in Table IX.

Intelligence Distribution of the Western Canadian Population (0-24) for 1941

Psychologists have divided the population into seven groups of different intelligence as shown in Figure 18. The per cents, 1%, 2%, 20%, 54%, 20%, 2%, and 1% were used to calculate the number of feeble-minded, mental-

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[5]Ibid., p. 150.

[6]Ibid., pp. 45, 147, 190.

TABLE IX

NUMBER OF SCHOOL POPULATION IN EACH MAJOR ACADEMIC DIVISION IN WESTERN CANADA BY PROVINCES 1941

Province	Preschool (0-4)	Elementary, Junior High (5-14)	Senior High (15-19)	University (20-24)
Manitoba	61,659	129,320	73,393	69,273
Saskatchewan	84,953	183,123	96,009	85,097
Alberta	74,901	153,551	78,358	73,614
British Columbia	59,512	115,621	66,620	69,247

ly retarded, slow-learners, average, rapid-learners, gifted, and genera there might have been in each major academic division of the school population in each province of Western Canada. The results are summarized in Tables X - XIII. (The results of these calculations will be called the "intelligence distribution.")

The intelligence distribution of the preschool children (0-4 years of age) is summarized in Table X. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 617, 850, 749, 595 feeble-minded children respectively in 1941. Each province could have had an equal number of genera in 1941. Each province could have had 1233, 1699, 1498, and 1190 mentally retarded children respectively in 1941. Again each province could have had an equal number of gifted children in 1941. Similarly each province could have had 12,332, 16,991, 14,980, and 11,902 slow-learning children respectively in 1941. Each province could have had an equal number of rapid-learning children in 1941. Finally, each province could have had

TABLE X

INTELLIGENCE DISTRIBUTION OF PRESCHOOL CHILDREN

OF WESTERN CANADA BY PROVINCES 1941

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	617	850	749	595
Mentally-retarded	1,233	1,699	1,498	1,190
Slow-learning	12,332	16,991	14,980	11,902
Average	33,295	45,873	40,447	32,138
Rapid-learning	12,332	16,991	14,980	11,902
Gifted	1,233	1,699	1,498	1,190
Genius	617	850	749	595

33,295, 45,873, 40,447, and 32,138 children of average intelligence respectively.

The intelligence distribution of the kindergarten, elementary, and junior high school children is summarized in TableXI. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 1,293, 1,831, 1,536, and 1,156 feeble-minded children respectively. Each province could have had an equal number of genera. Each province could have had 2,586, 3,662, 3,071, and 2,312 mentally-retarded children respectively in 1941. Again each province could have had an equal number of gifted children in 1941. Each province could have had 25,864, 36,625, 30,710, and 23,124 slow-learning children respectively, and an equal number of rapid-learners in 1941. Finally, each province could have had 69,834, 98,887, 82,917, and 62,437 children of average intelligence, respectvely in 1941.

TABLE XI

INTELLIGENCE DISTRIBUTION OF KINDERGARTEN, ELEMENTARY, AND JUNIOR HIGH SCHOOL AGED CHILDREN OF WESTERN CANADA BY PROVINCES 1941

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	1,293	1,831	1,536	1,156
Mentally-retarded	2,586	3,662	3,071	2,312
Slow-learning	25,864	36,625	30,710	23,124
Average	69,834	98,887	82,917	62,437
Rapid-learning	25,864	36,625	30,710	23,124
Gifted	2,586	3,662	3,071	2,312
Genius	1,293	1,831	1,536	1,156

The intelligence distribution of the children of high school age is summarized in Table XII. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 734, 960, 784, and 666 feeble-minded children of senior high school age, respectively. Each province could have had an equal number of genera in this group. Each province could have had 1,468, 1,920, 1,567, and 1,332 mentally-retarded children respectively in this group, and again an equal number of gifted children in this group in 1941. Each province could have had 14,679, 19,202, 15,672, and 13,324 slow-learning children, respectively, in this group, and an equal number of rapid-learning children in this group. Finally, each province could have had 39,631, 51,845, 42,312, and 35,976 children, respectively, of average intelligence in this group.

The intelligence distribution of the young people of university age

TABLE XII

INTELLEGENCE DISTRIBUTION OF SENIOR HIGH SCHOOL AGE

POPULATION OF WESTERN CANADA BY PROVINCES 1941

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	734	960	784	666
Mentally-retarded	1,468	1,920	1,567	1,332
Slow-learning	14,679	19,202	15,672	13,324
Average	39,631	51,845	42,312	35,976
Rapid-learning	14,679	19,202	15,672	13,324
Gifted	1,468	1,920	1,567	1,332
Genius	734	960	784	666

is summarized in Table XIII. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 693, 851, 736, and 692 feeble-minded young people, respectively, and an equal number of genera in this group. Each province could have had 1,385, 1,702, 1,472, and 1,385 mentally-retarded young people, respectively, and also an equal number of gifted young people in this group. Again each province could have had 13,855, 17,019, 14,723, and 13,849 slow-learning young people, respectively, and also an equal number of rapid-learning young people in this group. Finally, each province could have had 37,407, 45,953, 39,752, and 37,395 young people of average intelligence, respectively, in this group.

According to the foregoing discussion 54% of the population is of average intelligence and 46% of the population is of either above or below average intelligence. The data for this 46% of the population 0-24

TABLE XIII

INTELLIGENCE DISTRIBUTION OF UNIVERSITY AGED POPULATION OF WESTERN CANADA BY PROVINCES 1941

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	693	851	736	692
Mentally-retarded	1,385	1,702	1,472	1,385
Slow-learning	13,855	17,019	14,723	13,849
Average	37,407	45,953	39,752	37,395
Rapid-learning	13,855	17,019	14,723	13,849
Gifted	1,385	1,702	1,472	1,385
Genius	693	851	736	692

TABLE XIV

SUMMARY OF THE NON-AVERAGE INTELLIGENT POPULATION OF WESTERN CANADA BY PROVINCES 1941

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	3,337	4,492	3,805	3,109
Mentally-retarded	6,672	8,983	7,608	6,219
Slow-learning	66,730	89,837	76,085	62,199
Rapid-learning	66,730	89,837	76,085	62,199
Gifted	6,672	8,983	7,608	6,219
Genius	3,337	4,492	3,805	3,109

years of age are summarized in Table XIV. According to Table XIV, Manitoba, Saskatchewan, Alberta, and British Columbia could have had a total of 3,337, 4,492, 3,805, and 3,109 feeble-minded people aged 0-24 years, respectively, and each province could have had an equal number of genera 0-24 years of age. Each province could have had a total of 6,672, 8,983, 7,608, and 6,219 mentally-retarded people 0-24 years of age, respectively, and each province could have had an equal number of gifted people 0-24 years of age. Finally, each province could have had 66,730, 89,837, 76,085, and 62,199 slow-learning people 0-24 years of age, respectively, and each province could have had an equal number of rapid-learning people 0-24 years of age.

Analysis of Population, 5-24, Attending School

After the population of Western Canada, 0-24 years of age by provinces, had been divided into groups of varying intelligence, the figures showing the population attending school were analyzed. This analysis included only the population from five to twenty-four years of age. Table XV shows the number in each province who were attending school in 1941 who had one to four, five to eight, nine to twelve, thirteen to sixteen, or seventeen or more years of schooling. There were 58,798, 81,938, 66,838, and 49,297 children in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively, who had one to four years of schooling and who were still attending school. There were 51,747, 74,111, 60,927, and 47,936 children in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively, who had five to eight years of schooling and who were still attending school. Each province had 24,724, 32,609, 30,797, and 28,780 people, respectively, who had nine to twelve years of schooling and who were still

attending school. Finally, Manitoba, Saskatchewan, Alberta, and British Columbia had 2,058, 2,904, 3,143, and 3,653 people, respectively, who had thirteen to sixteen years of schooling and who were still attending school; but each province had only 110, 113, 142, and 245 people respectively, who had seventeen or more years of schooling and who were still attending school. Manitoba had a total of 137,437 people out of 271,986 people 5-24 years of age who were still attending school. Saskatchewan had a total of 191,675 people out of 364,229 people 5-24 years of age who were still attending school. Alberta had 161,847 people out of 305,524 people 5-24 years of age who were still attending school, and British Columbia had 129,911 people out of 251,488 people 5-24 years of age who were still attending school.

TABLE XV

POPULATION 5-24 YEARS OF AGE ATTENDING SCHOOL BY YEARS OF SCHOOLING, FIVE-YEAR AGE GROUPS FOR WESTERN CANADA BY PROVINCES 1941

Years of Schooling	Manitoba	Saskatchewan	Alberta	British Columbia
1 - 4	58,798	81,938	66,838	49,297
5 - 8	51,747	74,111	60,927	47,936
9 - 12	24,724	32,609	30,797	28,780
13 - 16	2,058	2,904	3,143	3,653
17 -	110	113	142	245
Total	137,437	191,675	161,847	129,911
Total (5-24)	271,986	364,229	305,523	251,488

Comparison of Urban and Rural Population With Regard to Years of Schooling

Table XVI shows the per cent of the rural population and the per cent of the urban population living in the four Western Provinces with regard to years of schooling. The per cents are accurate to one decimal place.

TABLE XVI

PERSONS WHO HAVE ATTENDED SCHOOL BY YEARS OF SCHOOLING FOR WESTERN CANADA BY PROVINCES, 1941

Years of Schooling		Manitoba	Saskatchewan	Alberta	British Columbia
1 - 4 -	Rural	21.6	21.4	20.0	14.8
	Urban	12.5	13.9	11.6	9.3
5 - 8	Rural	51.1	54.8	50.7	43.4
	Urban	36.1	38.8	34.7	36.0
9 - 12	Rural	24.8	21.7	26.3	35.1
	Urban	44.7	39.1	44.2	46.3
13 - 16	Rural	2.2	1.9	2.7	6.0
	Urban	5.7	7.0	8.2	7.3
17 -	Rural	.3	.2	.3	.7
	Urban	1.0	1.2	1.3	1.1

Twenty-one decimal six per cent of the rural population of Manitoba had up to four years of schooling, 12.5% of the urban population of Manitoba had up to four years of schooling, 51.1% of the rural population and 36.1% of the urban population had five to eight years of schooling,

24.8% of the rural population and 44.7% of the urban population had nine to twelve years of schooling, 2.2% of the rural population and 5.7% of the urban population has thirteen to sixteen years of schooling, and only a fraction of one per cent of the rural population and one per cent of the urban population had seventeen or more years of schooling. The picture in Saskatchewan and Alberta is similar to that of Manitoba, except that 7.0% of the urban population of Saskatchewan and 8.2% of the urban population of Alberta had thirteen to sixteen years of schooling, instead of 5.7% as in Manitoba. In British Columbia, 14.8% of the rural population had up to four years of schooling. Four-fifths of the rural population and four-fifths of the urban population of British Columbia had between five and twelve years of schooling. Six per cent of the rural population of British Columbia had between thirteen and sixteen years of schooling. This per cent is about three times as high as the per cent for the same group in the Prairie Provinces. Seven tenths of a per cent of the rural population of British Columbia had seventeen or more years of schooling which is twice as high as the per cent for the same group in the Prairie Provinces. Part of the rural population of British Columbia appears to have stayed in school longer than the rural population of the Prairie Provinces.

Comparison of the School and University Potential, Actual University and School Attendance, and University and High School Drop Outs for 1941

An attempt was made to make a rough comparison between the number of people who could do academic work and the number who actually did. These data are summarized in Table XVII. The first row of figures represents the academic potential for each province, and the second row of figures represents the number of people who actually attended some educational

institution. The first figure for the elementary and junior high potential for each province was obtained by subtracting the number of feeble-minded and mentally retarded from the total number of people 5-14 years of age in each province. Sixty per cent of the total population 15-19 years of age was taken to obtain the first figure for the senior high potential for each province. (The sixty per cent was arrived at by taking three-quarters of the group of average intelligence plus the twenty-three per cent of the group of superior intelligence, so that no one with an I. Q. of below 95 would be counted as high school potential.) The first figure for

TABLE XVII

ELEMENTARY, JUNIOR AND SENIOR HIGH, UNIVERSITY POTENTIAL AND ATTENDANCE IN WESTERN CANADA BY PROVINCES 1941

Province	Elementary Junior High (5-14)	Senior High (15-19)	University (20-24)
Manitoba	125,441	44,036	15,933
	110,545	24,724	2,168
Saskatchewan	177,630	57,605	19,572
	156,049	32,609	3,017
Alberta	148,944	47,015	16,931
	127,765	30,797	3,285
British Columbia	112,153	39,972	15,926
	97,233	28,780	3,898

the university potential for each province represents the number of people with superior intelligence - namely 23% of the total population

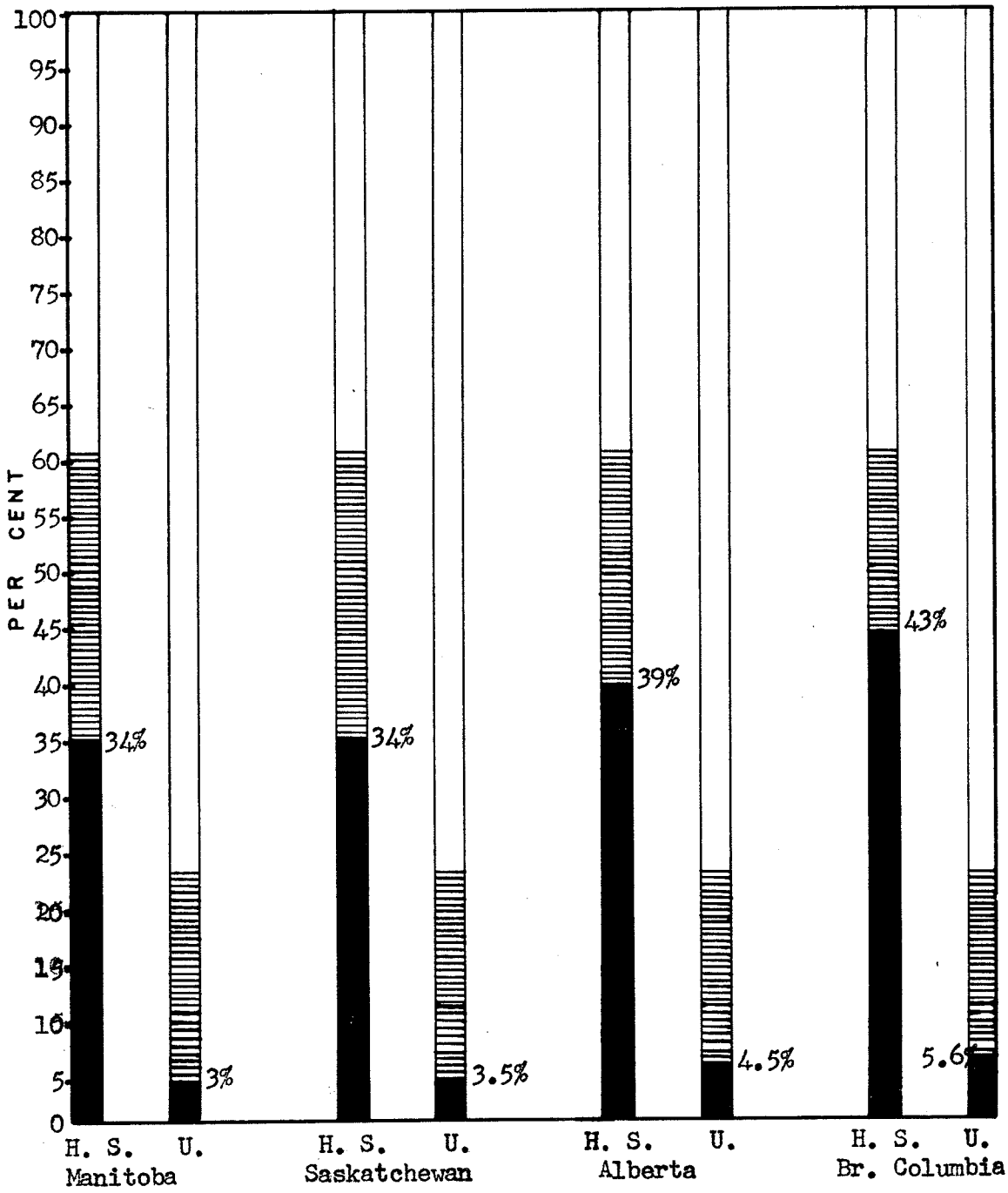

Fig. 19 - Showing the university and high school potential, actual university and high school enrollment, and university and high school drop outs for 1941. (Potential actual enrollment drop outs .)

20-24 years of age.

According to the foregoing calculations, Manitoba could have had 125,441 children aged 5-14 years capable of going to school. Of these

125,441 children, 110,545 children attended school. Manitoba could have had 44,036 people 15-19 years of age who could attended high school. Of these 24,724 people were in high school. Manitoba could have had 15,933 people 20-24 years of age who could have attended university, but only 2,168 people attended university. Saskatchewan, Alberta, and British Columbia could have had 177,630, 148,944, and 112,153 children 5-14 years of age, resepectively, capable of going to school. Of these, 156,049 children attended school in Saskatchewan, 127,765 children attended school in Alberta, and 97,233 children attended school in British Columbia. In Saskatchewan, 32,609 people out of 57,605 people attended high school, in Alberta 30,797 people out of 47,015 people attended high school, and in British Columbia 28,780 people out of 39,972 people attended high school. Finally, in Saskatchewan, 3,017 people out of 19,572 people attended university, in Alberta, 3,285 people out of 16,931 people attended university, and 3,898 people out of 15,926 people attended university in British Columbia. The forgoing data are shown graphically by Figure 19.

Figure 19 shows the per cent of the total population by provinces of high school age that actually attended high school in 1941 and the per cent of the total population by provinces that actually attended university. Figure 19 also shows the per cent of the population by provinces that could be expected to do high school work and university work. That is, 60% of the population 15-19 years of age could be expected to be capable of high school work, 23% of the total population 20-24 years of age could be expected to be capable of doing university work. The blank part and the striped part of the bars shows the drop outs. The striped part of the bars represents the part of the respective population that could be expected to remain at school or university until the course was completed.

CHAPTER V

ANALYSIS OF SCHOOL POPULATION - 1951

Introduction

The purpose of this chapter is threefold: (1) to see whether or not a greater per cent of those children capable of completing the high school and the university courses was going to high school and university than in 1941; (2) to analyze the school population of Western Canada; and (3) to compare the rural population with the urban population of Western Canada with regard to years of schooling.

Number in Each Major Classification - Preschool, Elementary and Junior High, Senior High, and University

In order to calculate the number of people in each division of intelligence, the population under twenty-five years of age was divided into preschool, elementary and junior high, senior high, and university groups. It was necessary to combine the elementary and junior high groups because pupils in grades five or six would, probably, bridge the (5-9) and (10-14) years of age groups.

In 1951, Manitoba, Saskatchewan, Alberta, and British Columbia had 89,977, 99,855, 116,846, and 125,886 preschool children, respectively. In the group five to fourteen years of age, there were 132,737, 155,397, 169,960, and 178,501 children in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively. Manitoba, Saskatchewan, Alberta, and British Columbia had 57,188, 68,482, 73,941, and 70,230 young people, respectively, in the group aged fifteen to nineteen years of age. The foregoing

data and the data for the number of young people old enough to go to university are summarized in Table XVIII.

TABLE XVIII[a]

NUMBER OF SCHOOL POPULATION IN EACH MAJOR DIVISION IN WESTERN CANADA BY PROVINCES 1951

Province	Preschool (0-4)	Elementary, Junior High (5-14)	Senior High (15-19)	University (20-24)
Manitoba	89,977	132,737	57,188	58,752
Saskatchewan	99,855	155,397	68,482	62,613
Alberta	116,846	169,960	73,941	75,527
British Columbia	125,886	178,501	70,230	79,824

[a]These figures were taken from Tables V - VIII, pp. 41, 46, 50, and 54 - 55 of this report.

Hypothetical Intelligence Distribution of the Western Canadian Population (0-24) for 1951

The per cents, 1%, 2%, 20%, 54%, 20%, 2%, and 1%, shown on Figure 18 of this report[1], and discovered by Dr. Baker,[2] and shown to be a good approximation of the intelligence distribution of the population,[3] were used to calculate the number of feeble-minded, mentally retarded, slow-learners, average, rapid-learning, gifted, and genera there might have been in each major division of the school population in each province of Western Canada. The results are summarized in Tables XIX to XXII.

[1]See Figure 18, p. 63 of this report.

[2]Harry J. Baker, Ph. D., op. cit., p. 239.

[3]See Appendix D, pp. 219 - 229.

The hypothetical intelligence distribution of the preschool children, (0-4 years of age), is summarized in Table XIX. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 900, 999, 1,168, and 1,259 feeble-minded children, respectively. Each province could have had an equal number of genera in 1951. Each province could have had 1,800, 1,997, 2,337, and 2,518 mentally retarded children, respectively, in 1951. Again each province could have had an equal number of gifted children. Similarly each province could have had 17,995, 19,971, 23,369, and 25,177 slow-learning children, respectively, in 1951. Each province could have had an equal number of rapid-learning children. Finally, each province could have had 48,587, 53,921, 63,098, and 67,978 children of average intelligence, respectively.

TABLE XIX

HYPOTHETICAL INTELLIGENCE DISTRIBUTION OF PRESCHOOL CHILDREN OF WESTERN CANADA BY PROVINCES 1951

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	900	999	1,168	1,259
Mentally retarded	1,800	1,997	2,337	2,518
Slow-learning	17,995	19,971	23,369	25,177
Average	48,587	53,921	63,098	67,978
Rapid-learning	17,995	19,971	23,369	25,177
Gifted	1,800	1,997	2,337	2,518
Genius	900	999	1,168	1,259

The hypothetical intelligence distribution of the kindergarten,

TABLE XX

HYPOTHETICAL INTELLIGENCE DISTRIBUTION OF KINDERGARTEN, ELEMENTARY, AND JUNIOR HIGH SCHOOL AGED CHILDREN OF WESTERN CANADA BY PROVINCES 1951

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	1,327	1,554	1,700	1,785
Mentally retarded	2,655	3,108	3,399	3,570
Slow-learning	26,547	31,079	33,992	35,700
Average	71,679	83,915	91,778	96,391
Rapid-learning	26,547	31,079	33,992	35,700
Gifted	2,655	3,108	3,399	3,570
Genius	1,327	1,554	1,700	1,785

elementary, and junior high school children is summarized in Table XX. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 1,327, 1554, 1,700, and 1,785 feeble-minded children, respectively. Each province could have had an equal number of genera in 1951. Each province could have had 2,655, 3,108, 3,399, and 3,570 mentally retarded children, respectively. Again each province could have had an equal number of gifted children. Each province could have had 26,547, 31,079, 33,992, and 35,700 slow-learners, respectively, and an equal number of rapid-learners in 1951. Finally, each province could have had 71,679, 83,915, 91,778, and 96,391 children of average intelligence, respectively in 1951.

The hypothetical intelligence distribution of the children of high school age is summarized in Table XXI. Manitoba, Saskatchewan, Alberta,

and British Columbia could have had 572, 685, 739, and 702 feeble-minded children of senior high school age, respectively. Each province could have had an equal number of genera in this group. Each province could have had 1,144, 1,370, 1,479, and 1,405 mentally-retarded children, respectively in this group in 1951, and again an equal number of gifted children in this group. Each province could have had 11,438, 13,696, 14,788, and 14,046 slow-learning children, respectively, in this group, and an equal number of rapid-learning children in this group in 1951. Finally, there

TABLE XXI

HYPOTHETICAL INTELLIGENCE DISTRIBUTION OF SENIOR HIGH SCHOOL AGED POPULATION OF WESTERN CANADA BY PROVINCES 1951

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	572	685	739	702
Mentally retarded	1,144	1,370	1,479	1,405
Slow-learning	11,438	13,696	14,788	14,046
Average	30,880	36,980	39,929	37,924
Rapid-learning	11,438	13,696	14,788	14,046
Gifted	1,144	1,370	1,479	1,405
Genius	572	685	739	702

could have been 30,880, 36,980, 39,929, and 37,924 children, respectively, of average intelligence in each province in 1951.

The hypothetical intelligence distribution of the young people of university age is summarized in Table XXII. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 588, 626, 755, and 798 feeble-minded

young people, respectively, and an equal number of genera in this group in 1951. Each province could have had 1,175, 1,252, 1,511, and 1,596 mentally retarded young people, respectively, and also an equal number of gifted young people in this group in 1951. Again each province could have had 11,750, 12,523, 15,105, and 15,965 slow-learners, respectively, in this group, and also an equal number of rapid-learners in this group in 1951. Finally, each province could have had 31,726, 33,811, 40,785, and 43,106 young people of average intelligence, respectively, in this group in 1951.

TABLE XXII

HYPOTHETICAL INTELLIGENCE DISTRIBUTION OF UNIVERSITY AGED POPULATION OF WESTERN CANADA BY PROVINCES 1951

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	588	626	755	798
Mentally retarded	1,175	1,252	1,511	1,596
Slow-learning	11,750	12,523	15,105	15,965
Average	31,726	33,811	40,785	43,106
Rapid-learning	11,750	12,523	15,105	15,965
Gifted	1,175	1,252	1,511	1,596
Genius	588	626	755	798

According to the foregoing discussion 54% of the population is of average intelligence and 46% of the population is either above or below average intelligence. The data for this 46% of the population 0-24 years of age are summarized in Table XXIII. According to Table XXIII, Manitoba, Saskatchewan, Alberta, and British Columbia could have had a total of

TABLE XXIII

SUMMARY OF THE HYPOTHETICAL NON-AVERAGE INTELLIGENT POPULATION OF WESTERN CANADA BY PROVINCES 1951

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	3,387	3,864	4,362	4,544
Mentally retarded	6,774	7,727	8,726	9,089
Slow-learning	67,730	77,269	87,254	90,888
Rapid-learning	67,730	77,269	87,254	90,888
Gifted	6,774	7,727	8,726	9,089
Genius	3,387	3,864	4,362	4,544

3,387, 3,864, 4,362, and 4,544 feeble-minded people aged 0-24 years, respectively, and each province could have had an equal number of genera 0-24 years of age. Each province could have had a total of 6,774, 7,727, 8,726, and 9,089 mentally retarded people 0-24 years of age, respectively, and each province could have had an equal number of gifted people 0-24 years of age. Finally, each province could have had 67,730, 77,269, 87,254, and 90,888 slow-learning people 0-24 years of age, respectively, and each province could have had an equal number of rapid-learning people 0-24 years of age.

After the population of Western Canada, 0-24 years of age by provinces had been divided into groups of varying intelligence, the figures showing the population attending school were tabulated. This tabulation included only the population from five to twenty-four years of age. Table XXIV shows the number in each province that were attending school in 1951 who had one to four, five to eight, nine to twelve, thirteen to sixteen,or seventeen

or more years of schooling. There were 61,737, 69,588, 76,091, and 80,316 children in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively, who had one to four years of schooling and who were still attending school. There were 46,680, 59,360, 61,140, and 60,994 children in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively, who had five to eight years of schooling and who were still attending school. Each province had 21,726, 28,912, 32,877, and 33,433 people, respectively, who had nine to twelve years of schooling and who were still

TABLE XXIV[a]

POPULATION 5-24 YEARS OF AGE ATTENDING SCHOOL BY YEARS OF SCHOOLING, FIVE-YEAR AGE GROUPS FOR WESTERN CANADA BY PROVINCES 1951

Years of Schooling	Manitoba	Saskatchewan	Alberta	British Columbia
1 - 4	61,737	69,588	76,091	80,316
5 - 8	46,680	59,360	61,140	60,994
9 - 12	21,726	28,912	32,877	33,433
13 - 16	2,989	2,671	3,573	5,374
17 -	288	185	285	624
Total	133,420	160,716	173,966	180,741
Total	248,677	286,492	319,428	328,555

[a]Ninth Census of Canada, 1951. Vol. II, Population, Bulletin 2-2. Ottawa, Ontario: Queen's Printer, 1953. pp. 25-7 - 25-10.

attending school. Finally, each province had 2,989, 2,671, 3,573, and 5,374 people, respectively, who had thirteen to sixteen years of schooling and who were still attending school; but each province had only 288, 185,

285, and 624 people, respectively who had seventeen years or more of schooling and who were still attending school. Manitoba had a total of 133,420 people out of 248,677 people 5-24 years of age who were still attending school. Saskatchewan had a total of 160,716 people who were still attending school, Alberta had 173,966 people who were attending school, and British Columbia had 180,741 people who were still attending school. (These people were all between five and twenty-four years of age. Saskatchewan, Alberta, and British Columbia had a total of 286,492, 319,428, and 328,555 people, respectively, in this age group.)

Comparison of Urban and Rural School Population Data

Table XXV shows the per cent of the rural population and the per cent of the urban population living in the four Western Provinces with regard to years of schooling. The per cents are accurate to one decimal place.

Twenty-seven decimal seven per cent of the rural population and 22.1% of the urban population of Manitoba had up to four years of schooling, 20.8% of the rural population and 16.7% of the urban population had between five and eight years of schooling, 7.2% of the rural population and 10.2% of the urban population had nine to twelve years of schooling, 1.9% of the urban population and .43% of the rural population had thirteen to sixteen years of schooling, and, finally, only a fraction of a per cent of either rural or urban population had seventeen or more years of schooling. In Saskatchewan 25.4% of the rural population and 21.2% of the urban population had between one and four years of schooling, 22.1% of the rural population and 17.2% of the urban population had between five and eight years of schooling, 9.2% of the rural population and 12.5% of the urban population had between nine and twelve years of schooling, 1.9% of the urban population and .5% of the rural population had between thirteen and

sixteen years of schooling, and finally, a fraction of a per cent of either rural or urban population had seventeen or more years of schooling.. The percentage of the population 5-24 years of age attending school by years of schooling for Alberta in 1951 was very similar to that of Saskatchewan. However, in British Columbia 26.9% of the rural population and 23.5% of the urban population had one to four years of schooling, 20.4% of the rural population and 17.5% of the urban population had between five

TABLE XXV[a]

PERCENTAGE OF POPULATION 5 - 24 YEARS OF AGE ATTENDING SCHOOL BY YEARS OF SCHOOLING, FIVE-YEAR AGE GROUPS FOR WESTERN CANADA BY PROVINCES, RURAL AND URBAN 1951

Years of Schooling		Manitoba	Saskatchewan	Alberta	British Columbia
1 - 4	Rural	27.7	25.4	25.5	26.9
	Urban	22.1	21.2	21.5	23.5
5 - 8	Rural	20.8	22.1	21.3	20.4
	Urban	16.7	17.2	16.4	17.5
9 - 12	Rural	7.2	9.2	9.7	9.2
	Urban	10.2	12.5	11.0	10.7
13 - 16	Rural	.43	.5	.72	.94
	Urban	1.9	1.9	1.6	2.04
17 -	Rural	.03	.04	.04	.07
	Urban	.20	.13	.16	.26

[a]Calculations are based on Table 25, Ninth Census of Canada, 1951. Vol. II, Population, Bulletin 2-2. Ottawa, Ontario: Queen's Printer, 1953. pp. 25-7 - 25-10.

and right years of schooling, 9.2% of the rural population and 10.7% of the urban population had between nine and twelve years of schooling, 2.04% of the urban population and .94% of the rural population had thirteen to sixteen years of schooling, and, finally, only a fraction of a per cent of either urban or rural population had seventeen or more years of schooling. It appears that in British Columbia more people have thirteen or more years of schooling.

Comparison of the School and University Hypothetical Potential, Actual University and School Attendance, and University and High School Drop Outs for 1951

An attempt was made to make a rough comparison between the number of people who could do academic work and the number who actually did. These data are summarized in Table XXVI. The first row of figures represents the academic potential for each province, and the second row of figures represents the number of people who actually attended some educational institution. The first figure for the elementary and junior high hypothetical potential for each province was obtained by subtracting the number of feeble-minded and mentally retarded from the total number of people 5-14 years of age in each province. Sixty per cent of the total population 15-19 years of age was taken to obtain the first figure for the senior high hypothetical potential for each province. (The sixty per cent was arrived at by taking three-quarter of the group of average intelligence plus the twenty-three per cent of the group of superior intelligence, so that no one with an I. Q. of below 95 would be counted as high school potential.) The first figure for the university potential for each province represents the number of people with superior intelligence - 23% of the total popula-

tion 20-24 years of age.

According to the foregoing calculations, Manitoba could have had 128,755 children aged 5-14 capable of gping to school. Of these 128,755 children, 108,417 children attended school. Out of a potential of 34,313 children aged 15-19, 21,726 children attended high school in Manitoba, and out of a potential of 13,513 young people aged 20-24, 3,277 people attended university. Saskatchewan, Alberta, and British Columbia could have had 150,735; 164,861, and 173,146 children 5-14 years of age, respectively, capable of going to school. Of these, 128,948 children attended school in Saskatchewan, 137,231 children attended school in Alberta, and 141,310

TABLE XXVI[a]

HYPOTHETICAL ELEMENTARY, JUNIOR AND SENIOR HIGH, UNIVERSITY POTENTIAL AND ACTUAL ATTENDANCE IN WESTERN CANADA BY PROVINCES 1951

Province	Elementary Junior High (5-14)	Senior High (15-19)	University (20-24)
Manitoba	128,755	34,313	13,513
	108,417	21,726	3,277
Saskatchewan	150,735	41,089	14,401
	128,948	28,912	2,756
Alberta	164,861	44,365	17,371
	137,231	32,877	3,858
British Columbia	173,146	42,138	18,360
	141,310	33,433	5,998

[a]Calculations based on Tables XX - XXIV, pp. 80 - 84.

children attended school in British Columbia. In Saskatchewan, 28,912 people out of 41,089 people attended high school, in Alberta 32,877 people out of 44,365 people attended high school, in British Columbia 33,433 people out of 42,138 people attended high school. Finally, in Saskatchewan, 2,756 people out of 14,401 people attended university, in Alberta 3,858 people out of 17,371 people attended university, and in British Columbia, 5,998 people out of 18,360 people attended university. The foregoing data are shown graphically by Figure 20.

Figure 20 shows the per cent of the total population by provinces of high school age that actually attended high school in 1951 and the per cent of the total population by provinces that actually attended university. Figure 20 also shows the per cent of the population by provinces that could be expected to do high school work and university work. That is, 60% of the population 15-19 years of age could be expected to be capable of doing high school work, and 23% of the total population 20-24 years of age could be expected to be capable of doing university work. The blank part and the striped part of the bars show the drop outs. The striped part of bars represents the part of the respective population that could be expected to remain at school or university until the course was completed.

From a comparison of Figure 19 of Chapter IV with Figure 20, the following observations may be made: (1) high school attendance increased in Manitoba from 34% to 44% of the population 15-19 years of age, in Saskatchewan from 34% to 50% of the population 15-19 years of age, in Alberta, from 39% to 51% and in British Columbia from 43% to 53% of the population of high school age; and (2) attendance at the university increased from 3% to 4.6%, 3.5% to 4.6%, 4.5% to 4.6%, and decreased from 5.7% to 5.6% of the population of university age 1951 in Manitoba, Saskatchewan, Alberta,

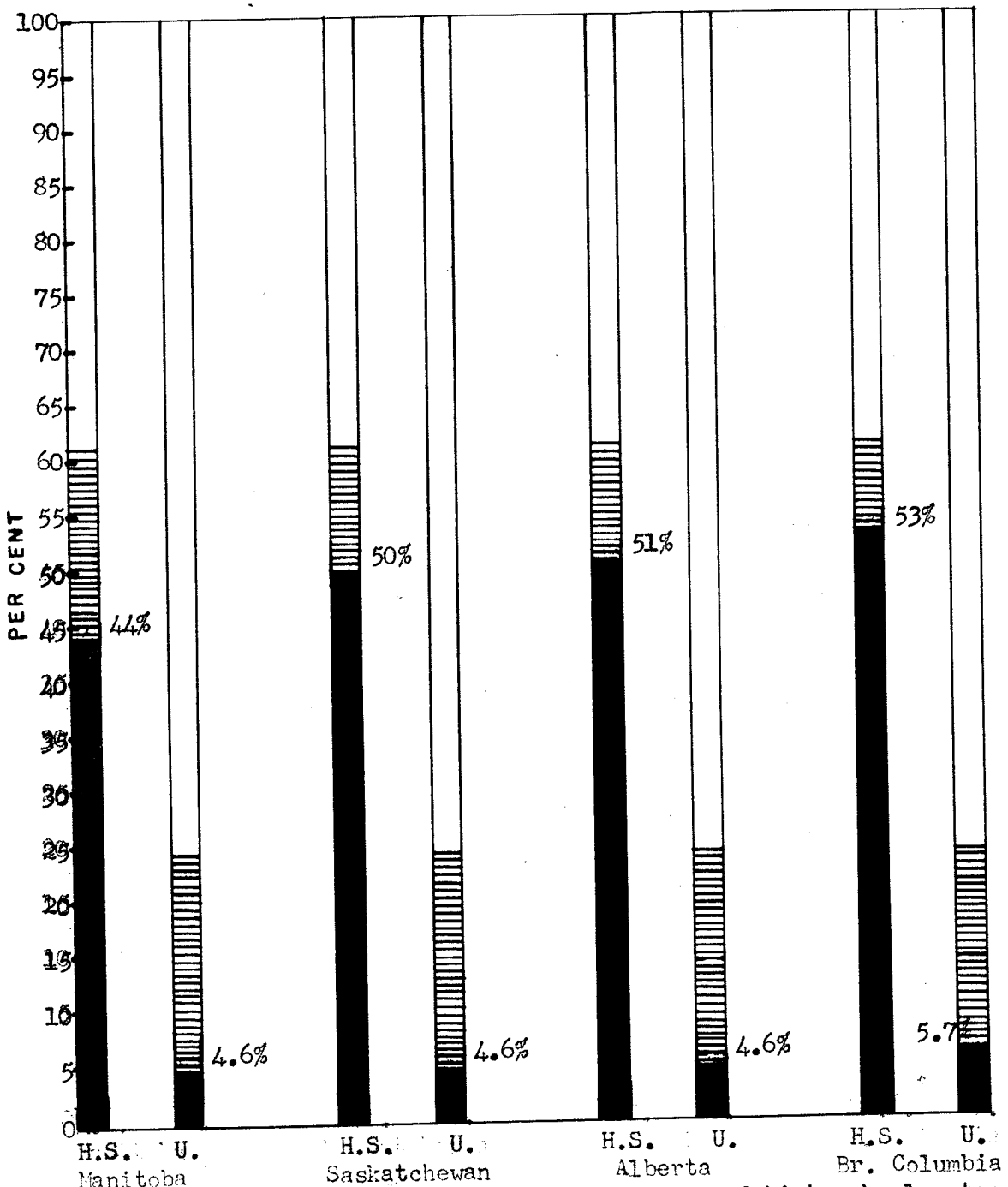

Fig. 20 - Showing the hypothetical university and high school potential and actual university and high school students for 1951 and drop outs for 1951. (Potential ▬▬▬, Actual enrollment ▬▬▬, Drop outs ▬▬▬.)

and British Columbia, respectively.

TABLE XXVII[a]

NUMBER OF SCHOOL POPULATION IN EACH MAJOR ACADEMIC DIVISION IN WESTERN CANADA BY PROVINCES 1956

Province	Preschool (0-4)	Elementary, Junior High (5-14)	Senior High (15-19)	University (20-24)
Manitoba	100,367	163,976	60,427	57,674
Saskatchewan	109,603	177,167	68,359	58,992
Alberta	149,697	223,138	80,486	82,842
British Columbia	156,759	249,106	86,433	86,397

[a]Census of Canada, 1956. Bulletin: 1 - 9, Population, Age Groups. Ottawa, Ontario: Queen's Printer, 1957. pp. 16 - 1 to 20 - 13

Hypothetical Intelligence Distribution of the Western Canadian Population (0-24) for 1956

Psychologists have divided the population into seven groups of different intelligence as shown in Figure 18[1] - plotted by Dr. Baker[2], and shown to be a good approximation of the intelligence distribution of the population by other writers.[3] That is, the per cents, 1%, 2%, 20%, 54%, 20%, 2%, and 1%, were used to calculate the number of feeble-minded, mentally retarded, slow-learners, average, rapid-learners, gifted, and genera there might have been in each major academic division of the school population in each provinces of Western Canada. The results are summarized in Tables XXVIII to XXXI. (The results of these calculations will be called

[1]See Figure 18, p. 63 of this report.

[2]Harry J. Baker, Ph. D., op. cit., p. 239.

[3]See Appendix D, p. 219 - 229.

the "intelligence distribution.")

TABLE XXVIII

HYPOTHETICAL INTELLIGENCE DISTRIBUTION OF PRESCHOOL CHILDREN OF WESTERN CANADA BY PROVINCES 1956

Province	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	1,003	1,096	1,497	1,568
Mentally retarded	2,008	2,192	2,994	3,135
Slow-learning	20,073	21,921	29,939	31,352
Average	54,199	59,185	80,837	84,649
Rapid-learning	20,073	21,921	29,939	31,352
Gifted	2,008	2,192	2,994	3,135
Genius	1,003	1,096	1,497	1,568

The hypothetical intelligence distribution of the preschool children (0-4) years of age is summarized in Table XXVIII. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 1,003, 1096, 1,497, and 1,568 feeble-minded children, respectively, in 1956. Each province could have had an equal number of genera. Each province could have had 2,008, 2,192, 2,994, and 3,135 mentally retarded children, respectively. Again each province could have had an equal number of gifted children in 1956. Similary, each province could have had 20,073, 21,192, 29,939, and 31,352 slow-learning children, respectively. Each province could have had an equal number of rapid learning children in 1956. Finally, each province could have had 54,199, 59,185, 80,837, and 84,649 children of average intelligence, respectively.

The hypothetical intelligence distribution of the kindergarten, ele -

mentary, and junior high school children is summarized in Table XXIX. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 1,640, 1,772, 2,231, and 2,491 feeble-minded children, respectively, in 1956. Each province could have had an equal number of genera. Each province could have had 3,280, 3,543, 4,463, and 4,982 mentally retarded children, respectively, in 1956. Again each province could have had an equal number of gifted children in 1956. Each province could have had 32,795, 35,433, 44,628, and

TABLE XXIX

HYPOTHETICAL INTELLIGENCE DISTRIBUTION OF KNIDERGARTEN, ELEMENTARY, AND JUNIOR HIGH SCHOOL AGED CHILDREN OF WESTERN CANADA BY PROVINCES 1956

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	1,640	1,772	2,231	2,491
Mentally-retarded	3,280	3,543	4,463	4,982
Slow-learning	32,795	35,433	44,628	49,821
Average	88,546	95,671	120,494	134,518
Rapid-learning	32,795	35,433	44,628	49,821
Gifted	3,280	3,543	4,463	4,982
Genius	1,640	1,772	2,231	2,491

49,821 slow-learners, respectively, and an equal number of rapid-learners. Finally, each province could have had 88,546, 95,671, 120,494, and 134,518 children of average intelligence, respectively.

The hypothetical intelligence distribution of the children of high school age is summarized in Table XXX. Manitoba, Saskatchewan, Alberta, and British Columbia could have had 604, 684, 805, and 864 feeble-minded

children of senior high school age, respectively. Each province could have had an equal number of genera in this group in 1956. Each province could have had 1,209, 1,367, 1,610, and 1,729 mentally retarded children, respectively, in this group, and again an equal number of gifted children in this group in 1956. Each province could have had 12,085, 13,672, 16,097, and 17,289 slow-learning children, respectively, in this group in 1956, and an equal number of rapid-learning children in this group. Finally, each province could have had 32,631, 36,913, 43,462, and 46,673 children, respectively, of average intelligence in this group in 1956.

TABLE XXX

HYPOTHETICAL INTELLIGENCE DISTRIBUTION OF SENIOR HIGH SCHOOL AGED POPULATION OF WESTERN CANADA BY PROVINCES 1956

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	604	684	805	864
Mentally-retarded	1,209	1,367	1,610	1,729
Slow-learning	12,085	13,672	16,097	17,289
Average	32,631	36,913	43,462	46,673
Rapid-learning	12,085	13,672	16,097	17,289
Gifted	1,209	1,367	1,610	1,729
Genius	604	684	805	864

The hypothetical intelligence distribution of the young people of university age is summarized in Table XXXI. Manitoba Saskatchewan, Alberta, and British Columbia could have had 577, 590, 828, and 864 feeble-minded young people, respectively, and an equal number of genera in this group.

Each province could have had 1,135, 1,180, 1,657, and 1,728 mentally retarded young people, respectively, and also an equal number of gifted young people in this group in 1956. Again each province could have had 11,535, 11,798, 16,568, and 17,279 slow-learning young people, respectively, and also an equal number of rapid-learning young people in this group. Finally, each province could have had 31,144, 31,856, 44,736, 46,655 young people of average intelligence, respectively, in this group in 1956.

TABLE XXXI

HYPOTHETICAL INTELLIGENCE DISTRIBUTION OF UNIVERSITY AGED POPULATION OF WESTERN CANADA BY PROVINCES 1956

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	577	590	828	864
Mentally-retarded	1,153	1,180	1,657	1,728
Slow-learning	11,535	11,798	16,568	17,279
Average	31,144	31,856	44,736	46,655
Rapid-learning	11,535	11,798	16,568	17,279
Gifted	1,153	1,180	1,657	1,728
Genius	577	590	828	864

According to the foregoing discussion, 54% of the population is of average intelligence and 46% of the population is of either above or below average intelligence. The data for this 46% of the population 0-24 years of age are summarized in Table XXXII. According to Rable XXXII, Manitoba, Saskatchewan, Alberta, and British Columbia could have had a total of 3,824, 4,142, 5,361, and 5,787 feeble-minded people aged 0-24 years, respectively, and each province could have had an equal number of

genera 0-24 years of age. Each province could have had a total of 7,650, 8,282, 10,724, and 11,574 mentally retarded people 0-24 years of age, respectively, and each province could have had an equal number of gifted people 0-24 years of age in 1956. Finally, each province could have had 77,488, 82,824, 107,232, and 115,741 slow-learning people 0-24 years of age, respectively, and each province could have had an equal number of rapid-learning people 0-24 years of age in 1956.

TABLE XXXII

SUMMARY OF THE HYPOTHETICAL NON-AVERAGE INTELLIGENT POPULATION OF WESTERN CANADA BY PROVINCES 1956

Group	Manitoba	Saskatchewan	Alberta	British Columbia
Feeble-minded	3,824	4,142	5,361	5,787
Mentally-retarded	7,650	8,282	10,724	11,574
Slow-learning	77,488	82,824	107,232	115,741
Rapid-learning	77,488	82,824	107,232	115,741
Gifted	7,650	8,282	10,724	11,574
Genius	3,824	4,142	5,361	5,787

Analysis of Population, 5-24, Attending School

After the population of Western Canada, 0-24 years of age by provinces, had been divided into hypothetical groups of varying intelligence, the figures showing the population attending school were analyzed. This analysis included only the population from five to twenty-four years of age. Table XXXIII shows the number in each province who were attending school in 1956 who had one to four, five to eight, nine to twelve, thirteen to sixteen, or seventeen or more years of schooling.

TABLE XXXIII[a]

POPULATION 5-24 YEARS OF AGE ATTENDING SCHOOL BY YEARS OF SCHOOLING, FIVE-YEAR AGE GROUPS FOR WESTERN CANADA BY PROVINCES 1956

Years of Schooling	Manitoba	Saskatchewan	Alberta	British Columbia
1 - 4	77,770	84,147	95,375	114,870
5 - 8	54,913	64,910	82,897	86,100
9 - 12	26,850	34,794	45,727	50,620
13 -	3,969	2,647	4,308	6,644
Total	163,502	186,498	228,307	258,234
Total (5-24)	282,077	304,518	386,466	421,936

[a]These data were obtained from the provincial registrars of the Departments of Education and the provincial registrars of the universities.

These data have several limitations which the similar data for 1941 and 1951 did not have. Firstly, the figure, 3,969, showing the number attending the University of Manitoba, shows only those students having Manitoba as their home address and attending the university and affiliated colleges. Accountancy and correspondence students are not included. Neither does the figure include those people of Manitoba who may have attended a university of a different province or country. Secondly, the figure, 2,647, shows only those students in the University of Saskatchewan and Regina College. Thirdly, the figures for British Columbia were given in thousands, and, furthermore, five per cent of the figures given for the first three groups had to be added to account for those students in the private insti-

tutions of British Columbia.[4] Notwithstanding, the foregoing limitations, one fact stands out clearly. The enrollment in each academic division had risen in each province from 1951 to 1956.

According to Table XXXIII, Manitoba, Saskatchewan, Alberta, and British Columbia had 77,770, 84,147, 95,375, and 114,870 children attending school in grades one to four, respectively. There were 54,913, 64,910, 82,897, and 86,100 children in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively, attending school in grades five to eight. There were 26,850, 34,794, 45,727, and 50,620 pupils in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively, enrolled in grades nine to twelve. Finally, there were 3,969, 2,647, 4,309, and 6,644 students in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively, enrolled in the universities and affiliated colleges. In Manitoba, 163,502 people out of 282,077 people attended an educational institution, in Saskatchewan, 193,276 people out of 304,518 people attended an educational institution, in Alberta, 238,705 people out of 386,466 people attended an educational institution, and in British Columbia, 279,114 people out of 421,936 people attended an educational institution.

Comparison of the School and University Hypothetical Potential, Actual University and School Attendance, and University and High School Drop Outs for 1956

An attempt was made to make a rough comparison between the number of people who could do academic work and the number who actually did. These

[4] Figures for the data in Table XXXIII were not available from the Canada Census of 1956. All figures were obtained from the registrars of the provincial Departments of Education and the registrars of the universities. The registrars gave the writer the foregoing instruction regarding the limitations.

data are summarized in Table XXXIV. The first row of figures represents the academic potential for each province, and the second row of figures represents the number of people who actually attended some educational institution. The first figure for the elementary and junior high potential for each province was obtained by subtracting the number of feeble-minded and mentally retarded from the total number of people 5-14 years of age in each province. Sixty per cent of the total population 15-19 years of age was taken to obtain the first figure for the senior high potential for each province. (The sixty per cent was arrived at by taking three-quarters

TABLE XXXIV[a]

HYPOTHETICAL ELEMENTARY, JUNIOR AND SENIOR HIGH, UNIVERSITY POTENTIAL AND ACTUAL ATTENDANCE IN WESTERN CANADA BY PROVINCES 1956

Province	Elementary Junior High (5-14)	Senior High (15-19)	University (20-24)
Manitoba	158,057	36,256	13,265
	132,683	26,850	3,969
Saskatchewan	171,852	41,015	13,568
	149,057	34,794	2,647
Alberta	216,444	48,292	19,054
	195,877	45,727	4,308
British Columbia	241,633	51,860	19,871
	200,970	50,620	6,644

[a]Calculations are based on Tables XXVIII - XXXI, pp. 93 - 96.

of the group of average intelligence plus the twenty-three per cent of the group of superior intelligence, so that no one with an I. Q. of below

95 would be counted as high school potential.) The first figure for the university potential for each province represents the number of people with superior intelligence - namely 23% of the total population 20-24 years of age.

According to the foregoing calculations, there were 132,683 children out of 158,057 in elementary and junior high school in Manitoba, there were 149,057 children out of 171,852 children in elementary and junior high school in Saskatchewan, there were 195,877 children out of 216,444 children in elementary and junior high school in Alberta, and 200,970 children out of 241,633 children in elementary and junior high school in British Columbia in 1956. There were 26,850 pupils out of 36,256 young people in senior high school in Manitoba, there were 34,794 pupils out of 41,015 young people in senior high school in Saskatchewan, there were 45,727 pupils out of 48,292 young people in senior high school in Alberta, and there were 50,620 pupils out of 51,860 young people in senior high school in British Columbia in 1956. Finally, there were 3,969 students out of 13,265 young people in university in Manitoba, there were 2,647 students out of 13,568 young people in university in Saskatchewan, there were 4,308 students out of 19,054 young people in university in Alberta, and there were 6,644 students out of 19,871 young people in university in British Columbia in 1956. The foregoing data are shown graphically by Figure 21.

Figure 21 shows the per cent of the population by provinces of high school age that actually attended high school in 1956 and the per cent of the total population by provinces that actually attended university. The foregoing data are shown by the solid bars. Figure 21 also shows the per cent of the population by provinces that could be expected to do high school work and university work. That is, 60% of the population 15-19 years

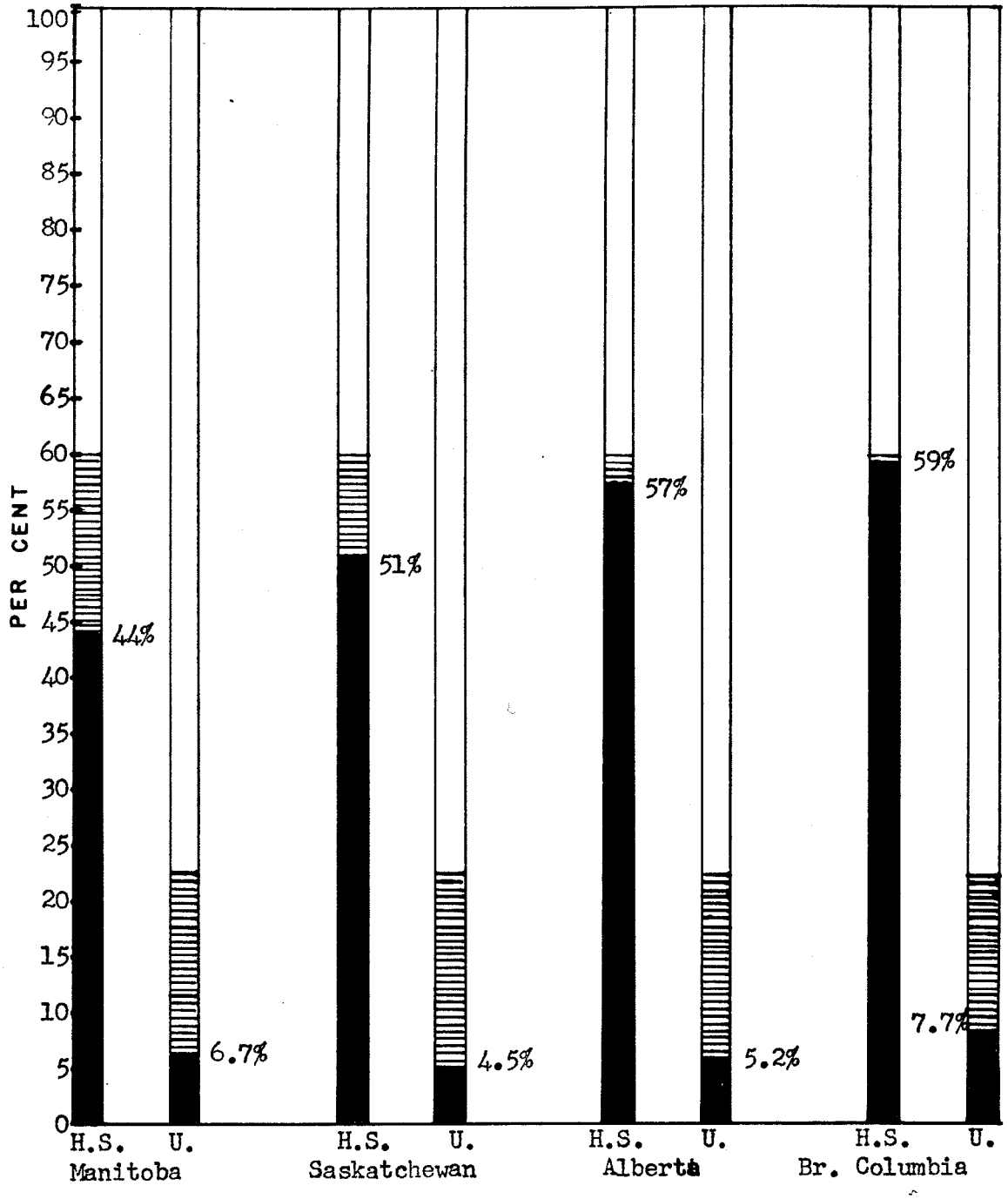

Fig. 21 - Showing the university and high school potential, actual university and high school enrollment, and university and high school drop outs for 1956. (Potential , actual enrollment , drop outs .)

of age could be expected to be capable of high school work, and 23% of the total population 20-24 years of age could be expected to be capable of doing university work. These data are shown by the solid bars and the striped bars. The blank part and the striped part of the bars show the drop outs. The striped part of the bars represents the part of the respective population that could be expected to remain at school or university until the course was completed. The data shown by Figures 19, 20, and 21 are summarized in Table XXXV. High school attendance in Manitoba, Saskatchewan, Alberta, and British Columbia increased from 34%, 34%, 39%, and 43%, respectively, in 1941 to 44%, 51%, 57%, and 59%, respectively by 1956. University attendance in Manitoba, Saskatchewan, Alberta, and British Columbia increased from 3%, 3.5%, 4.5%, and 5.6%, respectively in 1941 to 6.7%, 4.5%, 5.2%, and 7.7%, respectively, by 1956. Therefore, in spite of the incomplete figures for the university attendance for 1956, the data indicate that there is a trend towards a disproportionate increase in university and high school attendance in Western Canada.

TABLE XXXV

SENIOR HIGH AND UNIVERSITY PERCENTAGE ATTENDANCE

BY PROVINCES 1941, 1951, 1956

Year	Manitoba		Saskatchewan		Alberta		British Columbia	
	H. S.	U.	H. S.	U.	H. S.	U.	H.S.	U.
	%	%	%	%	%	%	%	%
1941	34	3	34	3.5	39	4.5	43	5.6
1951	44	4.6	50	4.6	51	4.6	53	5.7
1956	44	6.7	51	4.5	57	5.2	59	7.7

CHAPTER VII

THE FAMILY IN WESTERN CANADA

Introduction

Some of the family factors to be analyzed are: (1) the per cent of the population of each province under five years of age, five to nineteen, twenty to forty-four, forty-five to sixty-four, sixty-five and over; (2) sex ratios; (3) number of families by provinces 1901, 1911, 1921, 1931, 1941, 1951, and 1956; (4) conjugal conditions - divorced or widowed; (5) marriage rates, death rates, birth rates, and natural increase; (6) size of family; (7) the number of mothers gainfully employed; and (8) factors changing the pattern and functions of the family.

Per Cent of Population in the Following Five Age Groups - under five, five to nineteen, twenty to forty-four, forty-five to sixty-four, sixty-five and over

The first family factor analyzed was the percentage distribution of the population of Western Canada by provinces in the foregoing five age groups. These per cents were found by multiplying the ratio, the number in a given age group to the total population in a province in each census year, by a hundred. These per cents are summarized in Table XXXVI. According to Table XXXVI, in 1911, 13.8% of the population in Manitoba was under five years old. In Alberta and Saskatchewan, about the same proportion of the population was under five years of age. However, only 9.2% of the population in British Columbia was under five years of age in 1911. Generally,

TABLE XXXVI

PER CENT OF POPULATION IN THE FOLLOWING FIVE AGE GROUPS - UNDER FIVE, FIVE TO NINETEEN, TWENTY TO FORTY-FOUR, FORTY-FIVE TO SIXTY-FOUR, SIXTY-FIVE AND OVER

Province and year	Per Cent				
	Under 5	5 to 19	20 to 44	45 to 64	65 to -
Manitoba					
1911	13.8	30.1	42.1	11.6	2.4
1921	12.7	33.0	38.1	13.1	3.1
1931	9.5	32.7	36.6	16.6	4.6
1941	8.5	27.7	37.8	19.8	6.2
1951	11.5	24.5	36.8	18.8	8.4
1956	11.8	26.4	34.7	18.1	9.0
Saskatchewan					
1911	14.5	28.0	45.7	10.1	1.7
1921	14.8	33.2	38.3	11.2	2.5
1931	11.4	34.9	35.3	15.1	3.3
1941	9.5	31.3	35.4	18.6	5.2
1951	12.0	26.8	35.2	17.9	8.1
1956	12.7	27.7	33.4	17.4	8.8
Alberta					
1911	13.1	27.8	46.6	10.9	1.6
1921	13.4	31.3	40.0	13.0	2.3
1931	10.8	32.0	37.4	16.3	3.5

TABLE XXXVI (CONT'D)

Province and year	Per Cent				
	Under 5	5 to 19	20 to 44	45 to 64	65 to -
1941	9.4	29.0	37.2	19.2	5.2
1951	12.5	25.8	37.2	17.4	7.1
1956	13.4	27.0	36.0	16.4	7.2
British Columbia					
1911	9.2	21.0	54.0	13.6	2.2
1921	9.4	26.3	42.5	18.3	3.5
1931	7.4	26.2	37.8	23.1	5.5
1941	7.5	21.7	38.1	24.3	8.4
1951	11.0	21.8	37.5	20.4	9.3
1956	11.2	24.0	35.4	18.6	10.8

this proportion decreased throughout the West untill 1941. The 1951 Census again showed that around twelve per cent of the population by provinces was under five years of age.

In 1911, 30.1% of the population in Manitoba was between five and nineteen years of age. This proportion increased to 33% in 1921 and then decreased to 24.5% by 1951. In Saskatchewan 28.0% of the population was between five and nineteen years of age in 1911. This per cent increased to 34.9% by 1931, then it decreased to 26.8% by 1951. The population in Alberta in this age group followed a similar pattern. A smaller proportion of the population was in this age group in British Columbia, but in British Columbia, too, the proportion increased from 21% in 1911 to 26.3%

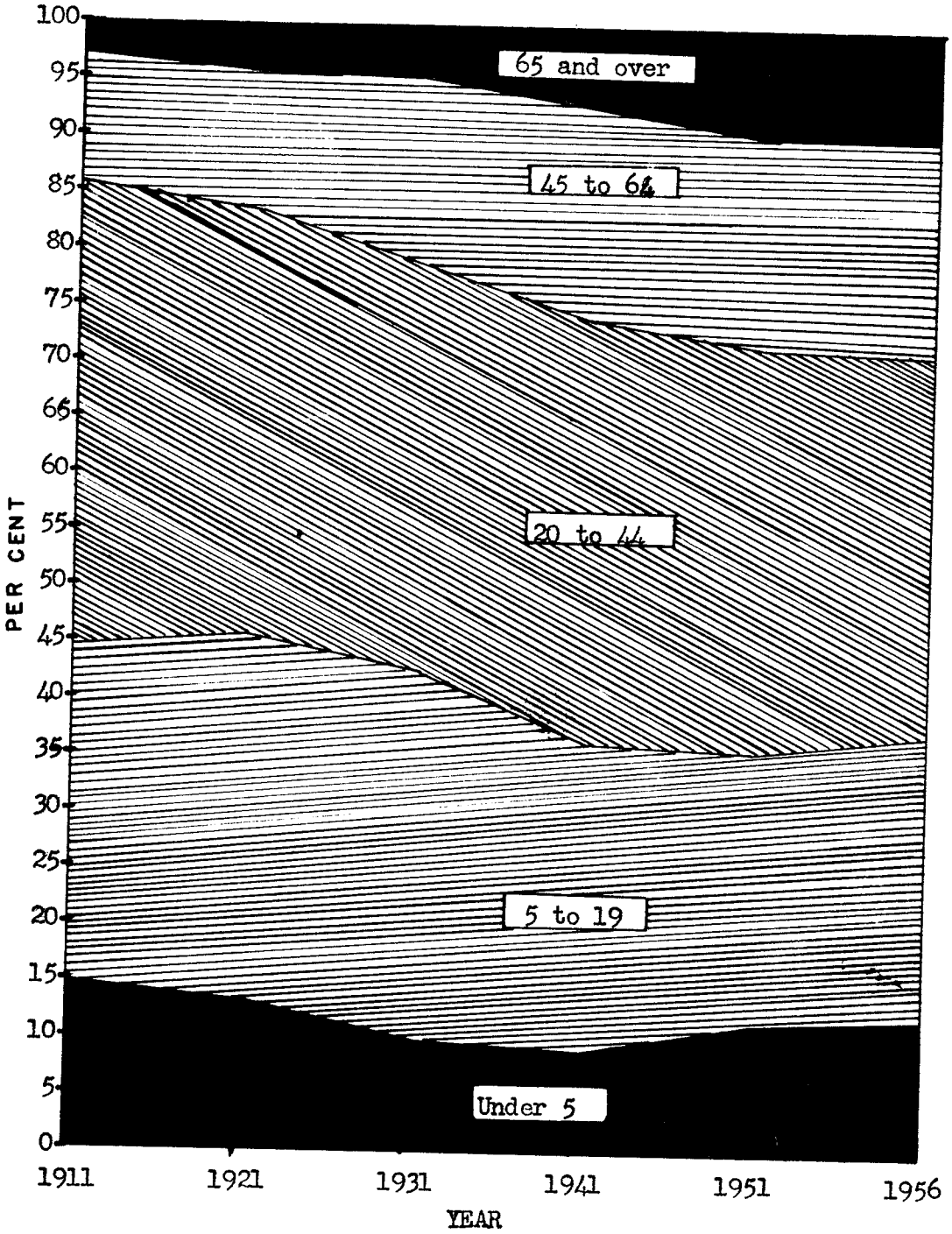

Fig. 22 - Showing percentage distribution of the Manitoba population in five different age groups.

in 1921 and then decreased to 21.7% by 1941. The proportion of the population in this age group increased in each province between the years 1951 to 1956.

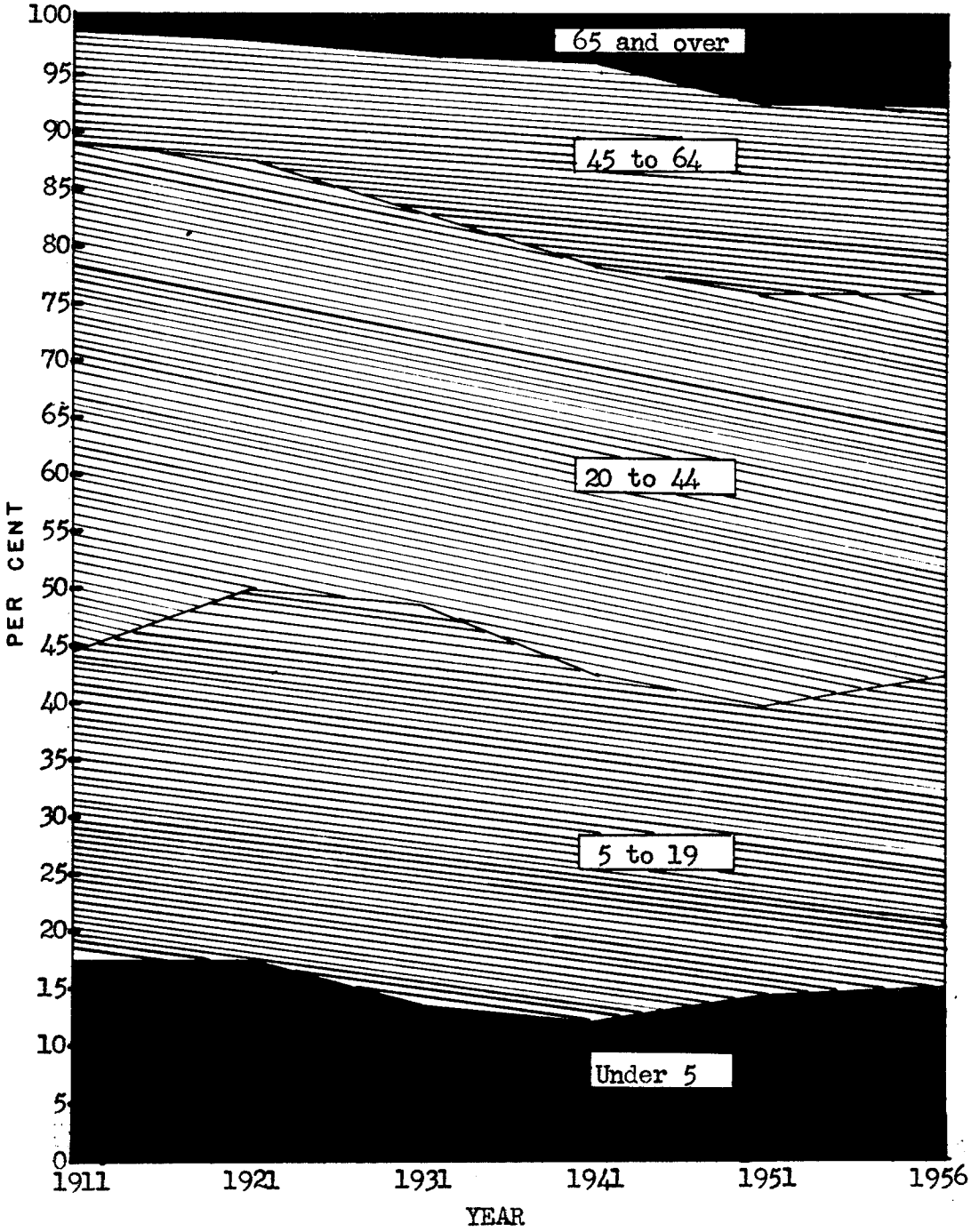

Fig. 23 - Showing percentage distribution of the Saskatchewan population in five different age groups.

In 1911, 42.1%, 45.7%, 46.6%, and 54.0% of the population in Manitoba, Saskatchewan, Alberta, and British Columbia, resepectively, was between twenty to forty-four years of age. These per cents by provinces decreased throughout the West to 34.7% in Manitoba, 33.4% in Saskatchewan, 36.0% in

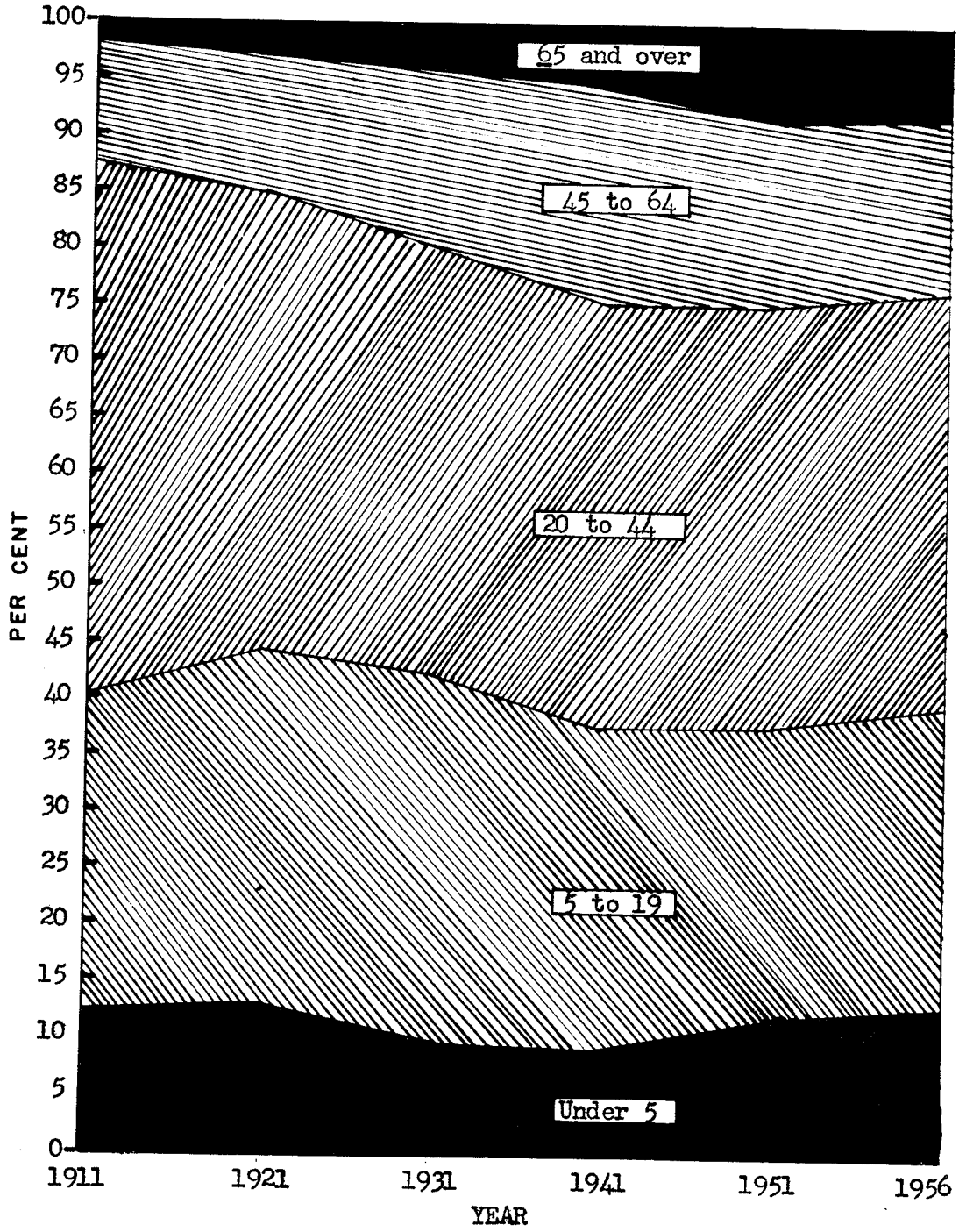

Fig. 24 - Showing percentage distribution of the Alberta population in five different age groups.

Alberta, and to 35.4% in British Columbia.

The proportion of the population 45-64 years of age throughout the West generally increased from 1911 to 1941. After 1941, this proportion

began to decline slightly. About the same proportion of the population in Manitoba, Saskatchewan, and Alberta was in the 45-64 age group. In British Columbia this proportion was a little higher than in the foregoing three provinces.

Finally, the proportion of the population sixty-five years of age and over increased in every province in Western Canada. The proportions increased from a low of 1.6% in Alberta to 10.8% in British Columbia by 1956.

From the foregoing analysis the following observations might be made: (1) the four provincial age patterns are very similar; (2) the percentage of children under five years of age declined each census year up to and including 1941 and increased thereafter; (3) the increase of children under five years of age by 1956, apparently, had again levelled off; (4) a steady increase in the per cent showing the forty-five to sixty-four years of age group and the sixty-five years and over age group - the latter per cent increased more than fourfold in each province except in Manitoba; and (5) a gradual decline of the percentage of people five to nineteen and twenty to forty-four years of age. This latter trend will be reversed as soon as the children born in the 1941-1951 decade reach those ages.

The data summarized in Table XXXVI are shown graphically by Figures 22, 23, 24, and 25. These figures show the percentage distribution of the population in five age groups by provinces. These figures show the increase of the dependent population at both ends of the age distribution scale, but a smaller per cent of the population in the labour pool capable of feeding the dependent population. This trend is not unique to Western Canada. Sociologists, like Francis J.Brown, George A, Lundberg, Clarence C. Schrag, Otto N. Larsen, report that the same trend is present to a large

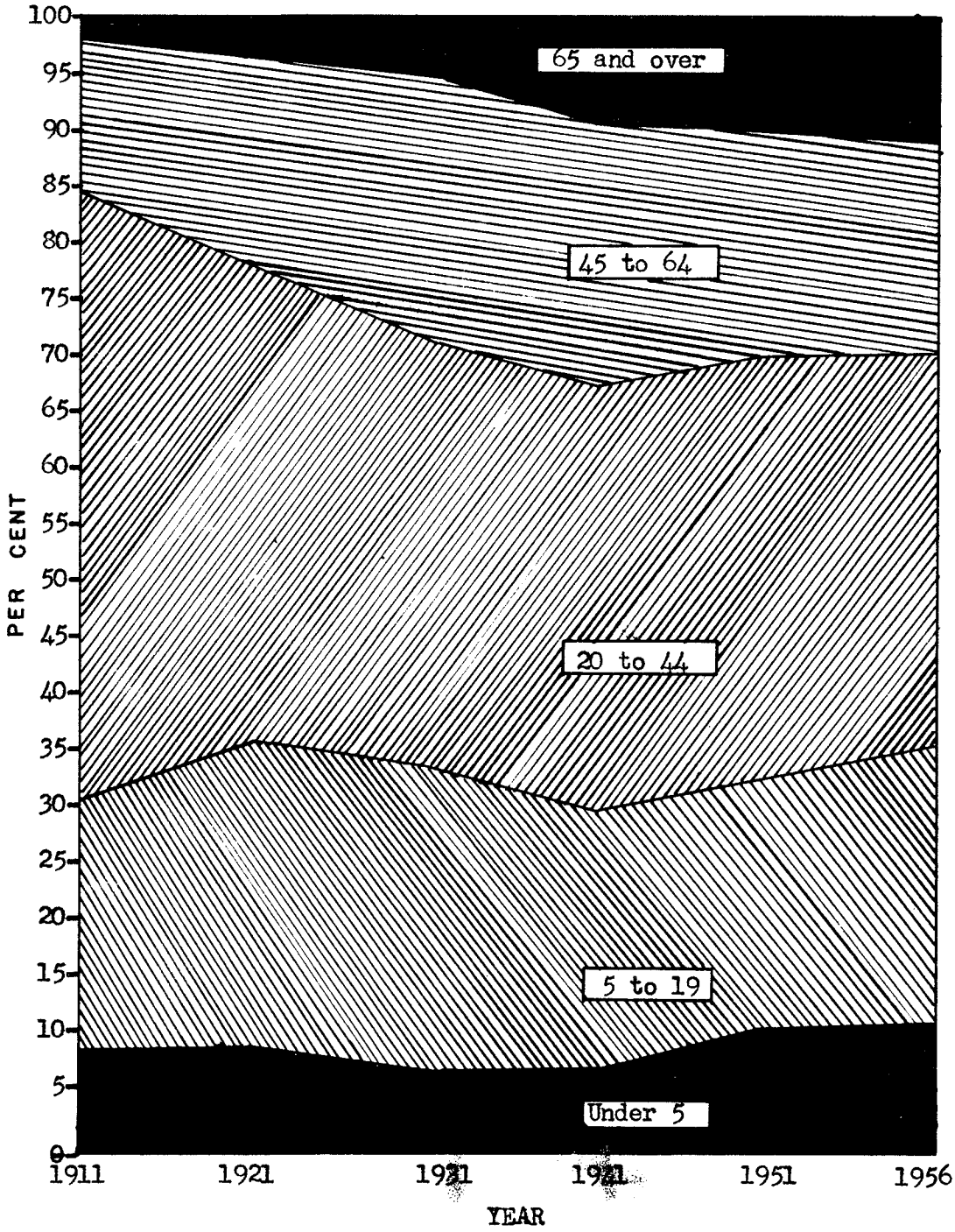

Fig. 25 - Showing percentage distribution of the British Columbia population in five different age groups.

degree in the United States also.[1, 2]

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[1]Francis J. Brown, Educational Sociology. New York, New York: Prentice-Hall, 1954, pp. 230 - 232.

[2]George A. Lundberg, Clarence C. Schrag, Otto N. Larsen, Sociology. New York, New York: Harper & Brothers, 1954, pp. 83 - 85.

Sex Ratios

The second family factor analyzed was the sex ratio. The sex ratios were calculated for the Western Provinces for each decennial census from 1911 to 1951 and for the 1956 census. The population was again divided into five age categories as shown in Table XXXVII. One notices, again, a similarity in the sex ratio trends in the four Western Provinces. With two exceptions, there appears to be a preponderance of males in each province for each census year and age group. The two exceptions are the 1951 twenty to forty-four years of age group for Manitoba and the same age group for British Columbia. The sex ratio data are summarized in Table XXXVII.

TABLE XXXVII

SEX RATIOS FOR POPULATION OF WESTERN PROVINCES BY CENSUS YEARS AND PROVINCES

Provinces and Years	Ratios				
	Under 5	5 to 19	20 to 44	45 to 64	65 to -
Manitoba					
1911	103	104	138	136	140
1921	103	101	112	131	121
1931	103	102	111	132	122
1941	103	102	103	122	119
1951	105	103	97	110	118
1956	104	104	102	107	113
Saskatchewan					
1911	103	111	190	159	143

TABLE XXXVII (CONT'D)

Province and Year	Ratios				
	Under 5	5 to 19	20 to 44	45 to 64	65 to -
1921	102	114	135	151	135
1931	103	103	126	156	132
1941	104	103	110	142	139
1951	104	104	103	123	145
1956	105	105	104	117	135
Alberta					
1911	104	106	172	168	159
1921	103	105	137	155	141
1931	102	103	129	157	137
1941	102	102	113	146	140
1951	103	104	103	130	137
1956	106	104	105	121	131
British Columbia					
1911	100	113	235	204	154
1921	101	102	135	170	138
1931	102	103	125	162	138
1941	103	103	108	133	126
1951	104	104	96	116	124
1956	104	104	104	111	116

In 1911, the sex ratios - the number of males to females - for the group under five years of age was 103 for Manitoba and Saskatchewan, 104

and 100 for Alberta and British Columbia, respectively. The sex ratios for the 5-19 years of age group are fairly steady around 103 also. The sex ratios for 1911 for Saskatchewan and British Columbia and the 1921 ratio for Saskatchewan are three exceptions to the foregoing observation. For the 20-44 years of age group the ratios are very high for each province in 1911 - 138 for Manitoba, 190 for Saskatchewan, 172 for Alberta, and 235 for British Columbia - but by 1956 the sex ratios for the 20-44 years of age group had declined to around 104. The sex ratios of 1951 for Manitoba and for British Columbia were less than unity. The sex ratios for the last two age groups are quite high in each province. The ratios for Manitoba and British Columbia declined more than the ratios for Saskatchewan and Alberta.

A few facts shown by the data summarized in Table XXXVII and discussed in the foregoing paragraphs are: (1) the sex ratio for the under five age group is quite constant in each province; (2) the sex ratio for the five to nineteen years of age group shows a fairly steady pattern too; (3) the 1911 sex ratio for the twenty to forty-four year of age group, the forty-five to sixty-four years of age group and the sixty-five years of age and over age group is quite high in each province; and (4) the sex ratio in the latter three age groups declines steadily for each province for each census after 1911. Lundberg, Schrag, and Larsen claim that such is a typical sex ratio pattern in frontier countries.[3] They claim that the males enter a new area first and after they have established themselves women and children follow. Western Canada has just passed from being a frontier area.

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[3]Ibid., p. 83.

Number of Families By Provinces, Marriage Ratios, and Family Size

The data for the number of families, marriage ratios, and family size for the four Western Provinces for each census year beginning with 1901 are summarized in Table XXXVIII. The marriage ratio means the number of married people to the number of single people. Again one must keep in mind that in 1901 all four Western Provinces were still frontier areas, and, therefore, in a stage of development. This development is revealed by the increase in the number of families.

TABLE XXXVIII

NUMBER OF FAMILIES, MARRIED MALES AND FEMALES, MARRIAGE RATIOS, FAMILY SIZE BY PROVINCES, 1901[a], 1911[a], 1921, 1931, 1941, 1951, and 1956

Province and Year	Number of Families	Married Males	Married Females	Marriage Ratios	Size of Families
Manitoba					
1901	51,056	42,881	41,679	49.55	
1911	89,861	85,804	80,234	57.37	
1921	133,954	117,634	113,905	61.37	4.16
1931	159,013	137,772	131,085	62.33	4.08
1941	166,249	157,389	153,926	74.42	3.8
1951	191,268	181,617	181,272	97.26	3.6
1956	204,414	196,143	195,817	85.54	3.6
Saskatchewan					
1901	19,235	16,065	15,816	53.65	

TABLE XXXVIII (CONT'D)

Province and Year	Number of Families	Married Males	Married Females	Marriage Ratios	Size of Families
1911	120,751	92,431	82,522	55.11	
1921	173,913	142,566	136,395	58.29	4.12
1931	209,699	174,114	164,786	58.14	4.19
1941	190,137	182,386	177,526	67.14	4.1
1951	196.188	187,457	185,848	81.43	3.7
1956	205,135	198,277	196,628	81.31	3.8
Alberta					
1901	16,305	13,134	12,300	53.45	
1911	90,346	71,378	62,853	55.83	
1921	143,650	117,223	110,298	63.04	3.85
1931	182,113	148,069	137,815	64.13	3.86
1941	175,744	171,381	164,811	73.09	3.9
1951	223,326	216,781	213,419	84.47	3.7
1956	262,922	256,945	253,421	83.28	3.7
British Columbia					
1901	38,445	36,429	26,090	52.97	
1911	79,825	84,734	62,342	59.93	
1921	133,912	125,869	103,546	77.73	3.43
1931	189,359	167,723	139,683	79.44	3.39
1941	199,383	204,276	186,812	91.64	3.4
1951	299,845	297,452	289,321	101.44	3.3
1956	346,003	345,117	336,263	95.02	3.4

[a]Size of family was not available.

Manitoba, in 1901, had 51,056 families and 204,414 families in 1956. This represents a fourfold increase. Saskatchewan, in 1901, had 19,235 families and 205,135 families in 1956. Alberta, in 1901, had 16,305 families and 262,922 families in 1956. Saskatchewan had eleven times as many families in 1956 as she had in 1901, but Alberta had sixteen times as many families in 1956 as in 1901. Finally, British Columbia, in 1901, had 38,445 families and 346,003 families in 1956.

The increase in the number of families would also result in an increase in the number of married females and males. A glance at Table XXXVIII shows that there were about four and a half times as many married males and females in Manitoba in 1956 as there were in 1901. In Saskatchewan the married males increased from 16,065 in 1901 to 198,277 in 1956 and the married females increased from 15,816 in 1901 to 196,628 in 1956. In other words, there were twelve times as many married people in Saskatchewan in 1956 as in 1901. In Alberta the married males increased from 13,134 in 1901 to 256,945 in 1956, and the married females increased from 12,300 in 1901 to 253,421 in 1956. This means that there were twenty times as many married people in Alberta in 1956 as there were in 1901. The married males increased from 36,429 in 1901 to 345,117 in 1956, and the married females increased from 26,090 in 1901 to 336,263 in 1956 in British Columbia.

The number of married males always exceeds the number of married females. Even after making allowance for widowed and divorced males and females the two figures do not agree. The difference becomes smaller through the years. There are several reasons for this. A few of them are: (1) all people married but not living together are classed by the census as married unless the persons concerned obtained a legal divorce; (2) immigration during the early part of this century was heavy; and (3) mar-

ried people may have been employed in different parts of the country when the census was taken, Immigration, probably, accounts for the greatest part of the difference because the fathers came from Europe first, established themselves and had their families follow them.

The third trend summarized in Table XXXVIII is the marriage ratios. The marriage ratios were found by multiplying the ratio of married to single people by a hundred for each census year. For example, in 1901 the marriage ratio for Manitoba was 49.55. This means that there were 49.55 married people for every 100 single people.

The marriage ratios for each province for each census year can be read from Table XXXVIII. However, one could make the following observations from the ratios: (1) the marriage ratio increased gradually throughout the West up to 1951 and then declined; (2) the marriage ratio of 1951 for each province was highest; (3) the marriage ratio increased while the twenty to forty-four year of age sex ratio decreased; and (4) the marriage ratio for Manitoba and British Columbia was highest in 1951 when their foregoing sex ratio was lowest. Therefore, there appears to be a certain relationship between the marriage ratio and the sex ratio. This relationship is discussed more fully in the Appendix.[5]

The last trend summarized in Table XXXVIII is the size of the family in Western Canada. The average size appears to hover around three to four people to a family. If father and mother are a constant factor then there are from one to two children to a family. There are fewer childless families and families with very many children and more families having two, three or more children.[6] There has been hardly any change in the size of

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[5] See Appendix C, pp. 213 - 218.

[6] , "Another Look at Canada's Population," Monthly Review, The Bank of Nova Scotia, (August, 1957), p. 3.

the family in British Columbia from 1901 to 1956. The greatest change appears to have been in Manitoba and Saskatchewan.

Conjugal Conditions

The fourth family factor analyzed was the conjugal condition of the married people of Western Canada. The number of males and females divorced, and the number of married males and females left alone by the death of either spouse were tabulated. The ratio of divorced males to a hundred married males and the ratio of divorced females to a hundred married females were calculated. For example, there were .04 divorced males to a hundred married males in Manitoba in 1901, or four for 10,000 married males were divorced. Similarly, the death ratios were calculated. The data are summarized in Table XXXIX.

A glance at the data shows that the marital pattern of the four provinces was quite similar. The divorce ratio increased in each province. Manitoba and Saskatchewan had the lowest divorce rates; Alberta and British Columbia had the highest rates. In general there were more divorced females than divorced males. The divorce ratio for Manitoba in 1931 for the females was lower than that for the males. There were also more divorced males in Saskatchewan and Alberta from 1901 to 1941.

It appears as if during the depression years the increase in the divorce rate slowed down. But the post war decade saw the divorce rates almost double in some provinces. By 1956 there were five divorced males for every thousand married males in Manitoba, four divorced males for every thousand married males in Saskatchewan, seven males for every thousand married males in Alberta, and ten divorced males for every thousand married males in British Columbia. The divorced females out of a thousand married females numbered seven in Manitoba, four in Saskatchewan, nine in Alberta,

TABLE XXXIX

DIVORCED MALES AND FEMALES, DIVORCE RATIOS, WIDOWS, WIDOWERS, BEREAVED RATIOS BY PROVINCES AND CENSUS YEARS 1901 TO 1956

Province and Year	Males			
	Divorced	Ratios per 100 Married Males	Widowers	Ratios per 100 Married Males
Manitoba				
1901	18	.04	2,730	6.36
1911	100	.12	4,036	4.69
1921	246	.21	6,480	5.51
1931	344	.25	8,677	6.29
1941	473	.30	10,269	6.53
1951	820	.45	10,445	5.75
1956	969	.49	10,997	5.61
Saskatchewan				
1901	6	.04	1,004	6.25
1911	169	.18	4,363	4.72
1921	337	.23	7,462	5.23
1931	394	.23	10,031	5.76
1941	468	.25	11,386	6.24
1951	711	.36	10,811	5.76
1956	759	.38	11,071	5.58
Alberta				
1901	7	.053	696	5.31
1911	160	.22	3,408	4.84

TABLE XXXIX (CONT'D)

Province and Year	Males			
	Divorced	Ratios per 100 Married Males	Widowers	Ratios per 100 Married Males
1921	413	.35	6,674	5.69
1931	621	.42	8,814	5.95
1941	801	.47	10,596	6.15
1951	1,533	.71	11,428	5.41
1956	1,730	.69	12,185	4.75
British Columbia				
1901	52	.14	2,586	7.09
1911	219	.26	4,205	4.96
1921	548	.43	7,132	5.67
1931	924	.55	10,670	6.35
1941	1,547	.76	13,982	6.83
1951	3,249	1.09	17,502	5.88
1956	3,633	1.05	19,507	5.65
	Females			
	Divorced	Ratios per 100 Married Females	Widows	Ratios per 100 Married Females
Manitoba				
1901	17	.04	3,968	9.51
1911	120	.15	7,593	9.47
1921	260	.23	12,366	10.85

TABLE XXXIX (CONT'D)

Province and Year	Females			
	Divorced	Ratios per 100 Married Females	Widows	Ratios per 100 Married Females
1931	309	.24	16,265	12.35
1941	654	.43	20,625	13.59
1951	1,319	.73	25,397	14.01
1956	1,377	.70	28,899	14.78
Saskatchewan				
1901	7	.04	1,607	10.16
1911	89	.11	5,593	6.76
1921	233	.17	10,580	7.74
1931	273	.17	14,748	8.96
1941	381	.21	18,965	10.68
1951	818	.44	22,654	12.21
1956	856	.43	25,414	12.95
Alberta				
1901	8	.065	1,092	8.89
1911	97	.15	4,514	7.19
1921	289	.26	9,618	8.73
1931	393	.29	13,234	9.53
1941	717	.44	17,964	10.89
1951	1,735	.81	24,693	11.58
1956	2,155	.85	30,339	11.98
British Columbia				

TABLE XXXIX (CONT'D)

Province and Year	Females			
	Divorced	Ratios per 100 Married Females	Widows	Ratios per 100 Married Females
1901	37	.14	3,096	11.85
1911	159	.26	6,303	10.12
1921	483	.48	12,859	12.40
1931	731	.52	19,706	14.12
1941	1,718	.92	29,235	15.70
1951	4,381	1.51	44,637	15.45
1956	4,936	1.47	53,384	15.85

and fifteen in British Columbia. Of the four Western Provinces, Saskatchewan had the lowest divorce rates and British Columbia had the highest divorce rates for both males and females.

The second trend summarized in Table XXXIX is the death rates among married males and females. The pattern, again, is similar throughout the West. The ratio for married males who lost their spouse showed a slight decrease while the ratio for females widowed increased. About two to three times as many females as males lost their spouse through death. In 1956, there were 5.61 widowers and 14.78 widows per hundred married males and females, respectively, in Manitoba. This was a decrease from 6.36 per hundred to 5.61 per hundred for the males, and an increase from 9.51 per hundred to 14.78 per hundred for the females. In Saskatchewan, the ratios for the males decreased from 6.25 per hundred married males in 1901 to 5.78 per hundred married males in 1956, and the ratios for the married females

increased from 10.16 in 1901 to 12.95 per hundred in 1956. In Saskatchewan there were only twice as many widowed females as males who lost their spouse. There were 5.31 widowers per a hundred married males in 1901 and only 4.75 widowers per hundred married males in 1956 in Alberta. The ratios for the females increased from 8.89 in 1901 to 11.98 in 1956 in Alberta. British Columbia had the highest number of females widowed. In 1901 there were 11.85 widows per hundred married females and in 1956 there were 15.85 widows per hundred married females. However, the ratios for the bereaved males decreased from 7.09 in 1901 to 5.65 in 1956. According to the report by the Bank of Nova Scotia, the death rate in British Columbia was above the Canadian average in 1951 to 1958.[7]

Vital Statistics for Western Canada

The vital statistics - birth rate, death rate, natural increase, and marriage rates, in the four Western Provinces - are discussed in this section. Table XL shows the birth rate, death rate, natural increase, and the marriage rates for Canada and the Western Provinces for four intervals from 1921 to 1955. The first interval included the years from 1921 to 1925, the second interval included the years from 1931 to 1935, the third interval included the years from 1941 to 1945, and the fourth interval included the years from 1951 to 1955.

The Canadian birth rates for the foregoing four intervals were 27.4, 21.6, 23.7, and 28.1 children per thousand population, respectively. The birth rate for the people of Manitoba was always below the Canadian average - namely 26.8, 19.4, 21.8, and 26.3 children per thousand for the four intervals, respectively. For the people of Saskatchewan, the birth rate decreased from 27.7 to 21.7 children per thousand people and then increased again to

[7]Ibid., p. 3.

27.3 children per thousand people. These rates were quite close to the national rates. The birth rates in Alberta for the four intervals were 26.0, 22.1, 23.7, and 30.9 children per thousand, respectively, and the birth rates for British Columbia were 18.4, 14.0, 19.8, and 25.4 children per thousand, respectively. The birth rates for British Columbia were lower than those of the other three provinces.

The death rate in the four provinces did not change very much during the thirty-year period. The national average death rate dropped from 11.3 to 8.5 people per thousand people. The death rate in Manitoba dropped from

TABLE XL[a]

BIRTH RATE, DEATH RATE, NATURAL INCREASE, MARRIAGE RATE, BY PROVINCES AND CANADA, 1921-25, 1931-35, 1941-45, 1951-55[b]

Type and Interval	Canada	Manitoba	Saskatchewan	Alberta	British Columbia
Birth Rate					
1921-25	27.4	26.8	27.7	26.0	18.4
1931-35	21.6	19.4	21.9	22.1	14.0
1941-45	23.7	21.8	21.7	23.7	19.8
1951-55	28.1	26.3	27.3	30.9	25.4
Death Rate					
1921-25	11.3	8.6	7.5	8.3	8.7
1931-35	9.8	7.7	6.5	7.3	8.9
1941-45	9.8	9.1	7.6	8.0	10.5
1951-55	8.5	8.4	7.6	7.5	9.9

TABLE XL (CONT'D)

Type and Interval	Canada	Manitoba	Saskatchewan	Alberta	British Columbia
Natural Increase					
1921-25	16.1	18.2	20.2	17.7	9.7
1931-35	11.8	11.7	15.4	14.8	5.1
1941-45	13.9	12.7	14.1	15.7	9.3
1951-55	19.6	17.9	19.7	23.4	15.5
Marriage Rates					
1921-25	7.3	7.5	6.4	7.3	7.1
1931-35	6.5	7.1	6.1	7.4	6.0
1941-45	9.7	10.0	7.7	10.0	10.7
1951	9.2	9.5	8.2	9.9	9.7
1952[c]	8.9	8.9	8.2	9.8	9.2
1953[d]	9.0	9.0	8.3	10.1	9.2

[a] ; "Canada's Changing Population," Monthly Review, The Bank of Nova Scotia, (July, 1954), p. 4.

[b] Monthly Review, The Bank of Nova Scotia, (August, 1957), op. cit., p. 3.

[c] Preliminary figures.

[d] Tentative estimate based on preliminary registration figures.

8.6 people per thousand to 7.7 people per thousand, increased to 9.1 people per thousand people during the third interval, and decreased again to 8.4 people per thousand during the last interval. The death rates in Saskatchewan followed a similar pattern, however, they were lower - namely 7.5, 6.5,

7.6, and 7.6 people per thousand people. In Alberta, the death rates were 8.3, 7.3, 8.0, and 8.5 deaths per thousand people, respectively, for the four intervals. Finally, in British Columbia the death rates were 8.7, 8.9, 10.5, and 9.9 deaths per thousand people. The death rates were lower than the Canadian average except for the last two intervals in British Columbia.

The birth rates for the four Western Provinces rose a little and the death rates declined a little during the four intervals from 1921 to 1955. Therefore, the natural increase should be up. In British Columbia the natural increase changed from 9.7 from 1921 to 1925 to 15.5 people from 1951 to 1955. In Alberta the natural increase changed from 17.7 people during the first interval to 23.4 people during the last interval. However, in Manitoba and Saskatchewan the natural increase dropped slightly. In Manitoba it dropped from 18.2 to 17.9 people and in Saskatchewan it dropped from 20.2 to 19.7 people during the four intervals. The Canadian average natural increase rose from 16.1 to 19.6 people during the four intervals. This change in the Canadian average natural increase is shown more clearly by Figure 26.

The figures for the marriage rates were available only for the first three intervals and for the first three years of the last interval. The average marriage rate for Canada was highest during the third interval from 1941 to 1945. With the exception of Saskatchewan, the provinces followed this same pattern. During the third interval Saskatchewan had a marriage rate of 7.7 which was below the average marriage rate for Canada, but Manitoba, Alberta, and British Columbia had a marriage rate of 10.0, 10.0, and 10.7, respectively, which was above the average marriage rate for Canada. For the year 1953, the marriage rate in Manitoba and British Columbia was close to the average rate for Canada, while in Saskatchewan

the marriage rate was below and the marriage rate for Alberta was above the average marriage rate for Canada.

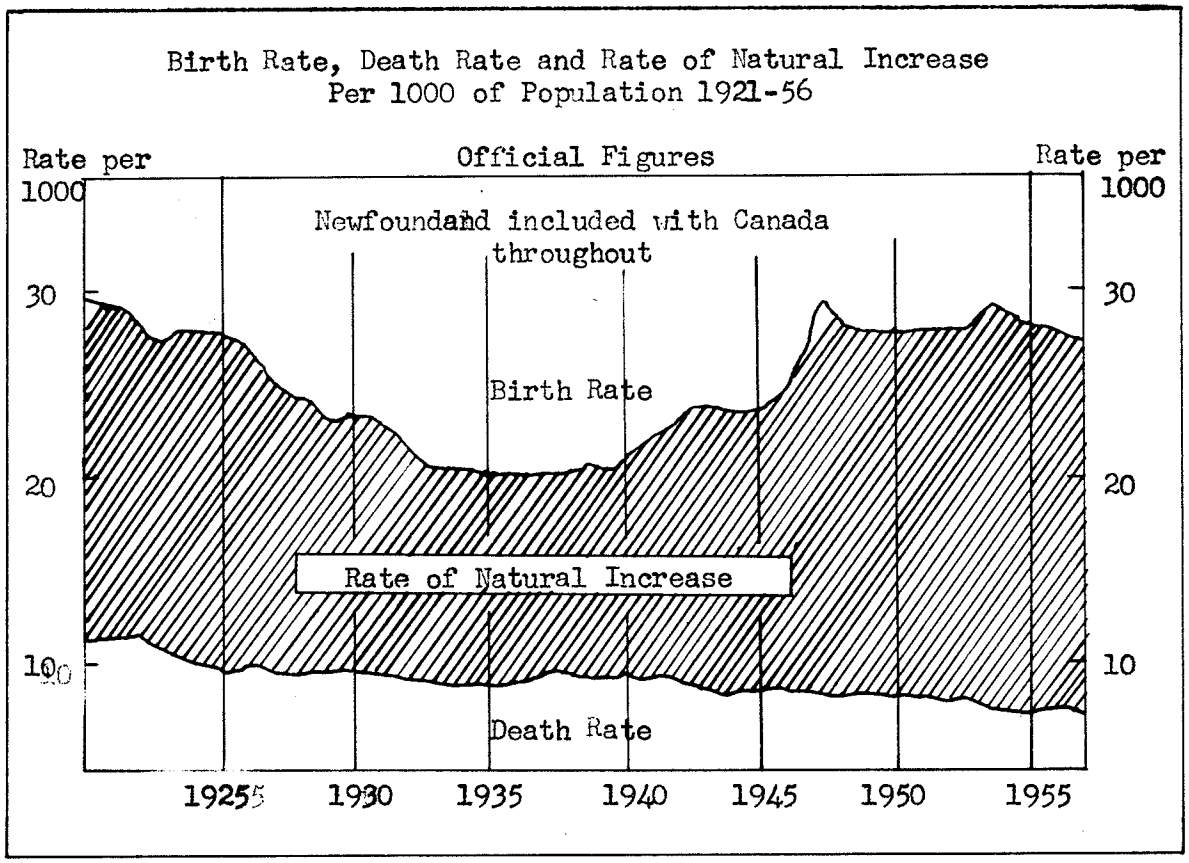

Fig. 26 - Showing Birth Rate, Death Rate, and Rate of Natural Increase per 1000 Population 1921-56.[8]

Married Women Gainfully Employed

An attempt was made to obtain some figures on the number of married women gainfully employed outside their own home. Prior to 1921, the Dominion Bureau of Statistics, apparently, did not break down the statistics for the female labour force to show the number of married women gainfully employed outside their homes. However, from 1921 to 1951 figures showing the number of married women gainfully employed were available. The data for this period are summarized in Table XLI.

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[8] Monthly Review, The Bank of Nova Scotia, (August, 1957), op. cit., p. 3.

TABLE XLI

MARRIED WOMEN GAINFULLY EMPLOYED, PER CENT OF MARRIED WOMEN GAINFULLY EMPLOYED BY PROVINCES 1921, 1931, 1941, and 1951

Province and Year	Number	Per cent of Married Women	Per cent of Families
Manitoba			
1921	3,227	2.8	
1931	4,827	3.7	3.03
1941	4,322	2.8	2.6
1951	21,650	11.9	11.3
Saskatchewan			
1921	3,241	2.4	
1931	5,031	3.1	2.4
1941	4,124	2.3	2.2
1951	16,525	8.9	8.4
Alberta			
1921	2,790	2.5	
1931	4,904	3.5	2.7
1941	4,649	2.8	2.6
1951	21,117	9.9	9.5
British Columbia			
1921	2,891	2.8	
1931	5,938	4.3	3.1
1941	6,221	3.3	3.6
1951	38,519	13.3	12.8

Table XLI shows the number of married women gainfully employed. In 1921, fewer than four thousand married women were gainfully employed outside the home. This affected fewer than three per cent of all married women, and fewer than three per cent of all families. During the 1921-1931 decade the number increased in every province. In British Columbia the number of married women gainfully employed doubled, but the per cent of married women gainfully employed increased from one to one and half per cent. During the depression the number decreased in all but one province. British Columbia had an increase in the number of married women gainfully employed, but the per cent of all married women working for pay decreased by one per cent. The Second World War, however, changed the picture quite noticeably. As a result of the shortage of manpower, many employers were forced to waive their prejudice against female employees. Both the actual number and per cent of married women gainfully employed increased in every province with British Columbia taking the lead. By 1951, one family out of every ten was affected by this trend.

However, according to the Women's Bureau Department of Labour the greatest increase in the per cent of women gainfully employed occurred in the forty-five to sixty-four age group. Fifteen per cent of this group was working for pay in 1947 and nineteen per cent in 1955. The per cent of married women in the twenty to twenty-four age group increased from five per cent in 1941 to nineteen per cent in 1951. The per cents of the twenty-five to thirty-four years of age group and thirty-five to forty-four years of age groups increased from thirteen and seventeen per cents, respectively, in 1941 to thirty-nine and forty-six per cent, respectively, in 1951. When all the married women are taken together, one notices that they comprised

one-third of the female force in 1951.[9]

The foregoing trend is not unique to Western Canada. In both the United States and Britain one married woman out of five is working.[10]

Factors Changing The Pattern and Functions of the Family

To conclude this chapter, the writer intended to make an original survey of factors changing the pattern and functions of the family of Western Canada. However, the task appeared too formidable to undertake. Consequently, plans had to be changed, and instead a survey of what other authors have written on the subject was made.

The author discovered that, without exception, writers on sociology and anthropology agree on the universality of the family. How this unique relationship originated has given writers ample opportunity for speculation. According to Kimball Young:

> ... Certain theorists contend the original human grouping consisted of "group marriage," or an undifferentiated horde of males and females living together more or less promiscuously. ... Still other writers have held that the original family was made up of mother and children, the father, aside from his sexual role, played a very indefinite part. Actually, no such condition ... has ever been found, even among people of the most elementary culture.[11]

If the family is universal, and as far as our records reveal, always has been, will the factors, which are helping to change the family pattern, be able to dissolve this unique relationship and make it obsolete? John F. Cuber believes that many professional as well as lay people have an

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[9]A. H. Brown, Women At Work In Canada. Ottawa, Canada: Women's Bureau, Department of Labour, January, 1957, pp. 5-12.

[10]Ibid., p. 30.

[11]Kimball Young, Sociology, A Study of Society and Culture. New York, New York: American Book Company, 1949. pp. 313.

erroneous belief it will.[12] Francis J. Brown says the same idea even more forcefully. He says:

> ... But family ties run deeper than the changing environment. The companionship of the home still retains its intrinsic and essential functions. As the family has withstood all of the impacts of sweeping changes in cultural patterns so it will survive whatever further changes may lie ahead.[13]

The foregoing statements pertaining to American families, probably, apply to the families in Western Canada too.

There appears to be a consensus of opinion of sociologists on the functions of the family. Francis J. Brown reports that Ogburn lists the following functions which a family should perform:

> (1) affectional; (2) economic; (3) education; (4) protective; (5) recreational; (6) family status; (7) religious.[14]

Brown also reports that Howard Becker lists the following functions:

> (1) production of population; (2) protection and care of the child; (3) economic production of goods and services; (4) socialization of the child; (5) education of the child; (6) recreational; and (7) affectional interaction.[15]

What factors are changing the foregoing patterns and functions? Moore and Cole say:

> Family functions do not remain constant. They vary greatly both in time and place, because of the influence of technological change, the locale of the family, changing economic conditions, the peculiar religious nationality and cultural backgrounds of families, and major social crises - such as depres-

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[12]John F. Cuber, Sociology, A Synopsis of Principles, New York, New York: Appelton-Century-Crofts, Inc., 1955. pp. 461.

[13]Francis J. Brown, op., cit., pp. 247.

[14]Ibid., pp. 247.

[15]Ibid., pp. 228.

> sions and wars - which have such catastrophic effects upon family life.[16]

This belief is shared by Lundberg, Schrag, and Larsen. They write:

> In complex urban societies many of the earlier functions of the family have been assumed by other more specialized institutions. Education, health, and welfare are increasingly the responsibilities of the state. Production and distribution of goods are handled by economic institutions. Religious behaviour is regulated by the church, and recreational activities are controlled by clubs and commercial organizations.[17]

The foregoing statement is similar in content to the statement made in the Province of Saskatchewan Royal Commission on Agriculture and Rural Life, Report No. 10, The Home and Family in Rural Saskatchewan, and reported in this report.[18]

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[16]Clyde B. Moore, William E. Cole, Sociology in Educational Practice, Cambridge, Massachusetts: The Riverside Press, 1952. pp. 61 - 62.

[17]George A. Lundberg, Clarence C. Schrag, Otto N. Larsen, op., cit., pp. 546.

[18]See pp. 12 - 13.

CHAPTER VIII

ECONOMICS AND THE SCHOOL

Introduction

From the discussion in the previous chapter, it appears that more married women are entering the labour force, but that the great majority either have no family responsibilities or their family is mature enough to take care of themselves while the mother is working. Many mothers with family responsibilities are working because they must help to balance the family budget.

The construction and maintenance of schools require money too. Without money it is also impossible to staff the schools with adequately trained personnel. Furthermore, the economy must permit parents to earn enough money to send their children to higher institutes of learning. The economy must also be sufficient so the Departments of Education can offer a diversified program of studies. Since only about half the high school aged population can complete the academic program successfully, another program must be made available to it.

School Organization[1]

The school curriculum in Manitoba is divided into three parts. The first part includes grades one to six and kindergarten; the second part includes grades seven to nine; and the third part includes grades ten to twelve. Up to the present there has been little centralizing of school facilities in Manitoba. However, centralizing of school facilities in Mani-

[1] Canada Yearbook, 1957-58, Pp. 347 - 349. Ottawa, Ontario: Queen's Printer, 1958.

toba has been recommended by the Royal Commission on Education in Manitoba.[2] Several composite high schools exist where both academic and vocational courses are offered. Many other high schools are offering at least some commercial subjects. There are several commercial colleges and at least one technical institute which are not connected with high school matriculation. Higher education is given by the University of Manitoba with its five affiliated colleges, one law school, and one Grand Seminaire affiliated with the University of Montreal. Opportunity for taking high school and university courses is also provided for.

The school curriculum in Saskatchewan is divided into two parts. The first part includes grades one to eight and kindergarten, and the second part includes grade nine to twelve. Upon the recommendation of the Royal Commission on Rural Education, the province is proceeding rapidly with centralizing school facilities in larger unit areas. The unit system of school administration appears to be gaining acceptance of the populace. The Saskatchewan Department of Education reports:

> Perhaps one of the best indications of the acceptance of the unit system of school administration is the number of towns, consolidated and separate school districts which have been included in units by agreements between the unit and district boards. On July 1, 1956, there were thirty-nine towns, fifteen consolidated and four separate school districts in units by agreement. During the year under review three town districts and four consolidated districts have been added in this way.[3]

As a result there are an increasing number of composite high schools. Besides the composite high schools there are three technical schools. Higher

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[2] Interim Report Manitoba Royal Commission on Education, (August, 1958), pp. 41 - 61. Winnipeg, Manitoba: Queen's Printer, 1958.

[3] Annual Report of the Department of Education of the Province of Saskatchewan, 1956-1957, pp. 13. Regina, Saskatchewan: Queen's Printer, 1958.

education is given by the University of Saskatchewan, the Regina College, ten colleges affiliated with the University of Saskatchewan, two independent Roman Catholic theological seminaries, and four colleges affiliated with the University of Ottawa. Saskatchewan, too, provides adult education and extension services. Both Manitoba and Saskatchewan have a Normal School or a Teacher's College were elementary teachers are given a one-year course. Secondary teachers are required to have a university degree, however, the teacher shortage has made it necessary to waive this requirement in many cases.

The school curriculum in Alberta is also, like the school curriculum in Manitoba, divided into three parts. Crowding of elementary schools has made it necessary to discontinue the kindergarten classes. This void is partially filled by private kindergartens. On the recommendation of the Coterminous Boundary Commission the centralizing of school facilities is proceeding rapidly.[4] Boundaries of unit areas are, as a rule, coterminous with municipal boundaries. Vocational training is given in composite high schools and at seven technical or vocational schools. Higher education is provided by the University of Alberta, its Calgary branch, three affiliated colleges, two independent junior colleges and a Roman Catholic seminary affiliated with the University of Ottawa. Teacher training, adult education, and extension services are given by the University of Alberta.

The school curriculum in British Columbia is also divided into three parts. The first two parts are identical to the division of the school curriculum of Alberta. The third part includes grades ten to thirteen. Centralizing of school facilities has progressed far in British Columbia. Three patterns of school administration exist in British Columbia. They

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[4]This report was not available for review.

are the elementary-junior high, the elementary-senior high, and the junior high-senior high patterns. There are four technical training schools as well as a number of private trade schools and business colleges. Higher education is given by the University of British Columbia with its three affiliated colleges, and by four theological schools. The University of British Columbia also trains all teachers and has an adult extension department.

School administrators appear to favour centralizing of school facilities. At least one province reported that centralization of school facilities had resulted in greater equality of educational opportunity for all people in the province and in an improvement in the quality of instruction.[5]

Provincial Productivity

From the foregoing discussion it is evident that there is a trend towards centralizing school facilities. It appears that with little or no extra cost more educational opportunities can be provided. Yet money is needed. In this section the provincial productivity of several primary and secondary industries will be discussed. The value of farm, sawmill, mineral, fish, and fur products, manufacturing and capital construction for the four Western Provinces is summarized in Table XLII. The table also shows the net production and the per cent of the total Canadian net production produced by the people of the Western Provinces.

The value of the products from agriculture for Manitoba in 1941 was $125,714,000, the value of the manufactured goods was $211,534,751, and the value of the mineral products and capital construction was almost twelve million dollars each. The foregoing figures represent the gross value of those products. The net production of the seven products listed

[5] Annual Report of the Department of Education of the Province of Saskatchewan, op. cit., pp. 11 and 23.

was $205,348,561. The people of Manitoba received 4.35% of the total Canadian net production of the seven products listed.

The value of the products from agriculture for Saskatchewan in 1941 was $205,803,000, the value of the manufactured goods was $96,020,000, and the value of capital construction was $11,098,700. The net production of the seven products listed was $228,318,037, or 4.8% of the total Canadian net production of the seven products listed.

The value of the products from agriculture for Alberta in 1941 was $203,803,000, the value of the manufactured goods was $142,651,493, the value for mineral products was $36,167,469, and the value of capital construction was $15,598,800. The net production of the seven products listed for Alberta was $276,898,177, or 5.8% of the total Canadian net production.

TABLE XLII[a]

VALUE OF FARM, SAWMILL, MINERAL, FISH, AND FUR PRODUCTS, MANUFACTURING AND CAPITAL CONSTRUCTION OF WESTERN CANADA BY PROVINCES, 1941

Item	Manitoba	Saskatchewan	Alberta	British Columbia
Agriculture	125,714,000	205,803,000	203,803,000	50,510,000
Sawmill Products	2,253,209	3,010,671	4,928,517	82,364,174
Minerals	11,898,109	9,336,756	36,167,469	60,323,299
Fish	3,233,115	414,492	440,444	31,732,037
Fur	2,763,976	2,324,479	2,806,074	1,913,667
Manufacturing	211,534,751	96,020,975	142,651,493	412,957,807
Capital Construction	11,701,600	11,098,700	15,598,800	18,716,00

[a]The Canada Yearbook, 1944, pp. 214, 261, 280, 301, 272, 365, 428, and 189. Ottawa, Ontario: King's Printer, 1944.

TABLE XLIII[a]

VALUE OF FARM, SAWMILL, MINERAL, FISH, AND FUR PRODUCTS, MANUFACTURING AND CAPITAL CONSTRUCTION OF WESTERN CANADA BY PROVINCES, 1951

Item	Manitoba	Saskatchewan	Alberta	British Columbia
Agriculture	265,711,000	636,189,000	459,949,000	109,431,000
Sawmill Products	4,112,135	4,497,183	22,667,881	347,147,390
Minerals	30,045,992	51,032,953	168,144,211	176,278,932
Fish	7,524,000	1,749,000	862,000	85,221,000
Fur[b]	5,370,335	2,805,972	5,280,952	2,736,544
Manufacturing	551,346,046	250,813,026	458,281,384	1,404,880,341
Capital Construction	91,157,700	39,604,700	183,075,100	381,547,500
Net Production	569,952,272	891,151,432	1,002,712,967	1,240,224,681
Per Cent of Canadian Total	4.36	6.81	7.67	9.48

[a]The Canada Yearbook, 1955, pp. 404,463, 515, 603, 691-692, 735, 756. Ottawa, Ontario: Queen's Printer, 1955.

[b]The Canada Yearbook, 1954, pp. 609. Ottawa, Ontario: Queen's Printer, 1954.

from $636,189,000 in 1951 to $424,650,000 by 1955, but the capital construction value increased from $39,604,700 in 1951 to $280,415,000 by 1955. The value of manufactured goods increased from $250,813,026 in 1951 to $295,162,037 by 1955, and the value of the minerals increased from $51,032,953 in 1951 to $69,199,727 by 1955. Nevertheless, the value of the net production decreased from $891,151,432 in 1951 to $795,140,719 by 1955. This means a decrease from 6.81% of the total Canadian net production in

TABLE XLIV[a]

VALUE OF FARM, SAWMILL, MINERAL, FISH, AND FUR PRODUCTS, MANUFACTURING AND CAPITAL CONSTRUCTION OF WESTERN CANADA BY PROVINCES, 1955

Item	Manitoba	Saskatchewan	Alberta	British Columbia
Agriculture	173,542,000	424,650,000	365,130,000	104,041,000
Sawmill Products	3,680,222	4,339,875	23,853,097	414,944,542
Minerals	37,044,979	69,199,727	320,295,543	140,742,540
Fish	6,044,000	1,617,000	1,144,000	60,032,000
Fur	6,038,776	4,555,802	4,582,937	2,830,659
Manufacturing	588,351,081	295,162,037	641,148,235	1,679,344,816
Capital Construction	257,433,000	280,415,000	623,605,000	582,153,000
Net Production	590,478,522	795,140,719	1,273,176,313	1,577,870,127
Per cent of Canadian Total	3.73	5.02	8.04	9.96

[a]The Canada Yearbook, 1957-58, pp. 422, 482, 552, 608, 624, 636, 716, and 741. Ottawa, Ontario: Queen's Printer, 1958.

1951 to 5.02% of the total Canadian net production of the seven peoducts listed by 1955.

For Alberta, the value of the products from agriculture decreased from $459,949,000 in 1951 to $365,130,000 by 1955. The values of mineral products and manufactured goods increased from $168,144,211 and $458,281,384, respectively, in 1951 to $320,295,543 and $641,148,235, respectively, by 1955. But the value of capital construction decreased from $623,605,000 in 1951 to $183,075,100 by 1955. The net production value increased from

$1,002,712,967 in 1951 to $1,273,176,313 by 1955. This represents an increase from 7.67% of the total Canadian net production in 1951 to 8.04% of the total Canadian net production of the seven products listed in 1955.

The value of manufactured goods increased from $1,404,880,341 in 1951 to $1,679,344,816 by 1955 in British Columbia. The value of capital construction increased from $381,547,000 in 1951 to $582,153,000 by 1955. The values of agriculture products, mineral products, and fish products decreased from $109,431,000, 176,278,932, and $85,221,000, respectively, in 1951 to $104,041,000, $140,742,540, and $60,032,000, respectively, by 1955. But the value of sawmill products increased from $347,147,390 in 1951 to $414,944,542 by 1955 so that the net production in British Columbia increased from $1,240,224,681 in 1951 to $1,577,870,127 by 1955. This represents an increase from 9.48% of the total Canadian net production in 1951 to 9.96% of the total Canadian net production of the seven products listed in 1955.

Since the population varies in number in the four Western Provinces, the foregoing discussion may be misleading. Therefore, the net production per capita was worked out for each province in Western Canada for 1941, 1951, and 1955. These data are summarized in Table XLV.

The per capita net production for the people of Manitoba increased from $272 in 1941 to $734 by 1951 and then decreased to $695 by 1955. For the people of Saskatchewan, the per capita net production increased from $255 in 1941 to $1071 by 1951 and then decreased to $903 by 1955. The per capita net production for the people of Alberta increased from $348 in 1941 to $1067 by 1951 and to $1133 by 1955. The per capita net production for the people of British Columbia increased from $487 in 1941 to $1064 by 1951 and to $1129 by 1955. Figure 27 shows the foregoing data more

TABLE XLV

PER CAPITA NET PRODUCTION BY PROVINCES, 1941, 1951, 1955

Province	1941	1951	1955[a]
	$	$	$
Manitoba	272	734	695
Saskatchewan	255	1071	903
Alberta	348	1067	1133
British Columbia	487	1064	1129

[a]1955 Net production was divided by 1956 population figures.

clearly.

The foregoing discussion dealt with the value to each province of the seven major primary and secondary industries of Western Canada. However, income derived from services must also be included to arrive at the per capita income for the people of each Western Province. The sum of the value of the provincial net production and the provincial income derived from services divided by the population number is the provincial income per capita. These data and the income per child 5-19 years of age and the income per pupil enrolled are summarized in TableXLVI.

The per capita income in 1951 for Manitoba, Saskatchewan, Alberta, and British Columbia was $1121, $1303, $1256, and $1276, respectively. The per capita income for Canada in 1951 was $1120. The per capita income for the people of Manitoba increased to $1260 by 1956, but for the people of Saskatchewan the per capita income decreased to $1291 by 1956. For the people of Alberta and British Columbia the per capita income increased to $1370 and $1566, respectively, by 1956. The Canadian per capita income

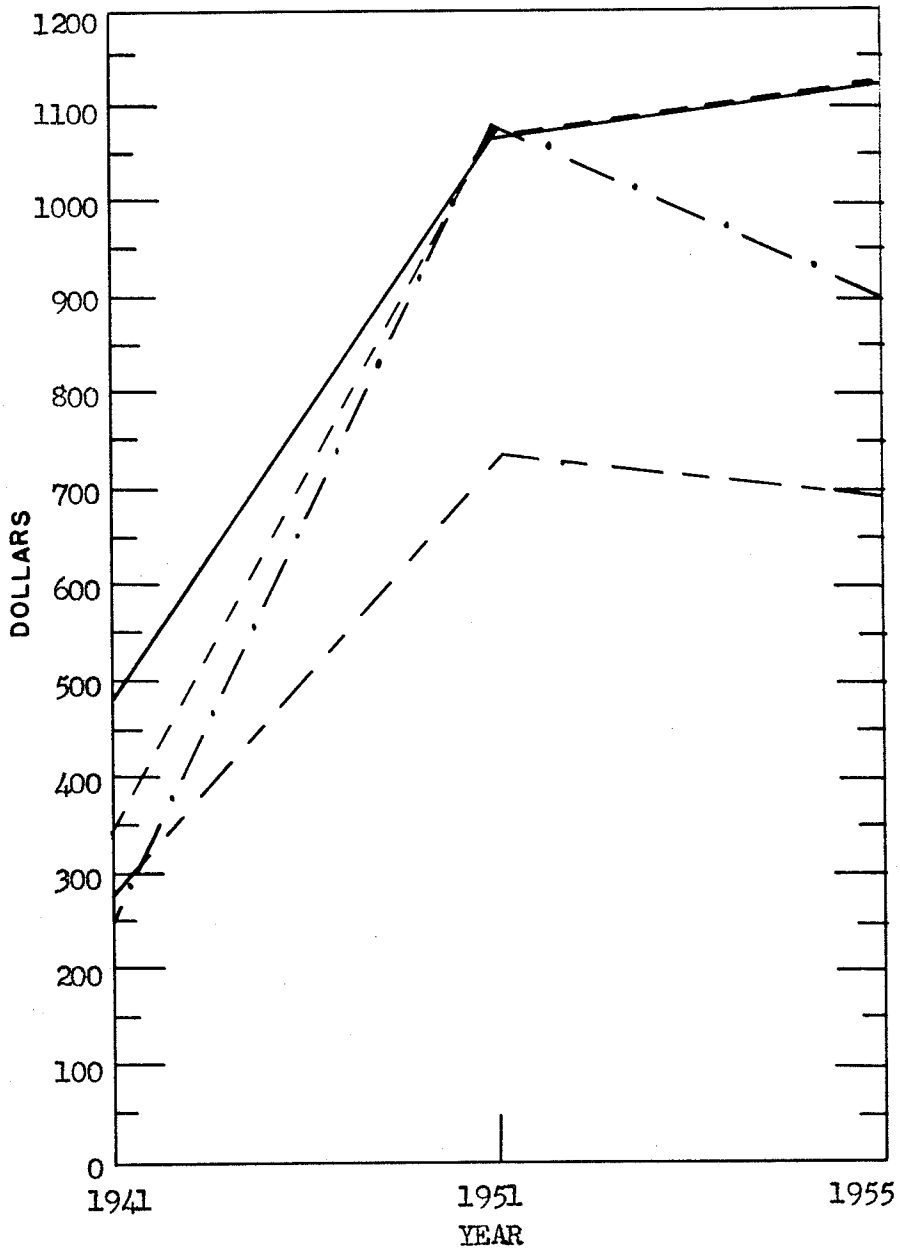

Fig. 27 - Showing per capita net production by provinces, 1941, 1951, and 1955. (_____ British Columbia, ------- Alberta, ___ . ___ . Saskatchewan, ___ - ___ - ___ Manitoba)

increased to $1350 by 1956.

The income per child 5-19 years of age in 1951 for Manitoba, Saskatchewan, Alberta, and British Columbia was $4581, $4842, $4834, and $6103,

respectively. The Canadian income per child 5-19 years of age was $4375 in 1951. By 1956, the income per child 5-19 years of age in Manitoba, Saskatchewan, Alberta, and British Columbia increased to $4773, $4631, 5069, $6673, respectively. The income per child 5-19 years of age had decreased in Saskatchewan to $4631 by 1956. The Canadian income per child 5-19 years of age had increased to $4918 by 1956.

TABLE XLVI[a]

INCOME PER CAPITA, PER CHILD 5-19, PER PUPIL ENROLLED

BY PROVINCES AND CANADA, 1951, 1956

Province	Per Capita	Per Child 5-19	Per Pupil Enrolled
	$	$	$
1951			
Manitoba	1121	4581	6751
Saskatchewan	1303	4842	6861
Alberta	1256	4834	6777
British Columbia	1276	6103	8756
Canada	1120	4375	
1956			
Manitoba	1260	4773	6713
Saskatchewan	1291	4631	6346
Alberta	1370	5069	6872
British Columbia	1566	6673	9303
Canada	1350	4918	6732

[a]Interim Report Manitoba Royal Commission of Education, op. cit., pp. 19.

Finally, the income per child enrolled in 1951 was $6751, $6861, $6777, and $8756 in Manitoba, Saskatchewan, Alberta, and British Columbia, respec-

provinces in 1941, 1951, and 1955 in Table XLVII. The wholesale business in Manitoba increased from $572,859,000 in 1941 to $2,026,479,000 by 1951 and the retail business in Manitoba increased from $210,833,000 in 1941 to $609,284,000 by 1951 and to $669,000,000 by 1955. In Saskatchewan the wholesale business increased from $280,683,000 in 1941 to $798,844,000 by 1951, and the retail business in Saskatchewan increased from $191,184,000 in 1941 to $653,816,000 by 1951 and to $748,000,000 by 1955. In Alberta the wholesale business increased from $320,632,000 in 1941 to $1,099,373,000 by 1951, and the retail business in Alberta increased from $225,119,000 in 1941 to $848,283,000 by 1951 and to $1,035,000,000 by 1955. Finally, the wholesale business in British Columbia increased from $383,648,000 in 1941 to $1,334,308,000 by 1951 and the retail business increased from $309,573,000 in 1941 to $1,082,637,000 by 1951 and to $1,412,000,000 by 1955. (The volume by provinces of the wholesale business for 1955 was not available. However, the Canadian total wholesale business in dollars for 1951 was $14,401,037,000[6] and for the first six months of 1955, the wholesale business was $6,749,510,000.[7])

The volume of retail business by provinces was divided by the provincial population figures for 1941, 1951, and 1955 to obatin the per capita volume of retail business. These data are summarized in Table XLVIII. In 1941, the per capita volume of retail business was $288.96, $231.38, $295.31, and $378.52 for Manitoba, Saskatchewan, Alberta, and British Columbia, respectively. This volume had increased to $784.63, $786.15, $902.91, and $929.14 in Manitoba, Saskatchewan, Alberta, and British Columbia, respectively, by 1951 and to $836.00, $880.00, $1023.00, and $1112.00 in

[6] Canada Yearbook, 1955, pp. 956-957.

[7] Canada Yearbook, 1956-57, pp. 936.

TABLE XLVIII

PER CAPITA RETAIL BUSINESS OF WESTERN CANADA BY PROVINCES 1941, 1951, 1955

Province	1941	1951	1955
	$	$	$
Manitoba	288.96	784.63	836.00[a]
Saskatchewan	213.38	786.15	880.00[b]
Alberta	295.31	902.91	1023.00[c]
British Columbia	378.52	929.14	1112.00[d]

[a]The 1955 population of Manitoba was taken as 800,000.

[b]The 1955 population of Saskatchewan was taken as 850,000.

[c]The 1955 Population of Alberta was taken as 1,011,000.

[d]The 1955 population of British Columbia was taken as 1,269,000.

Manitoba, Saskatchewan, Alberta, and British Columbia, respectively, by 1955. According to the figures, the people of Manitoba spent least per capita and the people of British Columbia spent the most per capita.

However, to implement major educational changes, municipal financial resources are not enough any more. Provincial governments are assuming a greater and greater share of the financial burden of education.[8] The government is not any richer than the people who elect the government. Therefore, as a result, of the four Western Provinces, the Manitoba government has the lowest revenue.[9, 10] For the year 1955, the governmental revenue for

[8]See Table LII, p. 154.

[9]Canada Yearbook, 1944, op. cit., p. 841.

[10]Canada Yearbook, 1955, op. cit., p. 1156.

Manitoba, Saskatchewan, Alberta, and British Columbia was, respectively, $58,000,000; $100,000,000; $175,000,000; and $206,000,000.[11] The ratios are approximately 1:2:3:4, but the population ratios for 1956 were about 1:1:1.4:1.5, respectively, for Manitoba, Saskatchewan, Alberta, and British Columbia.

From the foregoing figures it is apparent that the government of Manitoba must increase its revenue before it can give substantially increased financial assistance to the municipalities. Since the total value of the municipal real property assessment of Manitoba is the lowest of the four Western Provinces,[12, 13, 14] the municipalities will need greater financial aid as soon as major changes in the school system of Manitoba are implemented. Not only was the real property of Manitoba lowest of the four Western Provinces, but the personal property of the people of Manitoba was lowest too. However, the weekly earnings per capita were about the same in 1942.[15] By 1951, the weekly earnings per worker were slightly lower in Manitoba than in the rest of Western Canada.[16] In 1951, the weekly earnings per worker in Winnipeg and Montreal were the lowest of the cities listed in the 1955 Canada Yearbook.[17] By 1955, workers in Manitoba earned about 26¢

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[11] Canada Yearbook, 1956-57, op. cit., p. 1108.

[12] Canada Yearbook, 1944, op. cit., p. 850.

[13] Canada Yearbook, 1955, op. cit., p. 1162.

[14] Canada Yearbook, 1956-57, op. cit., p. 1114.

[15] Canada Yearbook, 1944, op. cit., p. 705.

[16] Canada Yearbook, 1955, op. cit., p. 783.

[17] Ibid., p. 783.

per week more than workers in Saskatchewan, but $7.65 less than workers in British Columbia.[18]

School Finance

Certain aspects of the Western Canadian economy have been reviewed. In this section a few aspects of school finance will be discussed. The Royal Commission of Education for Manitoba, as has been stated earlier, recommends the centralization of all school facilities in Manitoba. School facilities in Saskatchewan, Alberta, and British Columbia have already been centralized to a large extent and the authorities of education in these provinces claim they get better equipment and a better quality of instruction for their tax dollar spent on education.[19] However, centralizing school facilities does not mean lower taxes. The three provinces, Saskatchewan, Alberta, and British Columbia, spent much more for education than did Manitoba. The amounts spent by each Western Province in 1941, 1951, and 1955 are summarized in Table XLIX, and the amounts spent per capita in each province for the foregoing three years are summarized in Table L.

In 1941, Manitoba, Saskatchewan, Alberta, and British Columbia paid $8,893,451.34; $12,231,000.00; $12,623,188.79; and $10,982,364.49, respectively, for education. By 1951 these payments had increased to $21,432,068.12; $32,879,050.00; $32,721,525.21; and $54,195,133.95, respectively, for Manitoba, Saskatchewan, Alberta, and British Columbia, and by 1955 Manitoba, Saskatchewan, Alberta, and British Columbia spent $34,703,403.42; $59,604,872.41; $52,950,355.50; and $80,823,263.71 for education, respec-

[18] Canada Yearbook, 1956-57, op. cit., p. 765.

[19] Forty-sixth Annual Report of the Department of Education of the Province of Alberta, 1951, pp. 16-17. Edmonton, Alberta: Queen's Printer, 1952.

TABLE XLIX[a]

TOTAL EXPENDITURE FOR EDUCATION BY PROVINCES,

1941, 1951, 1955

Province	1941	1951	1955
	$	$	$
Manitoba	8,893,451.34	21,432,068.12	34,703,403.42
Saskatchewan	12,231,000.00	32,879,050.00	59,604,872.41
Alberta	12,623,188.79	32,721,525.21	52,958,355.50
British Columbia	10,982,364.49	54,195,133.95	80,823,263.71

[a]Source: Annual reports of the Departments of Education of the four different provinces.

TABLE L

EXPENDITURE FOR EDUCATION PER CAPITA BY PROVINCES,

1941, 1951, 1955

Province	1941	1951	1955[a]
	$	$	$
Manitoba	12.19	27.59	40.83
Saskatchewan	13.66	39.53	67.68
Alberta	15.85	33.66	47.15
British Columbia	13.43	46.51	57.36

[a]The 1955 total expenditures were divided by the population figures for 1956.

tively. (The foregoing total expenditures were taken from the annual reports of the different Departments of Education.)

All four provinces paid about the same amount per capita in the year 1941. The amounts paid by each province per capita in 1941 were $12.19, $13.66, $15.85, and $13.43 for Manitoba, Saskatchewan, Alberta, and British Columbia, respectively. By 1951, Manitoba, Saskatchewan, Alberta, and British Columbia paid $27.59, $39.53, $33.66, and $46.51, respectively, per capita for education. By 1955, Manitoba, Saskatchewan, Alberta, and British Columbia paid $40.83, $67.68, $47.15, and $57.36, respectively, for education per capita.

An attempt was made to show the ratio of money spent for education to retail business by provinces for the four Western Provinces. The resulting data are summarized in Table LI. For every dollar spent on retail business Manitoba, Saskatchewan, Alberta, and British Columbia spent $0.42, $0.064, $0.054, and $0.035, respectively, on education in 1941. By 1951, Manitoba, Saskatchewan, Alberta, and British Columbia spent $0.036, $0.050, $0.037, and $0.050, respectively, for education for every dollar spent on retail business. In 1955, Manitoba, Saskatchewan, Alberta, and British

TABLE LI

RATIOS OF MONEY SPENT FOR EDUCATION TO RETAIL BUSINESS OF THE WESTERN PROVINCES, 1941, 1951, 1955

Province	1941	1951	1955
	$	$	$
Manitoba	.042	.036	.049
Saskatchewan	.064	.050	.076
Alberta	.054	.037	.046
British Columbia	.035	.050	.051

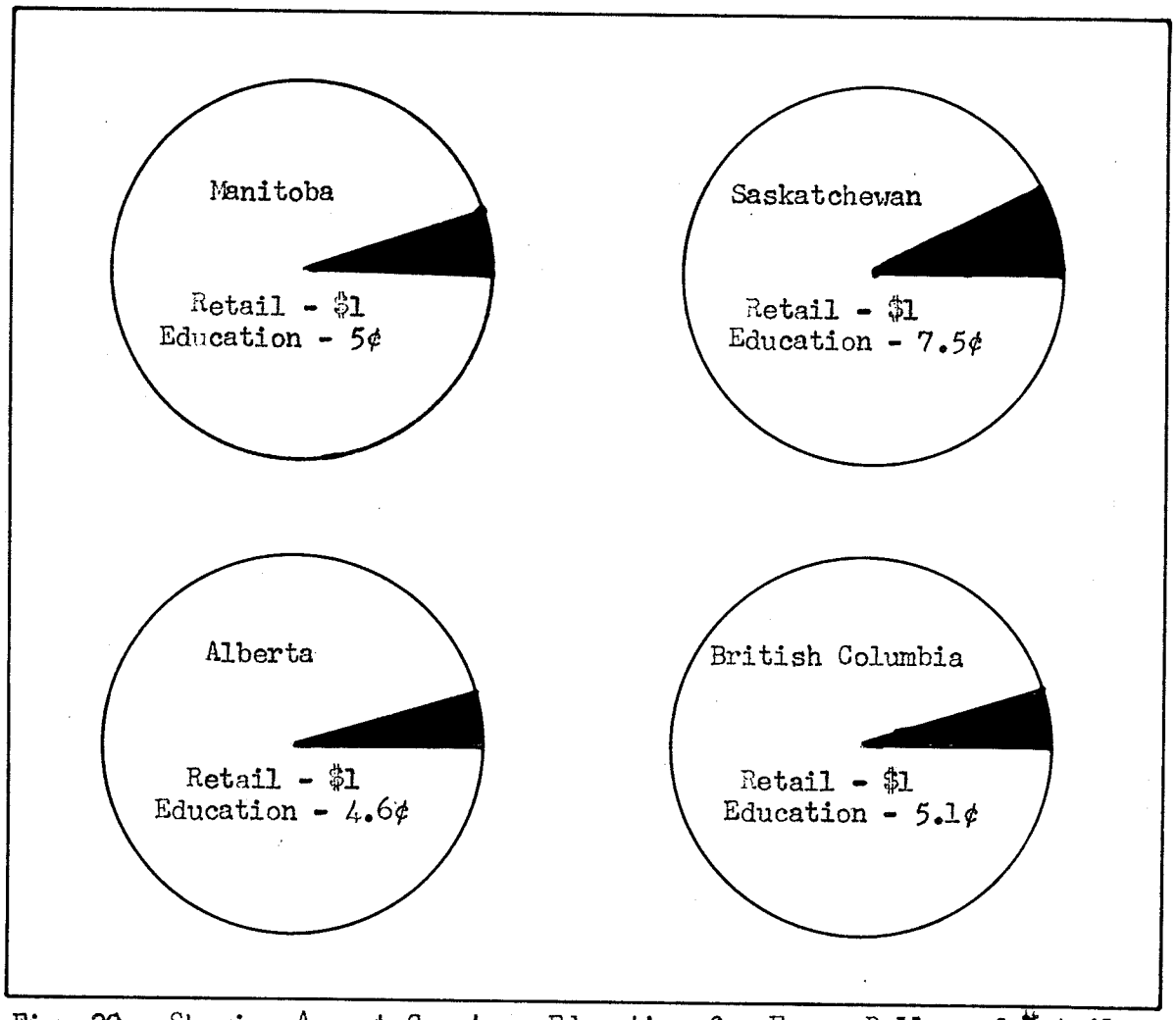

Fig. 28 - Showing Amount Spent on Education for Every Dollar of Retail Business 1955. (Amount spent on education superimposed on amount spent on retail business.)

Columbia spent $0.049, $0.076, $0.046, and $0.051, respectively, for education for every dollar spent on retail business. Figure 28 shows the foregoing data for 1955 more clearly.

From the foregoing discussion of the data summarized in Tables XLXIX, L, and LI, the following observations might be made: (1) in each province the total spent on education increased disproportionately to the increase in population, (2) the greatest increase occurred in British Columbia; (3) the population of British Columbia increased by about fifty-five per cent

but the amount spent on education increased by 636%; (4) the per capita increase of the expenditures for education in Saskatchewan was about 400% over the fifteen-year period; and (5) the per capita increase of the expenditures for education in Manitoba and Alberta was about 300%.

The school facilities in all four provinces are financed by: (1) levying a property tax for education; and (2) the provincial government's giving grants toward education. The amount of the grants given in 1941, 1951, and 1955 is summarized in Table LII.

TABLE LII[a]

GOVERNMENT GRANTS FOR EDUCATION BY PROVINCES, 1941, 1951, 1955

Province	1941	1951	1955
Manitoba	1,247,143.32	4,086,810.32	8,578,062.00
Saskatchewan	2,489,876.10	7,466,027.02	11,594,468.68
Alberta	1,916,012.65	7,768,878.22	15,950,191.66
British Columbia	3,963,848.24	20,518,315.85	34,279,302.27

[a]Source: Annual reports of the Departments of Education of the four different provinces.

In 1941, the government of Manitoba granted $1,247,143.32, in 1951, it granted $4,086,810.32, and in 1955 it granted $8,578,062.00 toward education. The grant in 1955 was seven times as high as the grant in 1941. The government of Saskatchewan granted $2,489,876.10, $7,466,027.02, and $11,594,468.68 toward education in 1941, 1951, and 1955, respectively. In Saskatchewan the 1955 grant to education was about four and half times as high as the 1941 grant to education. The government of Alberta granted $1,916,012.65, $7,768,878.22, and $15,950,191.66 in 1941, 1951, and 1955,

respectively, to education. This represents an eight-fold increase for Alberta. Finally, British Columbia granted $3,963,848.24, $20,518,315.85, and $34,279,302.27 in 1941, 1951, and 1955, respectively to education. For British Columbia the 1955 grant to education was eight and a half times as high as the 1941 grant to education.

Each province has its own method of calculating the amount of the grant for each particular school district or school unit. Manitoba, before 1947, had a flat grant of a dollar per teacher per day. In 1947, Manitoba adopted the principle of equalized assessment grants. In 1947, the grant was $1400 per teacher annually less the product of six mills on the assessment of each school district. At present it is $2500 per teacher less the product of five mills on the assessment of each school district plus special grants to secondary and technical schools, transportation, and classes for handicapped or retarded children. Any amount, spent by a district exceeding the amount of the foregoing grants for which the district can qualify, and the five mills on the assessment of the school district has to be raised by a special tax levy. (This method of financing tends to create a tremendous difference in the amount spent by a district. The extra tax levy might be a much greater burden on a district with a low assessment if a uniform amount were spent by each district. The recommendations by the Manitoba Royal Commission on Education would eliminate that inequality.[20])

Saskatchewan has five different types of grants. They are: (1) operation grants; (2) conveyance grants; (3) building and equipment grants; (4) equalization grants; and (5) special grants. In the 1956-57 fiscal

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[20] Interim Report Manitoba Royal Commission of Education, 1958, op. cit., pp. 65 - 103.

year, of the total, equalization grants accounted for 37%, building grants, for 12%, and operation grants, for 51%.[21] In 1957, the operation grants were $900 for an elementary room, $110 for a continuation or high school room and $1450 for a vocational high school room.[22] The conveyance grant covered 50% of the driver's wage, 50% of his board and room to a maximum of nine dollars per month, 50% of any tuition fees to a maximum of $45, and 50% of any special arrangements.[23] The building grant in 1957 was 15 mills on the amount by which the assessment per classroom was less than $135,000. That assured a district of at least $2000 per room for a new school. The financial need was calculated by assessing a cost of $3500 per year to each elementary teacher, $4000 per year to each High School teacher plus actual costs for conveyance and related services. The equalization grant was then calculated as a percentage of the total assigned costs. This per cent varied with ability to pay. In 1956, the equalization grant for unit districts covered basic costs which exceeded certain revenues, - costs above $3240 per continuation or high school room, $3040 per other room, and $1650 for each conveying district - and for non unit districts it was 14 mills on the difference between actual assessment per room and $130,000 per room to a maximum of $.90 per day for a rural or village districts, and 14 mills on the difference between the actual assessment per room and $125,000 per room to a maximum of $3.50 a day.[24]

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[21] Annual Report of the Department of Education of the Province of Saskatchewan, 1956-57, op. cit., p. 15.

[22] Ibid., p. 13.

[23] Province of Saskatchewan Royal Commission on Agriculture and Rural Life, Report No. 6, Rural Education, 1956, pp. 67-70. Regina, Saskatchewan: Queen's Printer, 1956.

[24] Annual Report of the Department of Education of the Province of Saskatchewan, 1956-57, op. cit., p. 15.

Alberta gets its money to pay for education from three sources: (1) taxes from real property; (2) a school tax; and (3) government grants. The grants covered roughly one-third of the cost of education in Alberta in 1955. Grants are given to cover the following expenditures: (1) the operation of elementary and secondary schools; (2) school buildings; (3) bonuses to teachers; (4) provision of books and equipment; (5) special services - such as supervision; (6) conveyance for pupils; and (7) for college operation.[25] For capital construction, Alberta pays the following amounts per room: (1) $5,000 for each of the first five rooms; (2) $6000 for each of the sixth to ninth room; (3) $7000 for each of the tenth to fifteenth room; and (4) $7500 for each room in excess of fifteen rooms. The grants, other than capital construction grants are determined by the assessed value of land and improvements, the level of instruction, the number of pupils in attendance in any classroom and the expenditure of the district or division for educational purposes. The amounts going to each district are determined by formulae passed by Orders in Council. Therefore, more money can be voted to cover increased expenditures without changing the School Grants Act.

The School Tax amounts to ten dollars for each member on the assessment roll, four dollars for everyone over twenty-one gainfully employed; and four dollars for everyone whose property assessment is not covered under the first ten dollar levy. In all cases, the payee must be resident in Alberta for one month before he is taxable. Any expenditure not covered by the revenue collected from the foregoing two sources must be covered by taxes from real property.

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[25]"The School Grants Act," Revised Statutes of Alberta, 1955, and Statutes of Alberta, 1958.

British Columbia has two sources from which its education is paid for: (1) government grants; and (2) property tax. Grants are available for: (1) teachers' salaries; (2) teachers who have special responsibilities and/or are isolated; (3) school operation; (4) capital construction; (5) technical schools; (6) night schools; (7) conveying pupils; (8) universities, normal school and colleges; and (9) special aid to any school district whose needs approved by the Minister exceed its revenue.[26] The grant for teachers' salaries is equal to the product of the number of teachers and the minimum teachers' salary approved by the Coucil of Public Instruction plus any amount given for teachers with special responsibilities and/or for teachers who are isolated. Grants for the operation of schools cover the approved costs of schools less: (1) the product of twelve mills on the assessed value of land and 75% on the assessed value of the improvements for urban areas; and (2) the product of nine mills on the assessed value of land and 75% on the assessed value of the improvements for rural areas. Special grants are available to districts with special needs. However, any district must provide a school tax equal to the product of five mills on the assessed value of land and 75% on the assessed value of the improvements.

Possibly, British Columbia gives the most liberal aid to meet capital construction costs. The capital construction grant covers 50% of approved costs of capital construction until the district bears the product of three mills on its assessment, 75% of additional approved costs of capital construction until the district bears the product of $1\frac{1}{2}$ mills on its assessment, and 90% of additional approved cost of capital construction. If a

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[26]"The Public Schools Act," Statutes of British Columbia, 1958.

school unit has an assessment of $25,000,000 and desires to erect a million dollar school plant, it would pay $182,500 and the government grant would cover the balance.

Grants for the remaining school facilities covered by the grants are determined from time to time because their cost would vary with an ever fluctuating demand.

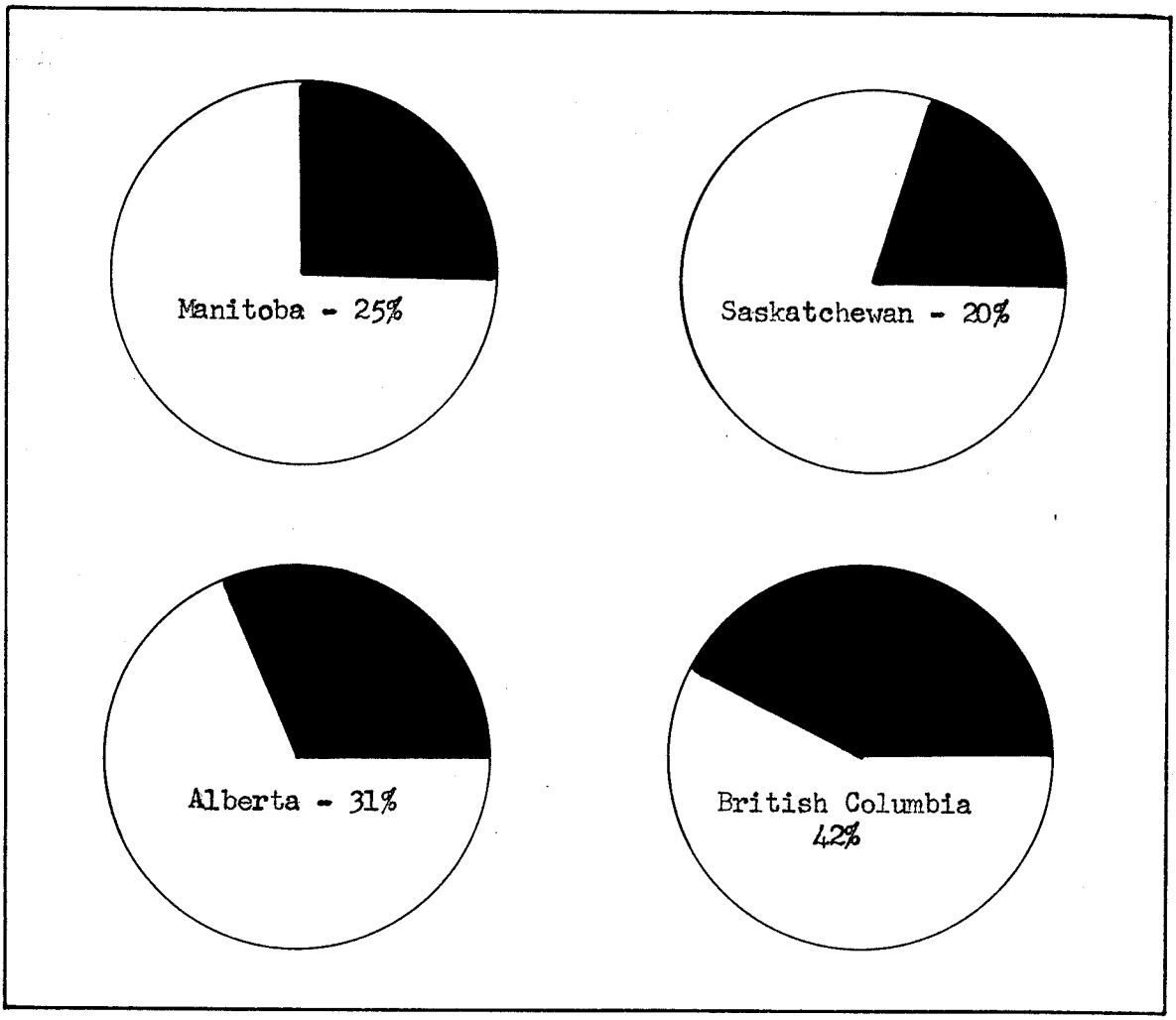

Fig. 29 - Showing in Black the Part of the Provincial Education paid for by the Provincial Government in 1955.

The foregoing discussion of the provincial grants is supplemented by Figure 29. Figure 29 shows, by provinces, what part of the provincial education cost was covered by the government grant to education in 1955.

The grant of the government of British Columbia covered 42% of the cost of education in British Columbia in 1955. The grant of the government of Alberta covered 31% of the cost of education in Alberta in 1955. The grants of the governments of Saskatchewan and Manitoba covered 20% and 25% of the cost of education in Saskatchewan and Manitoba, respectively, in 1955. The balance of the cost of education to each province had to be raised by taxation of real property in each province. This tax burden depends upon the assessment of real property. An attempt was made to find out whether or not the assessment of real property is uniform throughout the West.

Assessment of Property[27]

Manitoba appears to be the only province which has a technically-trained staff of assessors. The other provinces have local assessors whose assessment of property might not be uniform throughout the province. The assessors in each province are responsible to the provincial government under the Municipal Assessment Act, but the assessors in Manitoba receive more central direction than the assessors in the other provinces of the West.

Given a trained staff of assessors or assessors who learn as apprentices does not necessarily mean uniform assessment of property from province to province. The following principles are being followed in the Western Provinces. Land in every province is assessed at value. This value need not be sale value, but in British Columbia it is. Then, in Manitoba, improvements can be assessed up to two-thirds of their value. In Saskatchewan, outside of Regina and Saskatoon, improvements are assessed at sixty per cent of 1928 construction costs. In Regina and Saskatoon, the

[27]The author is indbted to Mr. C. H. Chappell, Provincial Municipal Assessor, Manitoba Government.

assessment is thirty and forty-five per cent, respectively, of 1928 construction costs. In Alberta, improvements are assessed at sixty per cent of construction costs, and in British Columbia improvements may be assessed at sixty per cent of 1953 construction costs. However, British Columbia tries to make sure that the ratio of assessment to sales value of property is constant throughout the province. Seventy-five per cent of this assessment value is used to cover the cost of education. No where in the West is the assessment ceiling as high as in Manitoba.

CHAPTER IX

CONCLUSIONS AND RECOMMENDATIONS

On the basis of the data tabulated in the seven foregoing chapters, the writer selected the following five trends and projected them into the future: (1) future provincial population; (2) extent of future urbanization; (3) future provincial population in each major academic division; (4) future population under five years of age and above sixty-five years of age; and (5) future cost of education. It should be pointed out that these projections are subject to modification if some unforeseen factors should interrupt the foregoing trends.

Future Provincial Population

The writer took into account the natural increase and the net migration from 1951-1955 in calculating the future provincial population. The natural increase for each province appears on pages 125 to 126 of this report. On the basis of a natural increase of 17.9 per thousand, the writer expects Manitoba to have just over 1,000,000 people by 1966 and about 1,200,000 people by 1976. The population of Saskatchewan is expected to reach the same figures by 1966 and 1976, since the natural increase during 1951-1955 was 19.7 but the net migration minus seven thousand people annually.[1]

The population of Alberta is expected to reach 1,500,000 by 1966

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[1] Monthly Review, The Bank of Nova Scotia, (August, 1957), op. cit., p. 4.

and 1,895,000 by 1976. This takes into consideration a natural increase of 23.4 people per thousand and a positive net migration of 13,000 annually. Finally, the population of British Columbia is expected to reach 1,900,000 and 2,300,000 people by 1966 and 1976, respectively. These figures were

TABLE LIII

FUTURE PROVINCIAL POPULATION BY PROVINCES, 1966, 1976

Province	1966		1976	
	Population	Net Migration	Population	Net Migration
Manitoba	1,014,000	Negligible	1,206,000	Negligible
Saskatchewan	1,000,000	-69,000	1,200,000	-92,000
Alberta	1,543,000	130,000	1,895,000	130,000
British Columbia	1,900,000	270,000	2,300,000	270,000

determined by using a natural increase of 15.5 people per thousand and a net migration of plus 27,000 people annually. The foregoing facts are summarized in Table LIII and shown graphically in Figure 30. The population increases amount to 2% annually for Manitoba and Saskatchewan, 2.8% for Alberta, and 3.6% for British Columbia. In the light of the population increase for Canada (2.8% per annum between 1951-1955) these increases seem to be quite realistic.[2] These increases will be shared almost equally between the sexes, since the sex ratio appears to be slightly greater than unity among the human species.[3]

[2]Ibid., p. 4.

[3]See Table XXXVII, p. 112 - 113.

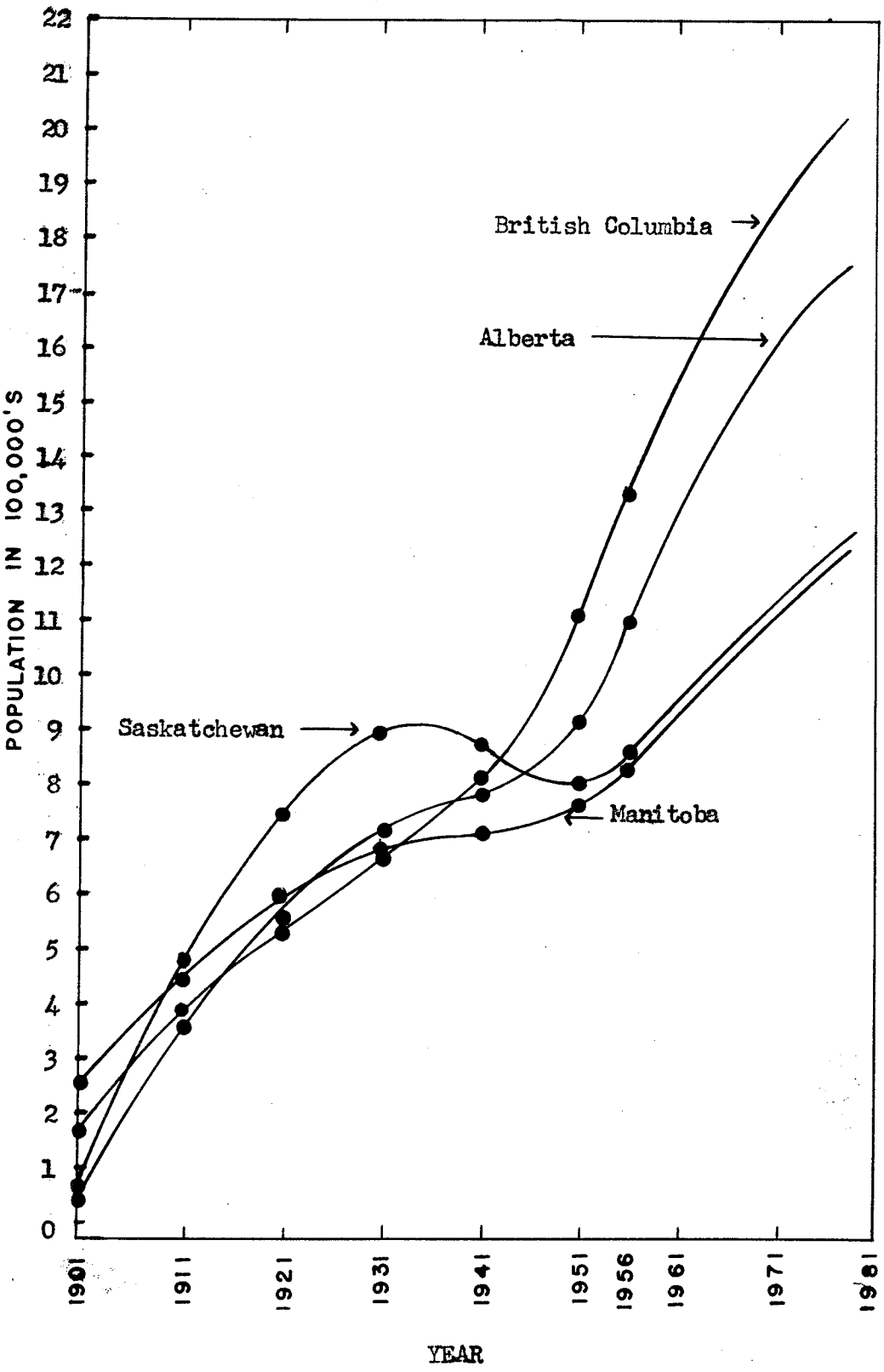

Fig. 30 - Showing the Provincial Population Projected to 1971.

Extent of Future Urbanization

The Gordon Commission predicted that by 1980, only seven per cent of the labour force will be employed in agriculture, whereas fifteen per cent of the labour force is employed in agriculture now. Thus one might infer that people are going to move to the urban centers unless some unforeseen factor interrupts this trend. According to Figure 31, based on Table II, pages 33 - 34, urbanization had begun to slow down by 1956 in each Western Province. (In Saskatchewan urbanization actually decreased.) The per cents from Table II, pages 33 - 34 were plotted and the lines were continued to 1976. The per cent increase in urbanization after 1901 was calculated from Table II, pages 33 - 34, and the average annual per cent of urbanization increase was found. This resulted in an average annual per cent urbanization increase of .63%, 77%, .56%, and .55% for Manitoba, Saskatchewan, Alberta, and British Columbia, respectively. These per cents were then multiplied by ten and added to the per cents of 1956 and to the resulting per cents of 1966 for each province. Then these new per cents were used to guide the projection of the graph lines. Using these future percents and the future provincial population from Table LIII, the writer calculated the future urban population figures. The resulting urbanization per cents and urban population are summarized in Table LIV. This means that about 70% of the Western Canadian population will be urbanized by 1976. The urban population of Alberta and Saskatchewan is expected to double in the next twenty years. The urban population of Manitoba is expected to increase by 60% and the urban population of British Columbia is expected to increase by 80%.

An urbanization increase such as the foregoing will make it necessary

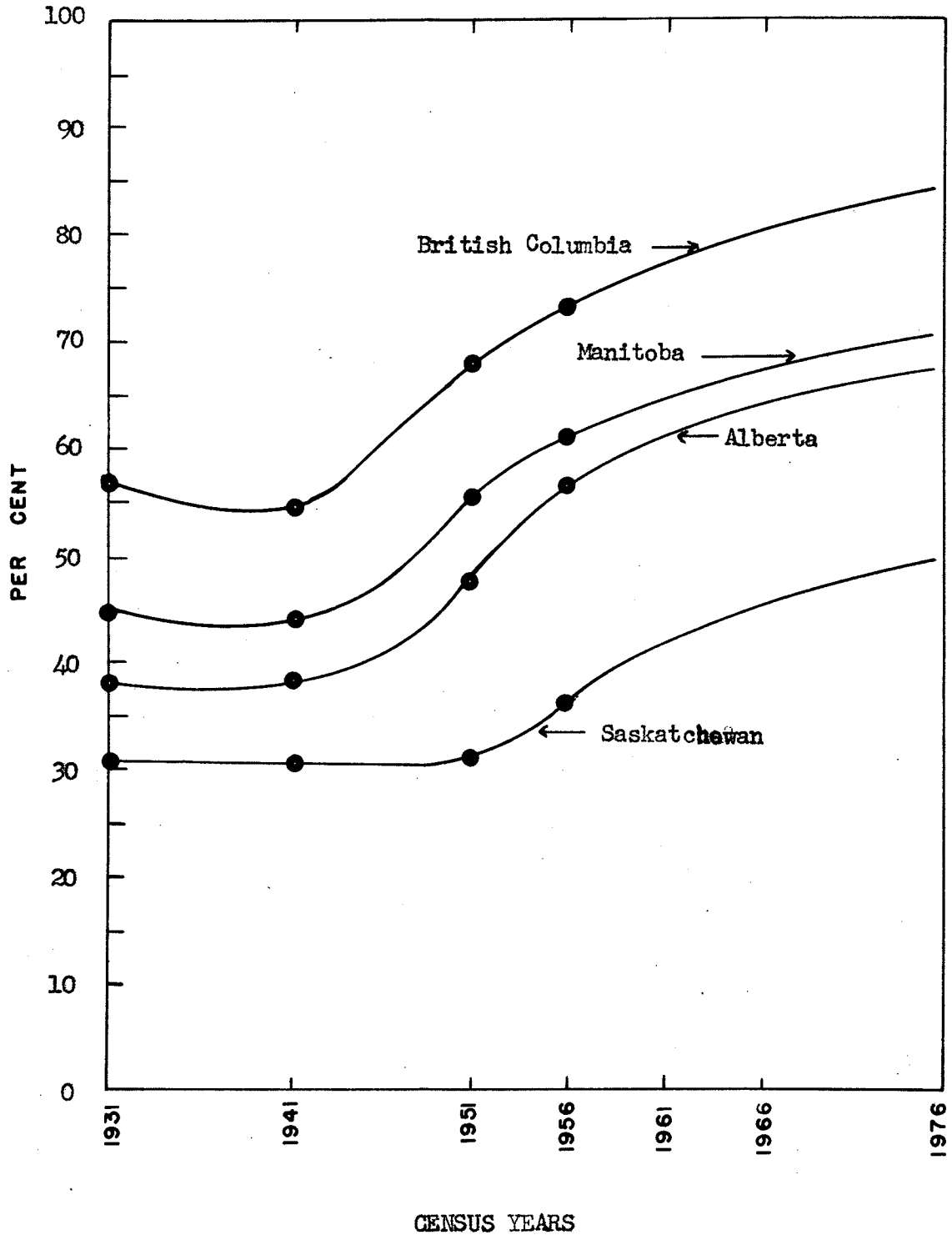

Fig. 31 - Showing the Per Cent of Future Urbanization for the Western Provinces.

TABLE LIV

FUTURE PROVINCIAL URBANIZATION PER CENTS AND

URBAN POPULATION FOR 1966, 1976

Province	1966		1976	
	Population	Per Cent	Population	Per Cent
Manitoba	672,000	66.36	876,000	72.66
Saskatchewan	442,600	44.26	624,000	51.96
Alberta	961,000	62.27	1,286,000	67.86
British Columbia	1,499,000	78.89	1,941,000	84.39

to increase capital expenditure throughout the West in the next twenty years. Most of these future urban residents may gravitate into the suburbs. Therefore, utilities will have to be greatly expanded. Water supply, which is now an urban summer problem in some suburbs, will have to be dealt with. Consumption of electricity will increase to the extent that, probably, more of it will have to be generated by thermal power. Urban traffic will continue to be an acute problem. More goods will be consumed, but the North American industrial capacity for mass production, given the raw materials, may produce the goods much faster than the public can consume them. This and automation might lead to serious unemployment.

A Breakdown of the Provincial Population Into Age Groups

and Their Projection Into the Future

Since this report concerns schools mainly, no age group outside of school age will be discussed except the preschool age group sixty-five years of age and over. From Table XXXVI, pages 105 - 106, it is evident

that the birth rate was beginning to level off by 1956. Then in 1957, the population increased at a record rate,[4] but, by late 1958, the increase had begun to taper off. Therefore, one might assume that the percentage of children under five years of age will not change very much unless some unforeseen factor interrupts the birth rate. In 1956, approximately, 12%, 13%, 13%, and 11%, respectively, of the population of Manitoba, Saskatchewan, Alberta, and British Columbia was under five years of age. If the proportion remains about the same, there should be about 121,000 preschool children in Manitoba, 130,000, in Saskatchewan, 200,000, in Alberta, and 209,000 in British Columbia by 1966. By 1976, since so many people move

TABLE LV

PROJECTION OF THE UNDER FIVE YEARS OF AGE GROUP TO 1966 AND 1976

Province	1966		1976	
	Under 5	% Under 5	Under 5	% Under 5
Manitoba	121,000	12	144,000	12
Saskatchewan	130,000	13	156,000	13
Alberta	200,000	13	246,000	13
British Columbia	209,000	11	253,000	11

to British Columbia to retire, a greater proportion of the population of Alberta is expected to be preschool children than of the population of British Columbia. The foregoing data are summarized in Table LV.

The average provincial per cent increase over a forty-five year

[4]See p. 15 of this report.

period was calculated, multiplied by ten, and added to the 1956 per cents for the group sixty-five years of age and over and then also to the resulting 1966 per cents. These data are summarized in Table LVI, and Figure 32 shows the same data graphically. The graph shows that there is a steady increase in the proportion of the group sixty-five years of age and over. British Columbia will have nearly fifteen per cent of its population over 65, Manitoba and Saskatchewan will each have twelve per cent of its population over 65, and Alberta will have about ten per cent of its people over 65. From the foregoing discussion one might conclude that about one-

TABLE LVI

PROJECTION OF THE GROUP SIXTY-FIVE YEARS OF AGE AND OVER TO 1966 AND 1976

Province	1966		1976	
	65 Plus	% 65 Plus	65 Plus	% 65 Plus
Manitoba	106,000	10.5	144,000	12.0
Saskatchewan	104,000	10.4	144,000	12.0
Alberta	129,000	8.4	182,000	9.6
British Columbia	241,000	12.7	336,000	14.6

quarter of the Western Canadian population will be dependent on the rest of the people, if retirement at sixty-five were made compulsory.

More important to the educational facilities than the retired group are the groups between five and twenty-four years of age. A projection will now be made to show the demands of this group. The projection for Manitoba is summarized in Table LVII. This table was set up in the follow-

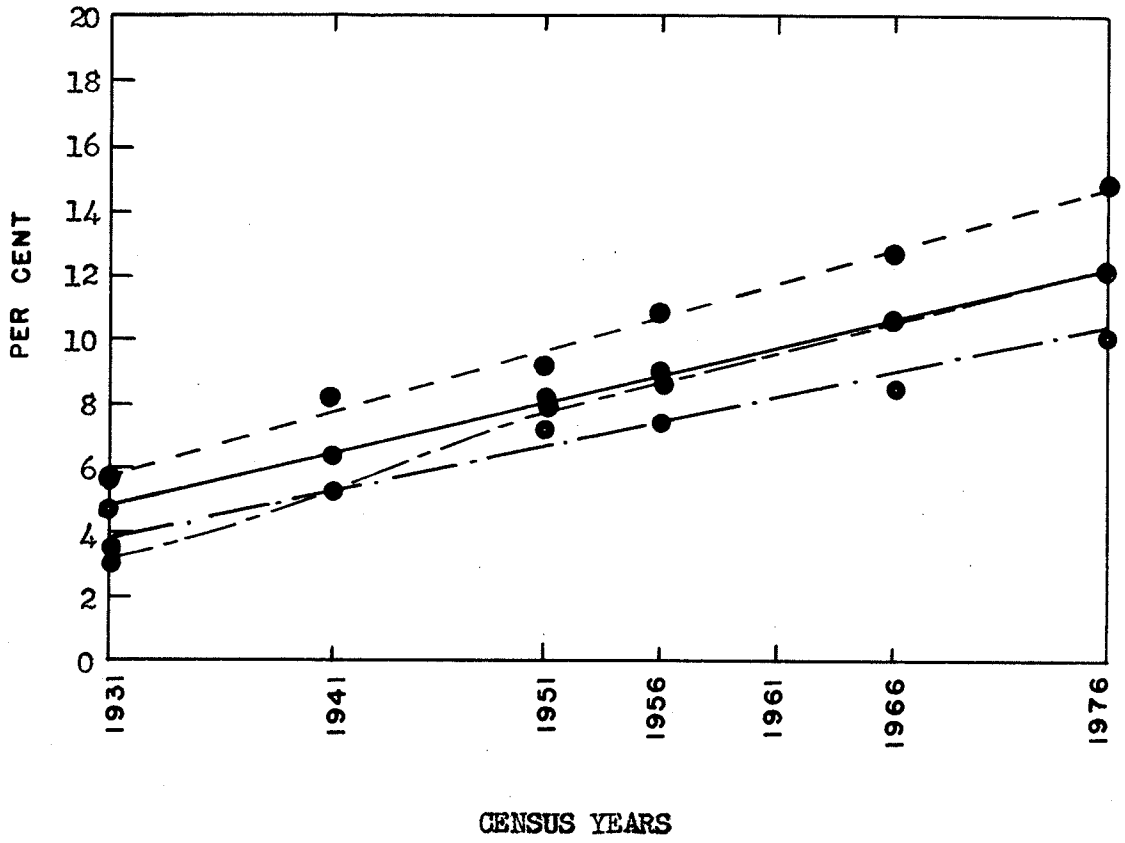

Fig. 32 - Showing the Provincial Per Cents Representing the Proportion of the Population Sixty-five Years of Age and over. (_____ Manitoba; _____ _ _____ Saskatchewan; ____ . ____ Alberta; - - - - - British Columbia).

ing manner. The 1951 and 1956 columns were taken from Table V, page 41. The natural increase for Manitoba from 1951 to 1956 was 17.9. Using this increase, thewriter found the 1961, 1966, and 1971 population of Manitoba and took 12% of each to find the number in the (0-4) years of age group. Then using the death rates for each five-year age group, he calculated the number of people in each successive age group for each year listed.[5] Figure 33 shows the increase graphically.

According to the 1951 Census, 66% of the (5-9) years of age group

[5]See Table VI, Appendix A, p. 204 for death rates.

TABLE LVII

PROJECTION OF THE MANITOBA POPULATION (0-24) BY FIVE YEAR AGE GROUPS TO 1971

Age Group	1951	1956	1961	1966	1971
0 - 4	89,977	100,365	111,000	121,000	130,800
5 - 9	72,594	91,460	96,465	106,700	116,345
10 - 14	60,143	72,516	91,220	96,225	106,435
15 - 19	52,188	60,427	72,341	90,980	95,985
20 - 24	58,752	57,674	60,162	72,016	90,570

was attending school. That would mean an enrollment of 64,000, 71,000, and 78,000 from this age group by 1961, 1966, and 1971, respectively. Ninety-five per cent of the next age group went to school. This would mean that about 86,000, 91,000, and 101,000 children will go to school in Manitoba in 1961, 1966, and 1971, respectively. There would be about 45,000 more in the secondary and junior high schools in 1961 than there were in 1951, and in 1971 there would be 179,000 pupils in elementary and junior high schools or 29,000 more than in 1961. The foregoing calculations do not take immigration nor emigration into consideration. Those children born during the late fifties will begin to enter high school in 1961. Barring immigration, Manitoba may expect an increased enrollment of 2,000 students annually in secondary schools after 1961 to 1966.

The projection for the population (0-24) years of age in Saskatchewan is summarized in Table LVIII. The natural increase used to obtain the first age group was 19.7. No allowance was made for immigration or emigration

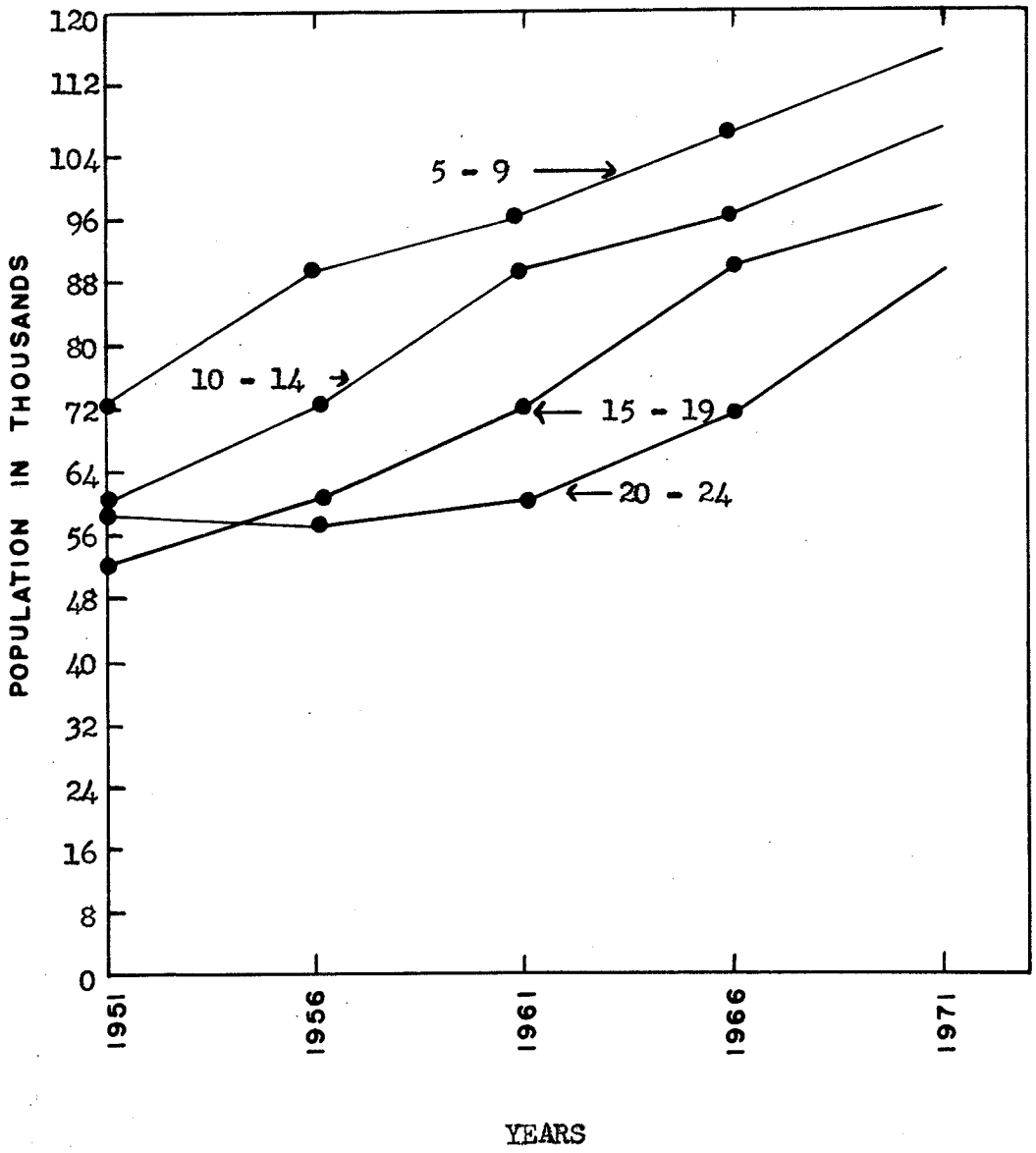

Fig. 33 - Showing the Projection of the Manitoba Population (5-24) by Five Year Age Groups to 1971.

other than the allowance made for the future provincial population of Saskatchewan shown in Table LIII.[6] Of 73,156 children aged (10-14) years, 68,359 were left by 1956, and of 68,482 people (15-19) years of age in 1951, 58,992 people were left by 1956. The population in the foregoing

[6]See Table LIII, p. 163 of this report.

age groups decreased instead of increased. Therefore, the figures showing the population for the (10-14), (15-19), and (20-24) years of age may be in error. The data in Table LVIII are shown graphically in Figure 34.

TABLE LVIII

PROJECTION OF THE SASKATCHEWAN POPULATION (0-24) BY FIVE YEAR AGE GROUPS TO 1971

Age Group	1951	1956	1961	1966	1971
0 - 4	99,855	109,603	120,000	130,000	140,000
5 - 9	81,782	97,953	105,588	115,620	125,255
10 - 14	73,615	79,214	97,678	105,293	115,295
15 - 19	68,482	68,359	79,029	97,433	105,028
20 - 24	62,613	58,992	68,104	78,739	97,073

In 1951, about two-thirds of the children (5-9) years of age were attending school. By taking two-thirds of the figures for 1961, 1966, and 1971 for the (5-9) years of age group, the writer calculated the future school enrollment from the (5-9) years of age group for Saskatchewan. The enrollment from this age group is expected to be 70,000, 77,000, and 83,000 children, respectively, in 1961, 1966, and 1971. In 1951 about 96% of the children (10-14) years of age attended school. Using the same per cent, the writer expects 93,000, 101,000, and 110,000 children of the (10-14) years of age group to attend school in Saskatchewan in 1961, 1966, and 1971, respectively. About 60% of the people (15-19) years of age in Saskatchewan was attending school in 1956. If the same proportion of this age group continues to go to school, the people of Saskatchewan might

have to provide secondary education for 48,000, 58,000, and 63,000 pupils, respectively, in 1961, 1966, and 1971. The total school population in Saskatchewan for 1961, 1966, and 1971 might be 217,800, 244,000, and 266,000, respectively.

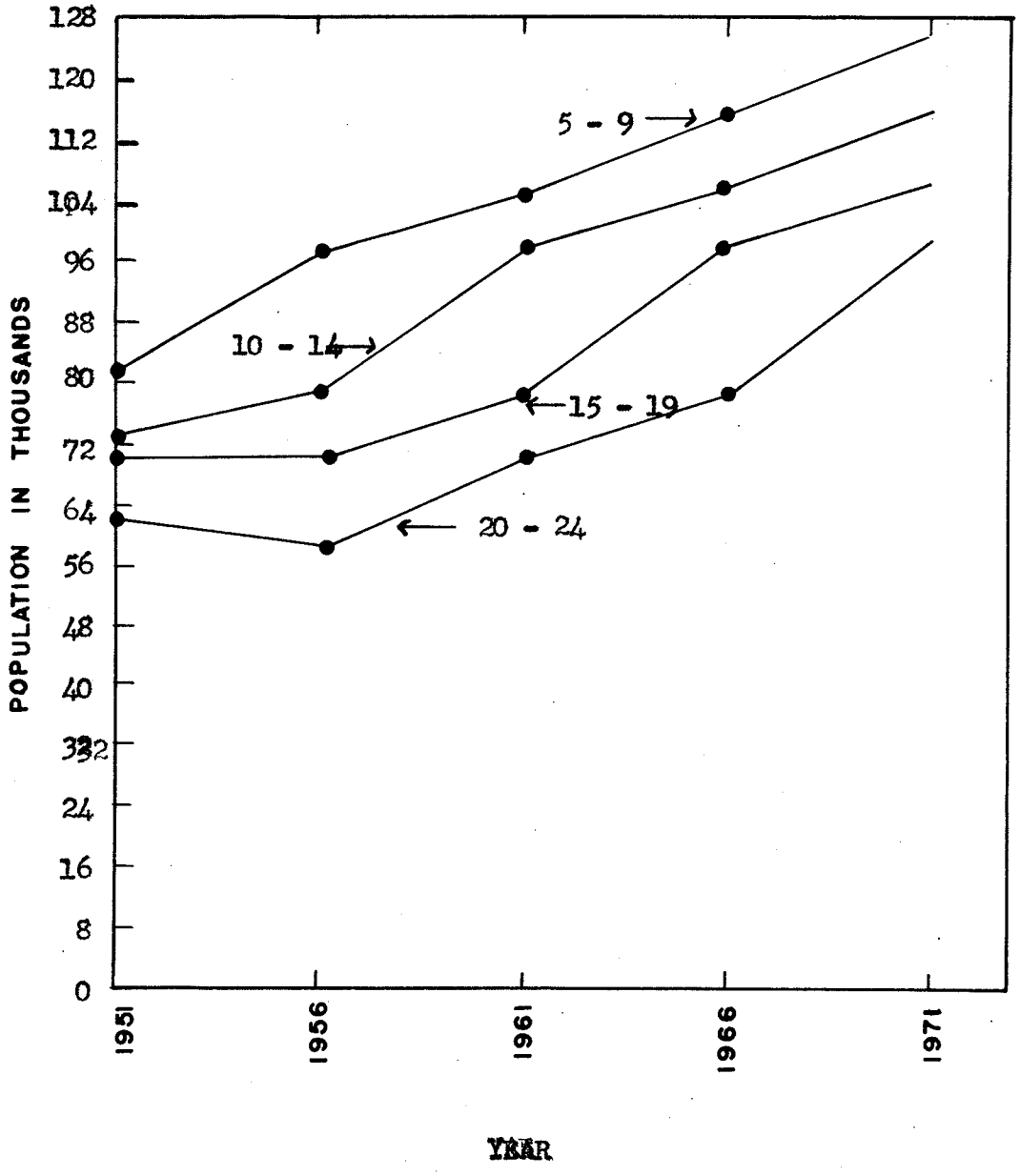

Fig. 34 - Showing the Projection of the Saskatchewan Population (0-24) By Five Year Age Groups to 1971.

During the 1951-1956 period, Alberta had a net gain of 64,000 people

from migration. From articles found in the Calgary Herald, it appeared evident that this gain from migration might be affected by the slowing down of the oil and natural gas business.[7] This, however, was ignored in making the following calculations. The (0-4) years of age group includes the increase gained from the net migration as shown in Table LVIII.[8] For the other age groups, the deaths were equated to the net migration and and no allowances for deaths were made.

TABLE LIX

PROJECTION OF THE POPULATION (0-24) OF ALBERTA BY FIVE YEAR AGE GROUPS TO 1971

Age Group	1951	1956	1961	1966	1971
0 - 4	116,846	149,697	173,000	201,000	224,000
5 - 9	93,063	125,820	150,000	173,000	201,000
10 - 14	76,897	97,318	126,000	150,000	173,000
15 - 19	73,941	80,496	98,000	126,000	150,000
20 - 24	75,527	82,842	81,000	98,000	126,000

In order to find the number of children (0-4) years of age, the writer used a natural increase of 23.4 people per thousand. This increase was added to the population figure of 1956. In 1956, 13% of the population Alberta was under five years of age. Thirteen per cent of the population figure for 1961 is 173,000, 13% of the population figure for 1966 is 201,000, and 13% of the population for 1971 is 224,000.

[7] See p. 20 of this report.

[8] See p. 163 of this report.

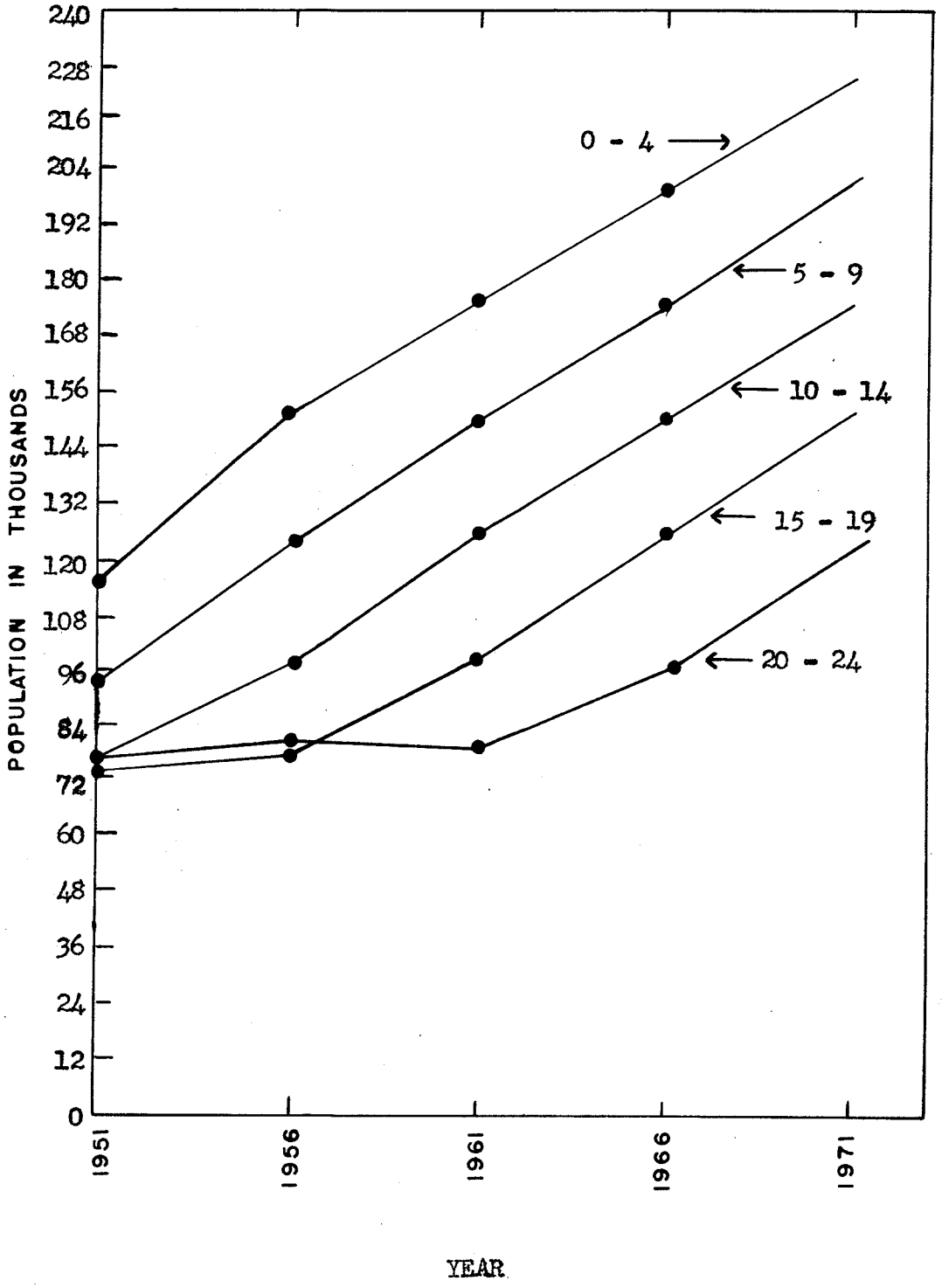

Fig. 35 - Showing the Projection of the Population of Alberta (0-24) By Five Year Age Groups To 1971.

In 1956, 149,697 children were (0-4) years of age. This figure was rounded off to the next thousand and equated to the number of children (5-9) years of age in 1961. In 1956, 125,820 children were (5-9) years of age. This figure was rounded off to the next thousand and equated to the number of young people (10-14) years of age in 1961. In 1956, 97,318 young people were (10-14) years of age. This figure was rounded off to the next thousand and equated to the number of young people aged (15-19) years in 1961. In 1956, 80,496 young people were (15-19) years of age. This figure was rounded off and equated to the number of young people aged (20-24) years in 1961. The figures for all age groups in 1961 were moved over similarly to equal the number of people in each age group in 1966 and the 1966 figures were moved similarly again to equal the figures for each age group in 1971.

In 1951, about two-thirds of the children (5-9) years of age were in school. Two-thirds of the population figures in Table LIX were taken to find the school enrollment. That is, 110,000, 115,000, and 134,000 children aged (5-9) years will attend school in Alberta in 1961, 1966, and 1971, respectively. Of the group of children aged (10-14) years, 95% was in school. Taking 95% of the figures for this age group, the writer expects 120,000, 142,000, and 164,000 children to attend school in Alberta in 1961, 1966, and 1971, respectively. Of the senior high school group, 58% attended high school in Alberta in 1956. Taking 58% of the figures for this age group, the writer expects 57,000, 73,000, and 87,000 young people to attend high school in Alberta in 1961, 1966, 1971, respectively.

Finally, the population figures for 1961, 1966, and 1971 for the people (0-24) years of age in British Columbia were calculated. These

figures are based on a natural increase of 15.5 people per thousand. In 1956, 11% of the population of British Columbia was under five years of age. Therefore, 11% of the population of British Columbia was taken to equal the population under five years of age in British Columbia. Since the net migration for British Columbia was twice as high as that for Alberta during 1951-56, the deaths that might occur in the (0-4) years of age group were added to the population figure for the (0-4) years of age group for 1956 and equated to the population figure for the (5-9) years of age group in 1966. For example, of the 156,759 children (0-4) years of age in 1956, 5,880 would likely die by 1961.[9] These deaths were added to 156,759 and the resulting figure taken to the next nearest thousand, giving 163,000 people for the (5-9) years of age group in 1961. The net migration is expected to be twice the number of deaths. The results of the foregoing calculations are summarized in Table LX. The first and last groups of 1971 are not quite double those of 1951, but the other three groups have more than doubled in number by 1971. The foregoing

TABLE LX

PROJECTION OF THE POPULATION (0-24) OF BRITISH COLUMBIA

BY FIVE YEAR AGE GROUPS TO 1971

Age Groups	1951	1956	1961	1966	1971
0 - 4	125,886	156,759	180,000	209,000	240,000
5 - 9	99,892	140,588	163,000	187,000	217,000
10 - 14	78,609	108,518	141,000	164,000	188,000
15 - 19	70-230	86,433	109,000	142,000	164,000
20 - 24	79,824	86,397	87,000	110,000	143,000

[9]See Table VI, p. 204 of this report.

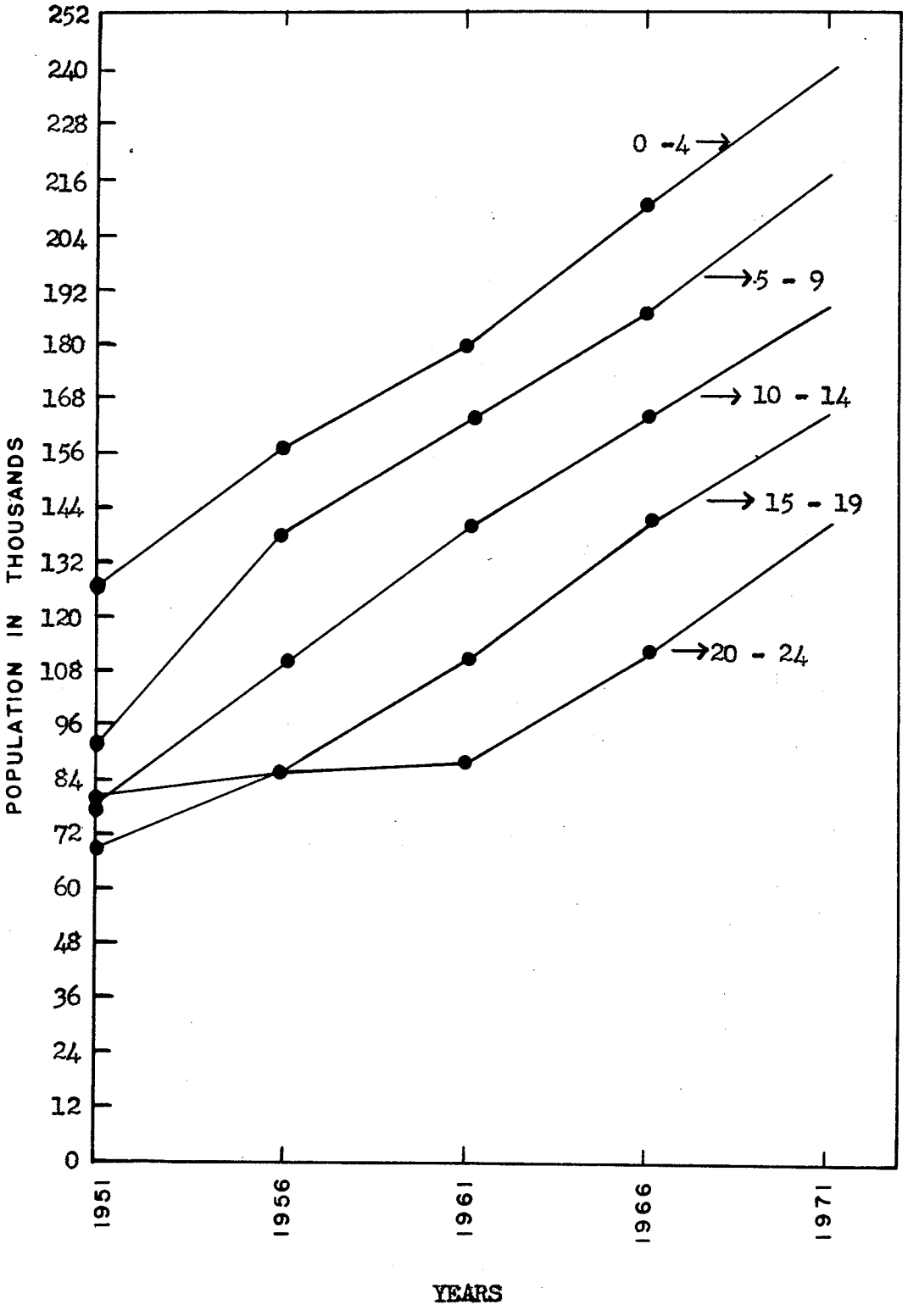

Fig. 36 - Showing the Projection of the Population of British Columbia, (0-24), By Five Year Age Groups To 1971.

results are shown graphically in Figure 36.

In 1951, 65% of the (5-9) years of age group and 95% of the (10-14) years of age group went to school, and in 1956, 59% of the (15-19) years of age group went to secondary schools. On the basis of the foregoing per cents, 105,950, 121,550, and 141,050 children of the (5-9) years of age group may be in school in 1961, 1966, and 1971, respectively. Of the group (10-14) years of age, 133,450, 155,800, and 178,600 children may be in school in the foregoing quinquennial years. Fifty-nine per cent of the high school groups is equal to 64,310, 83,780, and 96,760 students in 1961, 1966, and 1971, respectively.

The projected enrollments for each of the provinces are summarized in Table LXI and Figure 37 shows these projections graphically. The graph brings out the fact that the school populations of Alberta and of British Columbia will likely grow faster than the school populations of Manitoba and Saskatchewan. The school populations of Manitoba and Saskatchewan will likely grow more or less equally fast. One conclusion appears to stand out. The school enrollment is rising and with it the cost of education.

Cost of Future Educational Needs

To estimate the cost of future educational needs is even more hazardous than to estimate the future size of the population since one cannot know whether inflation or deflation will affect prices in the future. Then, too, provinces like Alberta and British Columbia which have proceeded a long way towards completing the centralization of their schools, may find their cost per enrolled capita dropping, whereas, Manitoba may find herself faced with high costs in order to finance centralization of schools. Saskatchewan is a case in point. Her costs per capita were highest in 1955. Centralization of schools, however, makes larger schools possible. Large

TABLE LXI

SUMMARY OF THE PROVINCIAL PROJECTIONS OF SCHOOL POPULATION TO 1971

Age Group	Manitoba	Saskatchewan	Alberta	British Columbia
1961				
5 - 9	64,000	70,000	100,000	105,950
10 - 14	86,000	93,000	120,000	133,450
15 - 19	43,400	48,000	57,000	64,310
20 - 24	6,000	6,800	8,100	8,700
Totals	199,400	217,800	285,100	312,410
1966				
5 - 9	71,000	77,000	115,000	121,550
10 - 14	91,000	101,000	142,000	155,800
15 - 19	54,600	58,000	73,000	83,780
20 - 24	7,300	7,900	9,800	11,000
Totals	223,800	243,900	339,800	372,130
1971				
5 - 9	78,000	83,000	134,000	141,050
10 - 14	101,000	110,000	164,000	178,600
15 - 19	57,600	63,000	87,000	96,760
20 - 24	9,000	10,000	12,600	14,300
Totals	245,600	266,000	397,600	430,710

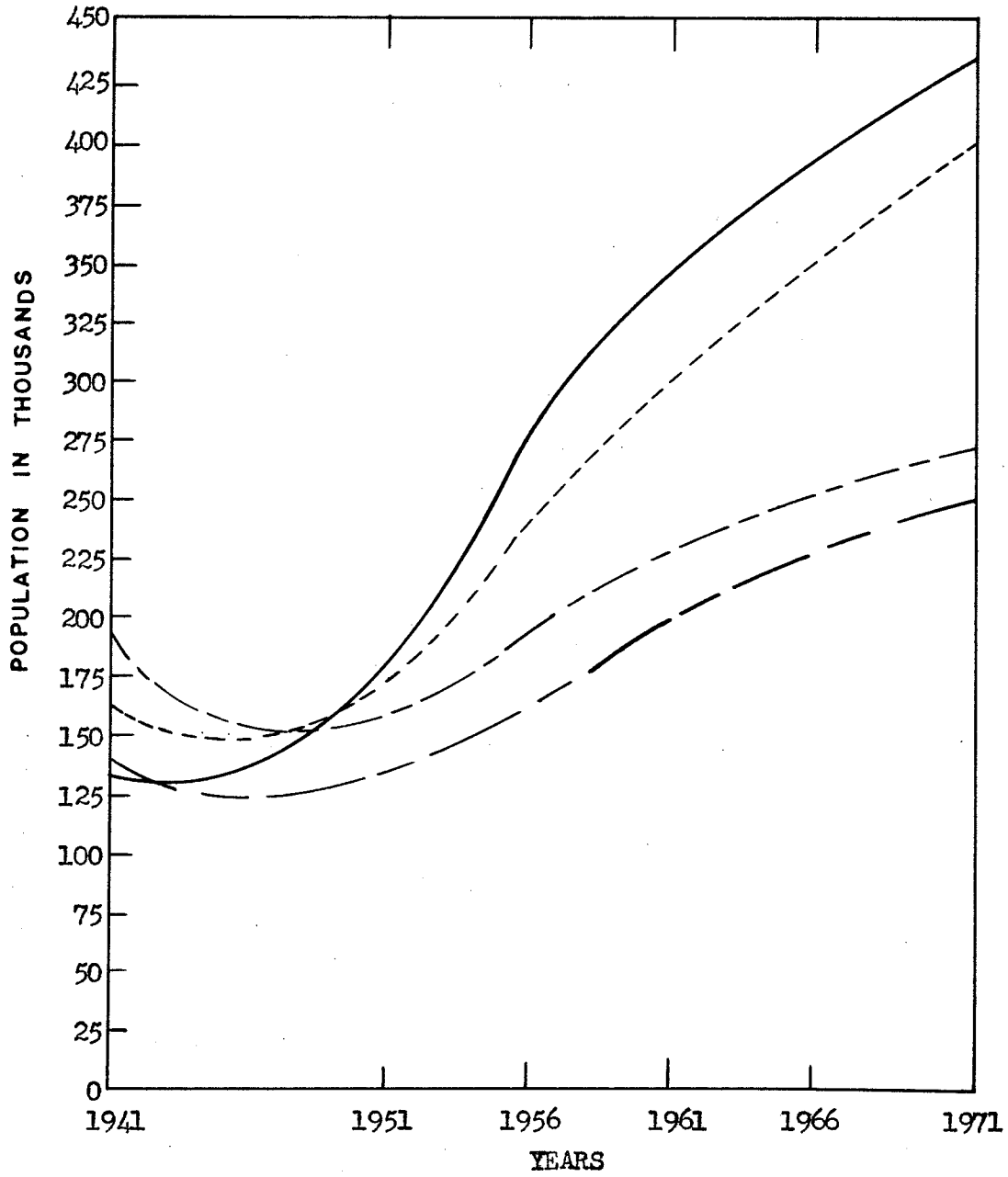

Fig. 37 - Showing the Summary of the Provincial Projections of School Population to 1971. (Manitoba _____ __ _____, Saskatchewan ____ _ ____, Alberta ---------, British Columbia _____)

schools are cheaper to run than comparable facilities in smaller schools. From articles appearing in the Readers' Digest, one might conclude that efforts will be made to provide all the desirable facilities as economically as possible. In Manitoba, costs for education have risen more than

three-fold according to Table L. The people of Manitoba paid $160.64 for every child that attended school in 1951, and around $212.25 for every child that attended school in 1955. The people of Saskatchewan paid $204.58 for every child that attended school in 1951, and they paid about $308.30 for every child that attended school in 1955. The per capita cost of education in Alberta did not vary quite so much. The people of Alberta paid $188.09 for every child that attended school in 1951, and they paid $221.90 for every child that attended school in 1956. The people of British Columbia paid $299.85 for every child that attended school in 1951, and they paid about $289 for every child that attended school in 1955. It appears that the maximum cost per capita lies somewhere around $300. However, it can increase as much as a $100 for every child that is enrolled in school. Using the foregoing facts, the writer estimated the future costs of education to each province. First Figure 38 shows the result of the projection of the education costs from Table XLIX. The provincial projections agree with the costs tabulated in Table LXII with the exception of

TABLE LXII

FUTURE COSTS OF EDUCATION BY PROVINCES FOR FIVE YEAR INTERVALS ENDING WITH 1971

Province	1961	1966	1971
	$	$	$
Manitoba	59,820,000	80,568,000	98,240,000
Saskatchewan	76,230,000	97,560,000	106,400,000
Alberta	85,530,000	122,328,000	159,040,000
British Columbia	95,685,000	130,245,000	172,284,000

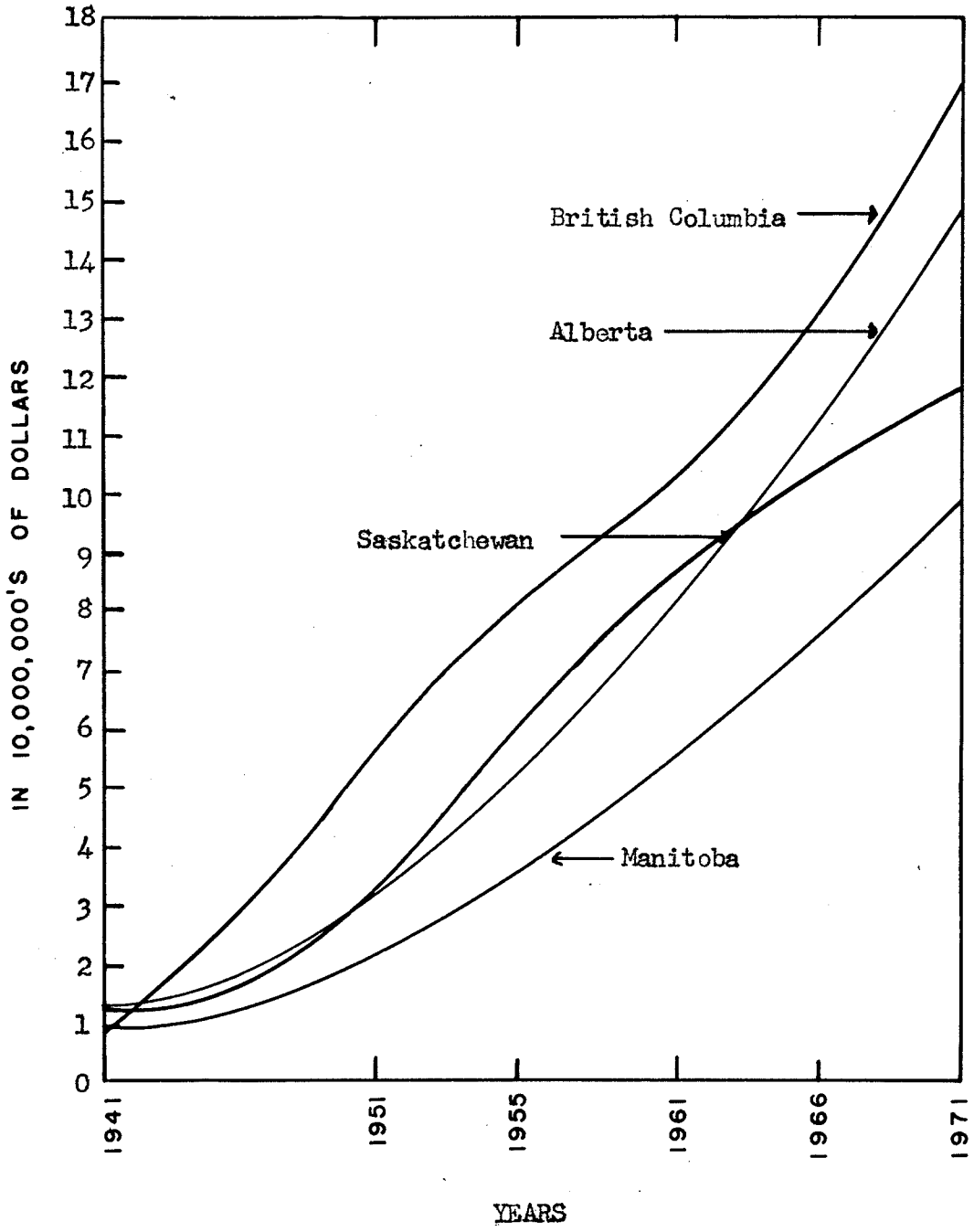

Fig. 38 - Showing the Projection of Future School Costs by Provinces.

the projections for British Columbia and Saskatchewan. The line for Saskatchewan would have crossed the $180,000,000 axis before 1971. This appeared to be a little unrealistic.

The figures in Table LXII were found in the following manner. It was noted that the people of British Columbia spent about $300 per student enrolled in 1951 as well as in 1955. The people of Saskatchewan spent $308 per student in 1955. Therefore, with the exception of the future costs of education in Saskatchewan, the future enrollments found in Table LXI were multiplied by $300 for 1961, $350 for 1966, and $400 for 1971. The school enrollment in Saskatchewan for 1961 was multiplied by $350. The multiplier $350 for 1966 was chosen because it appeared that the average increase per capita in the cost of education was $50 to $60 over a five-year period. The multiplier for Saskatchewan was taken to be $400 for 1966 and 1971. It was expected that capital expenditures for schools would gradually level off during the 1961 to 1971 period. The figures in the table and those that can be read from the figure show that: (1) education will continue to cost more; and (2) people appear to be willing to spend more for education than they have been in the past. On the basis of how fast moneys for education have increased in the past, the foregoing figures appear to be too conservative, but at the present time one cannot conceive the idea that costs will increase eight-fold by 1971 as they did for the people of British Columbia from 1941 to 1956.

Conclusions and Recommendations

In this final section, a few additional conclusions from the data in this thesis and several recommendations for further study will be made. From the data in Chapter III, the following conclusions could be drawn: (1) the population in Western Canada is increasing steadily in prosperous

times - Alberta and British Columbia gained at the expense of Saskatchewan and Manitoba; (2) population trends are very sensitive to economic trends; (3) a disproportionate number of people are moving to the suburbs; (4) Saskatchewan is the least industrialized and British Columbia is the most highly industrialized; (5) employment in services, real estate, and insurance business increased; and (6) the dependent population increased disproportionately during the forty-five year period.

The data in Chapters IV - VI seem to indicate that: (1) more people are staying in school longer; (2) provinces with centralized school facilities appear to be able to retain more of their students for a longer time; (3) on the basis of the intelligence curve, a large number of students are in need of special education; (4) urban young people stay in school longer; and, (5) many more young people have the mental ability to go to university than are taking higher education at the present time.

The data on the family show that: (1) people are living longer; (2) the sex ratio for frontier areas is much greater than equal to unity and gradually decreases to unity as the area becomes more settled; (3) inspite of so many deaths of males, the sex ratio of the retired group is higher than in any other group; (4) the marriage ratio appears to be highest when the sex ratio is near unity; (5) the size of the family appears to be increasing slightly; (6) divorce rates are increasing gradually; (7) the birth rate appears to have reached its high point and is beginning to drop; and (8) more married women are gainfully employed outside the home than ever before.

The data in Chpater VIII indicate; (1) that British Columbia and Alberta are the two wealthiest provinces in Western Canada; (2) that up

to the present time the people of Saskatchewan depend more upon agriculture than the other Western Provinces; (3) that the people of Manitoba may have to pay much more for education than they are paying at present; (4) that tax revenue from capital construction, land, and sales will have to be supplemented by money from some other source, if educational equality shall exist in the West; (5) that more federal aid for education is desirable; and (6) centralization of school facilities is desirable.

Out of this study grow the following recommendations: (1) a study should be carried out to show why high school students drop out before completing matriculation and why so few students continue on to university; (2) a study should be carried out to show the influence of economics upon the birth rate, marriage rate, divorce rate, and death rate; and (3) the relation between sex ratios and marriage ratios should be further investigated to see whether or not they could be used to predict marriage rates and hence the increase in the population.

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APPENDIX A

TABLE I

PERCENTAGE DISTRIBUTION OF FAMILIES CLASSIFIED ACCORDING TO YEARS OF SCHOOLING OF HEAD, BY NUMBER OF CHILDREN 21 YEARS OF AGE AND UNDER IN FAMILIES FOR CANADA, 1951

Years of Schooling	Total	Families by Number of Children						
		0	1	2	3	4-5	6-8	9
		Percentage Distribution						
All Family Heads	3,287,387	32.3	23.5	19.8	10.9	8.9	3.7	0.9
No School	73,482	39.5	19.7	13.3	9.3	10.7	6.2	1.3
1 - 4 years	268,460	33.0	19.0	15.0	10.8	12.6	7.5	2.1
5 - 8 years	1,529,538	31.9	21.9	18.3	11.3	10.6	4.7	1.3
9 - 12 years	1,115,521	31.7	26.4	22.4	10.6	6.7	1.9	0.3
13 plus	300,383	33.7	25.6	23.6	10.4	5.2	1.0	0.2

TABLE II[1]

STATISTICS OF THE LEADING INDUSTRIES OF THE PROVINCE OF SASKATCHEWAN, 1949

Industry	Employees	Cost of Material	Net Value	Gross Value
		$	$	$
Flour Mills	680	33,650,360	6,460.716	40,446,109

TABLE II (CONT'D)

Industry	Employees	Cost of Material	Net Value	Gros Value
		$	$	$
Petroleum	552	30,632,381	2,284,070	34,258,225
Meat Packing	1,291	26,086,381	5,432,984	31,765,794
Butter, Cheese	1,435	22,213,728	5,265,457	27,875,533
Breweries	396	1,841,625	6,010,746	7,977,459
Bread	962	3,733,585	3,100,668	7,026,676
Printing	1,106	1,348,006	3,739,615	5,174,891
Sawmills	878	1,321,884	2,169,162	3,562,128
Aerated Waters	288	1,225,313	1,462,984	2,796,451
Feeds	92	2,262,468	329,580	2,618,840
Sash, Door	352	1,262,227	1,311,214	2,612,161
Total Leading Industries	8,032	125,577,661	37,567,196	166,064,267
Total all Industries	10,841	164,349,341	47,356,949	215,742,708
% of all Industries	74.1	76.4	79.3	77.0

[1]General Review of the Manufacturing Industries of Canada, p. 83. Ottawa, Canada: King's Printer, 1952.

The leading industries for Manitoba, Alberta, and British Columbia were four times, three times, and nine times, respectively, the leading industries of Saskatchewan for the year 1949 and for the year 1953. Agriculture appears to be the leading occupation of the people of Saskatchewan.

TABLE III[2]

STATISTICS OF THE LEADING INDUSTRIES OF THE

PROVINCE OF SASKATCHEWAN, 1953

Industries	Employees	Cost of Material	Net Value	Gross Value
		$	$	$
Petroleum	1,003	45,754,470	14,969,468	62,777,002
Flour Mills	723	34,638,648	7,903,981	42,911,324
Meat Packing	1,142	23,486,604	8,151,631	31,879,941
Butter, Cheese	1,298	20,497,484	7,112,918	28,008,313
Breweries	393	2,430,232	8,069,105	10,653,206
Bread	1,036	4,287,106	5,331,587	9,867,524
Printing	1,130	1,870,055	5,647,070	7,625,152
Sawmills	994	1,854,793	2,948,543	4,908,053
Carbonated Beverages	289	1,786,738	2,394,121	4,133,801
Sash, Door	433	2,029,237	2,016,270	4,101,872
Sheet Metal	237	1,902,950	1,476,525	3,399,481
Wood Products	132	2,098,331	870,069	2,984,948
Total Leading Industries	8,810	142,436,648	66,891,288	213,250,617
Total All Industries	11,604	180,303,942	79,941,332	266,613,086
% of all Industries	75.9	78.9	83.6	79.9

[2]General Review of the Manufacturing Industries of Canada, p. 116. Ottawa, Canada: King's Printer, 1956.

TABLE IV

AREA OF LAND AND WATER OF WESTERN CANADA BY PROVINCES

Province	Land	Water	Total
	(acres)	(acres)	(acres)
Northwest Provinces	357,016,778	12,853,120	369,869,898
Manitoba	140,622,720	6,019,200	146,641,920
Saskatchewan	155,092,480	5,323,520	160,416,000
Alberta	160,155,200	1,510,400	162,265,600
British Columbia	229,938,560	4,464,640	234,403,200

TABLE V

BIRTHPLACE OF THE WESTERN CANADIAN PEOPLE AS SHOWN BY THE CENSES FOR 1911, 1921

Birthplace	Manitoba		Saskatchewan	
	1911	1921	1911	1921
Canada	270,554	387,746	248,751	457,833
British Isles	94,090	111,759	80,177	99,166
British Possessions	988	1,296	839	1,127
Europe	78,056	85,902	91,104	108,352
Austria	23,146	17,529	15,878	17,040
Belgium	2,284	3,267	1,271	2,156
Bulgaria	2,219	20	6,666	138
Czechoslavakia	169	679	520	939
Denmark	593	911	982	1,515

TABLE V (CONT'D)

Birthplace	Manitoba		Saskatchewan	
	1911	1921	1911	1921
Finland	159	272	537	770
France	3,149	2,943	2,940	3,261
Galicia	12,064	14,656	8,797	9,686
Germany	4,294	2,227	8,300	6,409
Greece	64	133	40	221
Holland	730	1,042	628	984
Hungary	916	595	5,526	4,710
Iceland	5,135	4,757	1,337	1,351
Italy	687	979	266	383
Jugo Slavia	-	75	-	349
Norway	1,435	1,529	7,625	9,240
Poland	-	5,705	-	3,303
Rumania	-	2,634	-	7,324
Russia	16,375	17,082	23,084	28,315
Sweden	3,859	3,948	6,209	7,381
Switzerland	-	412	-	567
Ukraine	-	4,230	-	2,096
Other	778	277	214	498
Asia	1,099	1,493	1,519	3,010
China	844	1,279	1,160	2,613
Japan	19	42	58	97

TABLE V (CONT'D)

Birthplace	Manitoba		Saskatchewan	
	1911	1921	1911	1921
Syria	132	120	213	227
Turkey	42	26	53	23
Other	62	26	35	50
United States	16,328	21,644	69,628	87,617
West Indies	6	2	8	3
Other Countries	206	217	351	340
At Sea	67	59	55	62
	Alberta		British Columbia	
	1911	1921	1911	1921
Canada	161,869	315,090	169,322	264,046
British Isles	68,253	97,505	110,531	153,791
British Possessions	1,416	1,847	7,435	6,860
Europe	58,771	69,765	40,131	31,658
Austria	10,583	9,981	4,413	1,415
Belgium	1,007	1,652	803	790
Bulgaria	3,563	53	403	34
Czechoslavakia	381	1,106	382	589
Denmark	1,380	2,352	763	938
Finland	1,019	1,264	2,103	1,893
France	1,843	2,151	1,246	1,389

TABLE V (CONT'D)

Birthplace	Alberta		British Columbia	
	1911	1921	1911	1921
Galicia	5,816	6,807	581	422
Germany	6,102	4,606	3,054	1,537
Greece	97	217	683	483
Holland	1,136	1,765	379	515
Hungary	1,171	693	665	206
Iceland	235	241	247	309
Italy	1,825	2,486	8,107	4,847
Jugo Slavia	-	282	-	457
Norway	5,761	6,681	3,732	3,547
Poland	-	2,959	-	874
Rumania	-	3,073	-	306
Russia	10,011	11,572	3,976	4,354
Sweden	6,345	6,535	7,118	5,735
Switzerland	-	739	-	498
Ukraine	-	2,165	-	232
Other	496	385	1,476	288
Asia	2,216	3,979	26,988	32,649
China	1,784	3,422	18,819	21,523
Japan	244	374	7,894	10,934
Syria	68	109	130	107
Turkey	27	54	107	27
Other	93	20	38	58

TABLE V (CONT'D)

Birthplace	Alberta		British Columbia	
	1911	1921	1911	1921
United States	81,357	99,879	37,548	34,926
West Indies	7	7	22	14
Other Countries	360	342	408	537
At Sea	47	40	95	101

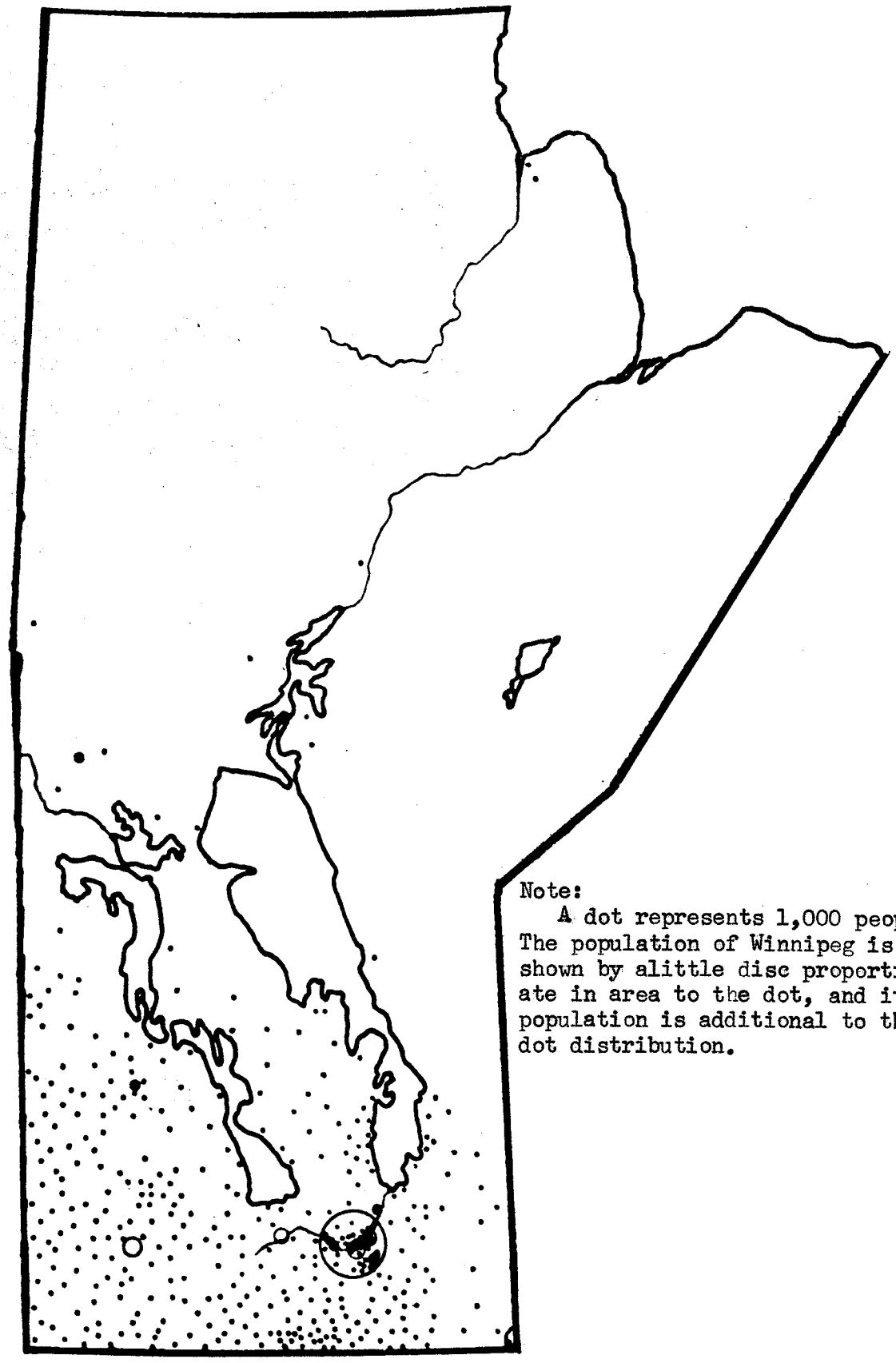
TABLE VI

DEATH RATES FOR THE WESTERN PROVINCIAL POPULATION

(0-24) BY FIVE YEAR AGE GROUPS 1956

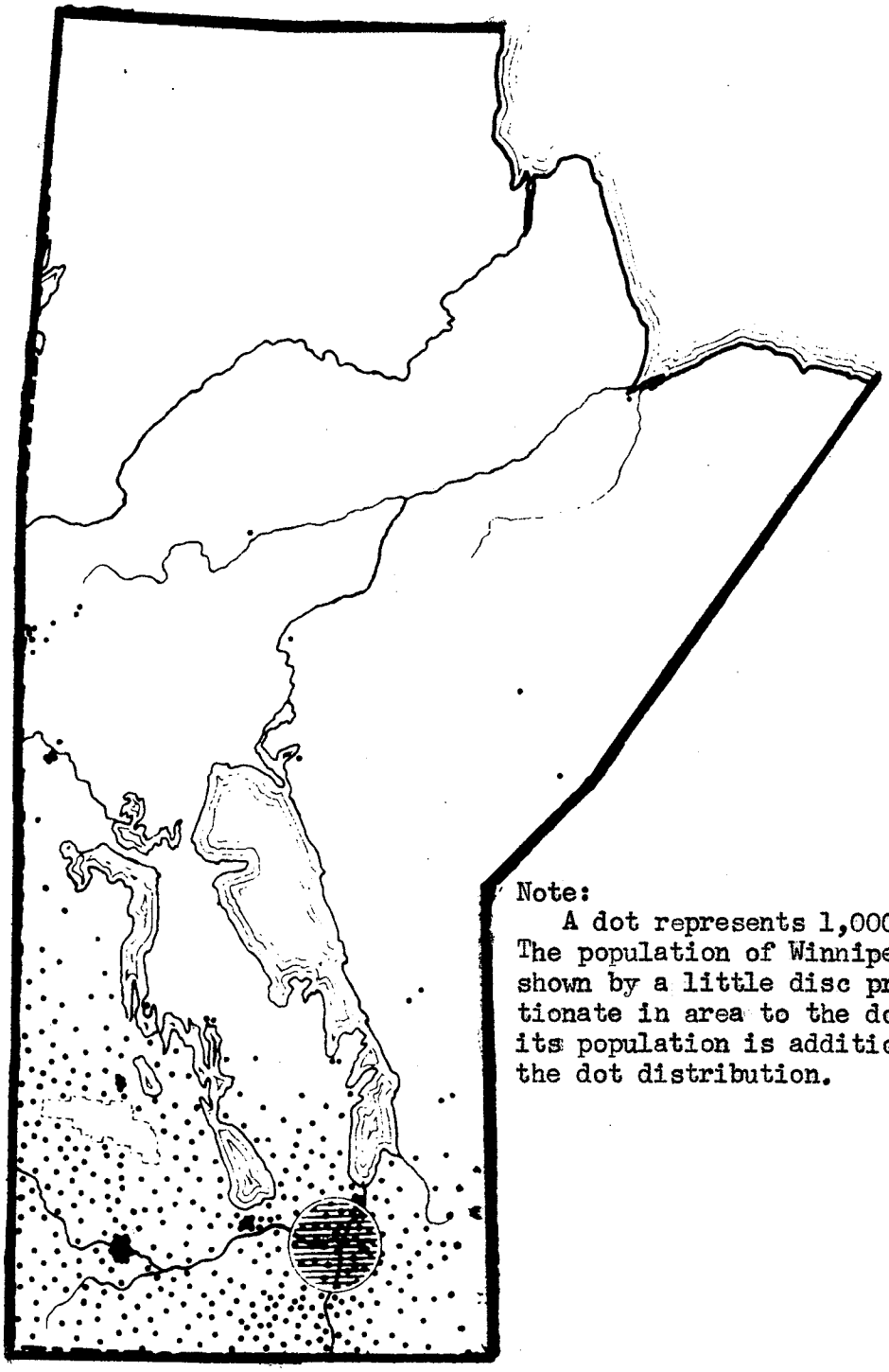
Age Group	Manitoba	Saskatchewan	Alberta	British Columbia
0 - 4	7.7	7.3	6.9	7.5
5 - 9	.5	.56	.56	.6
10 - 14	.5	.5	.5	.5
15 - 19	.9	.74	.9	1.05
20 - 24	1.5	1.1	1.1	1.6

APPENDIX B



Note:
A dot represents 1,000 people. The population of Winnipeg is shown by alittle disc proportionate in area to the dot, and its population is additional to the dot distribution.

Fig. 1 - Showing population density for Manitoba in 1931.



Note:
A dot represents 1,000 people. The population of Winnipeg is shown by a little disc proportionate in area to the dot, and its population is additional to the dot distribution.

Fig. 2 - Showing population density for Manitoba in 1941.

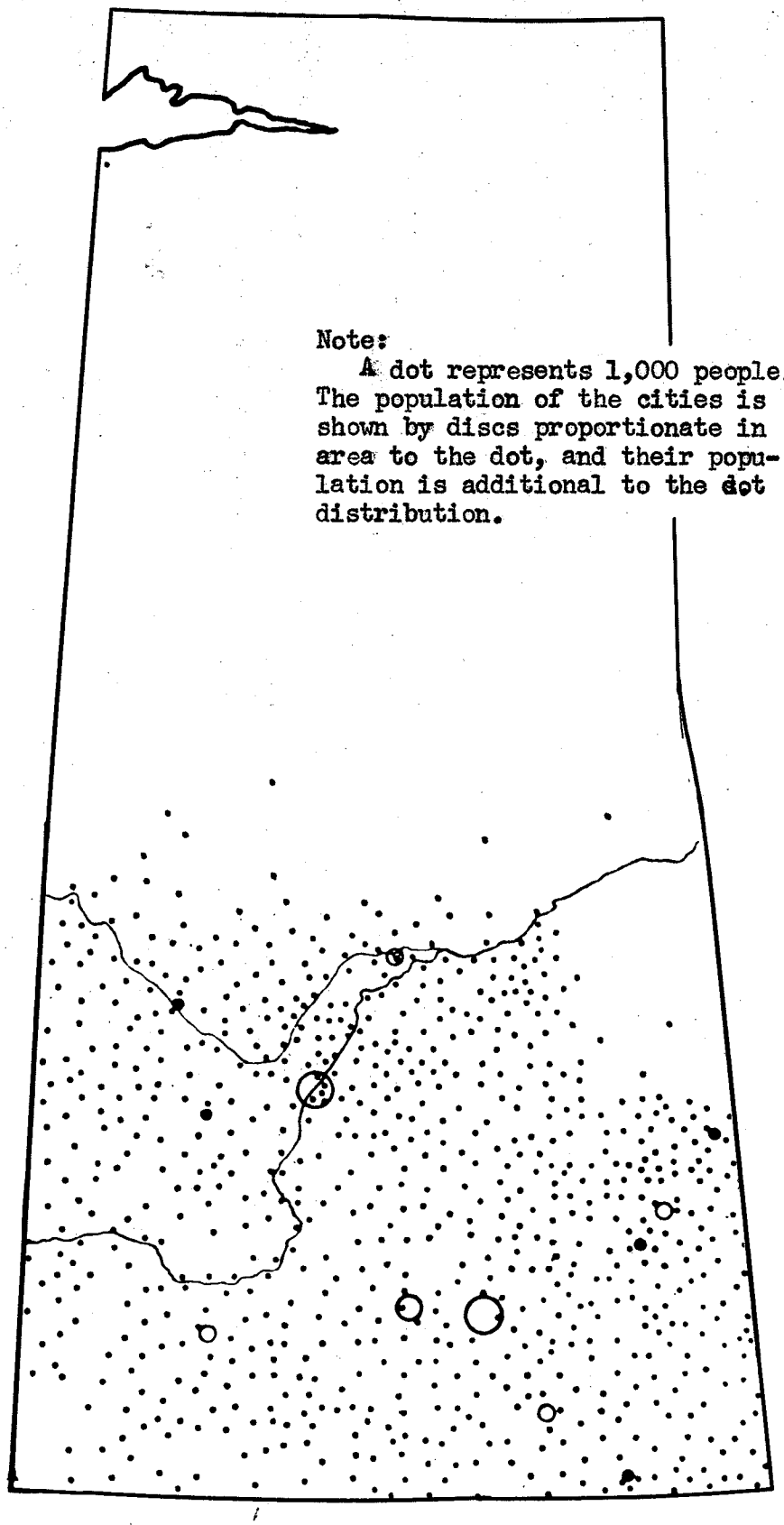
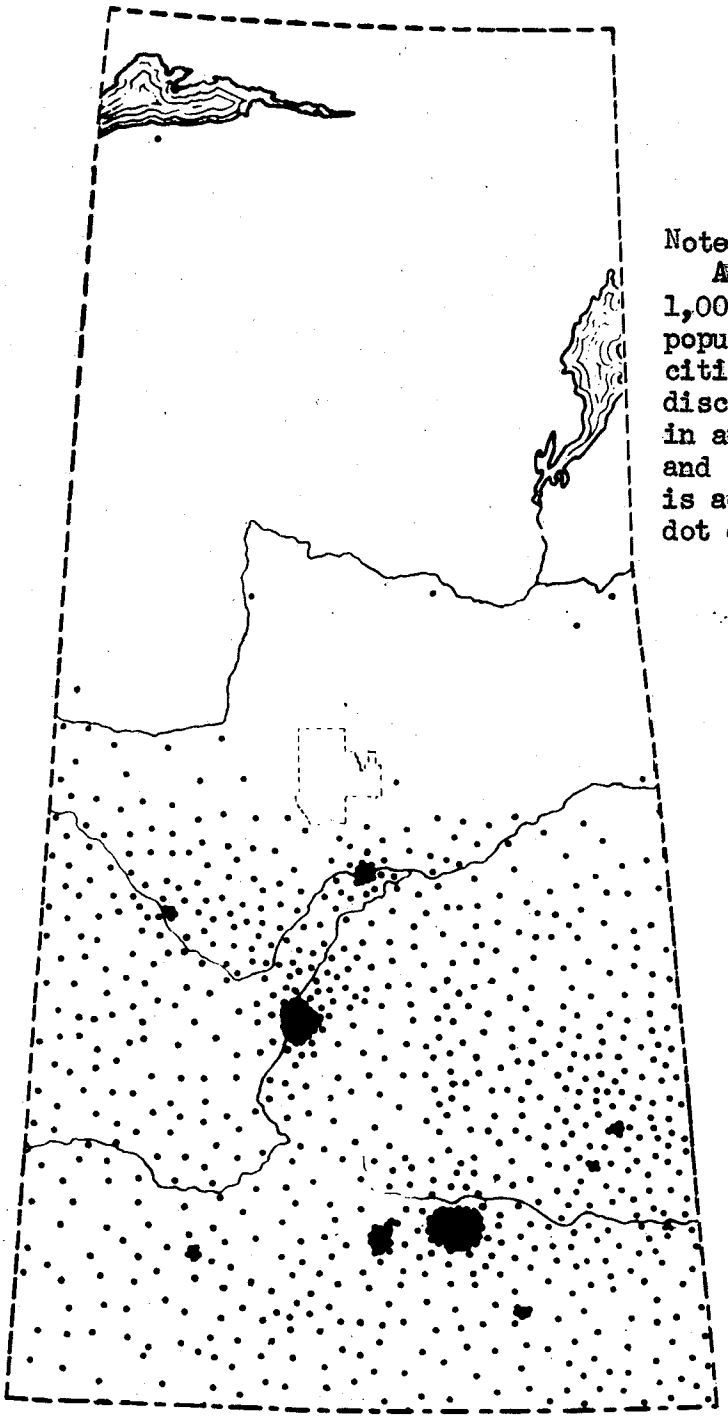
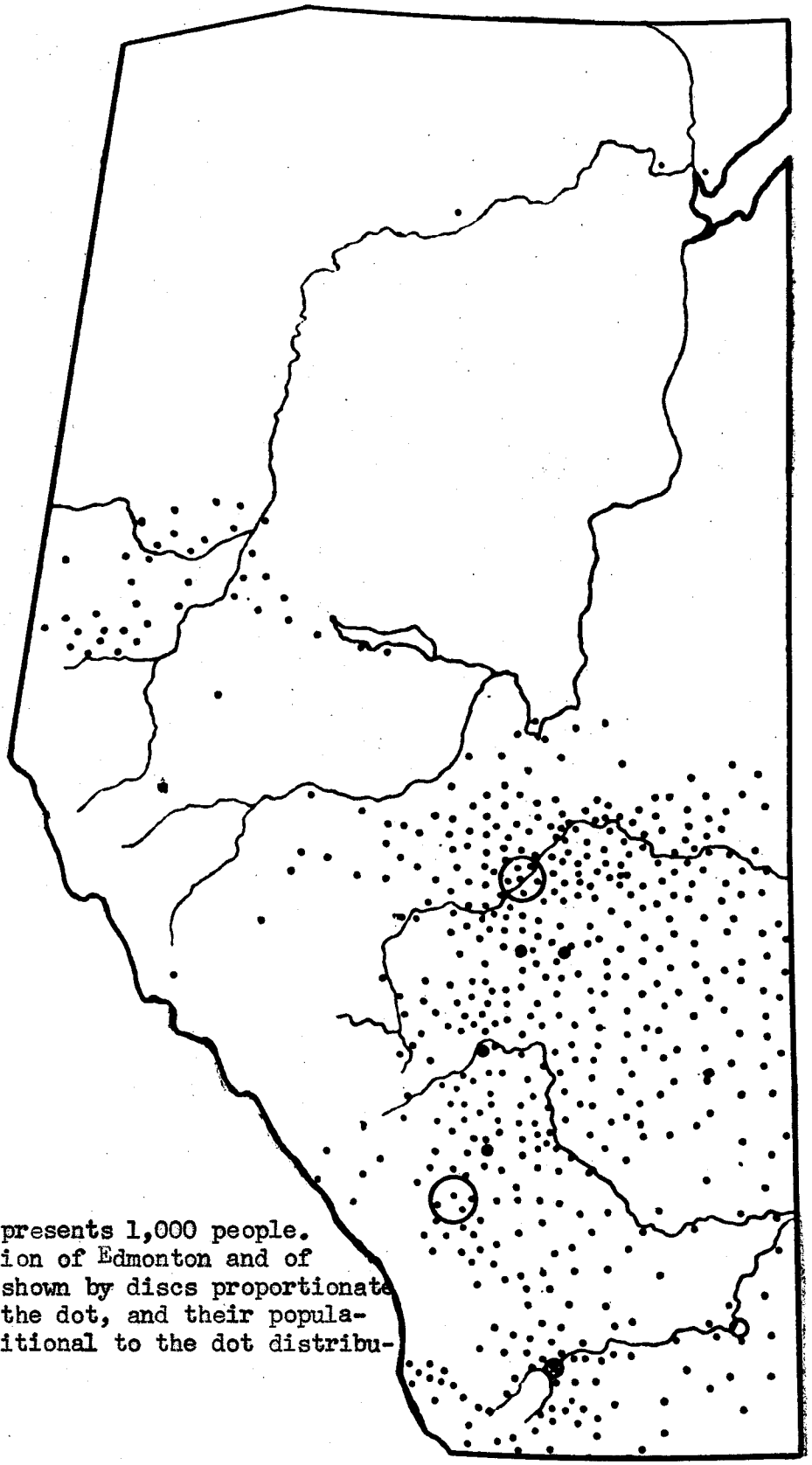


Fig. 3 - Showing population density for Saskatchewan in 1931.



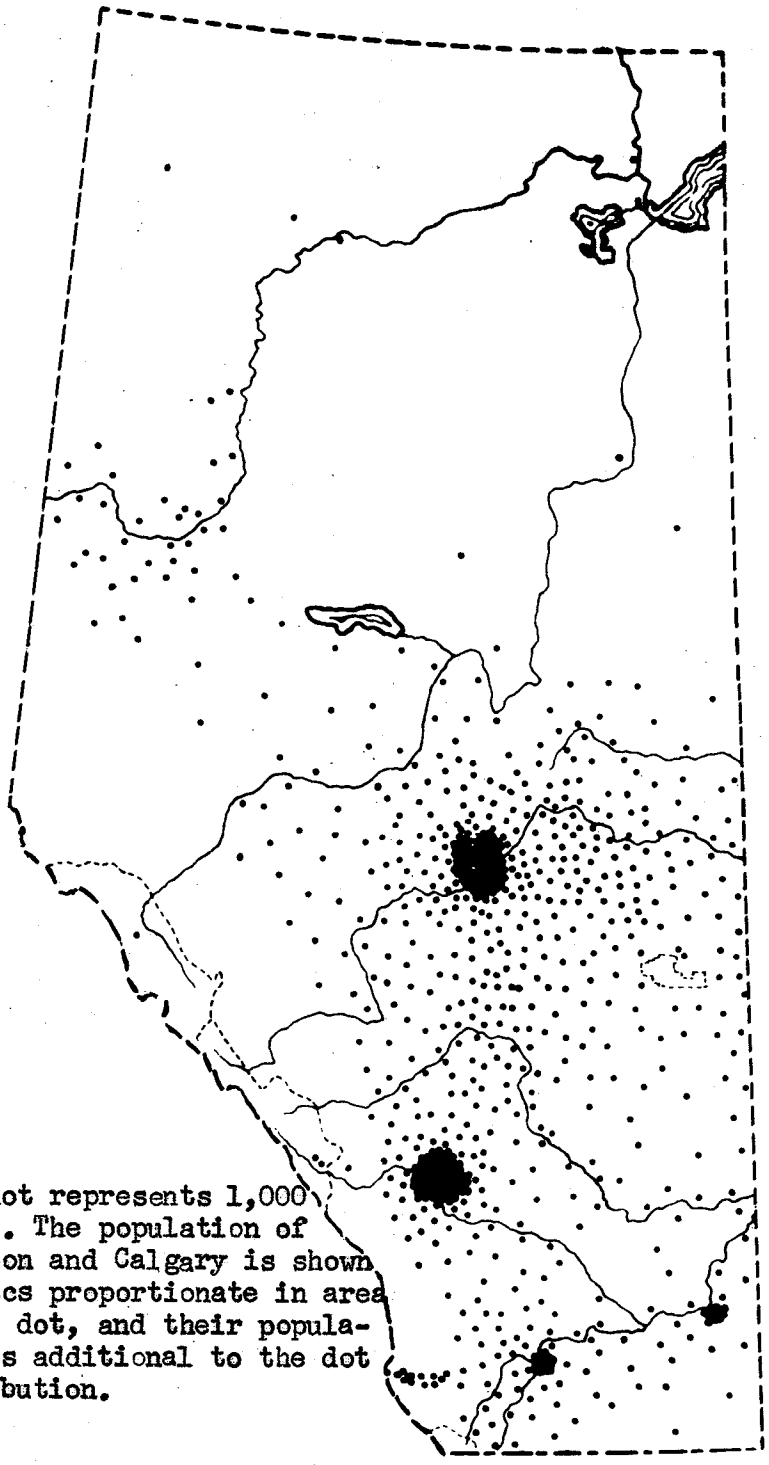
Note:
A dot represents 1,000 people. The population of the cities is shown by discs proportionate in area to the dot, and their population is additional to the dot distribution.

Fig. 4 - Showing population density for Saskatchewan in 1941.



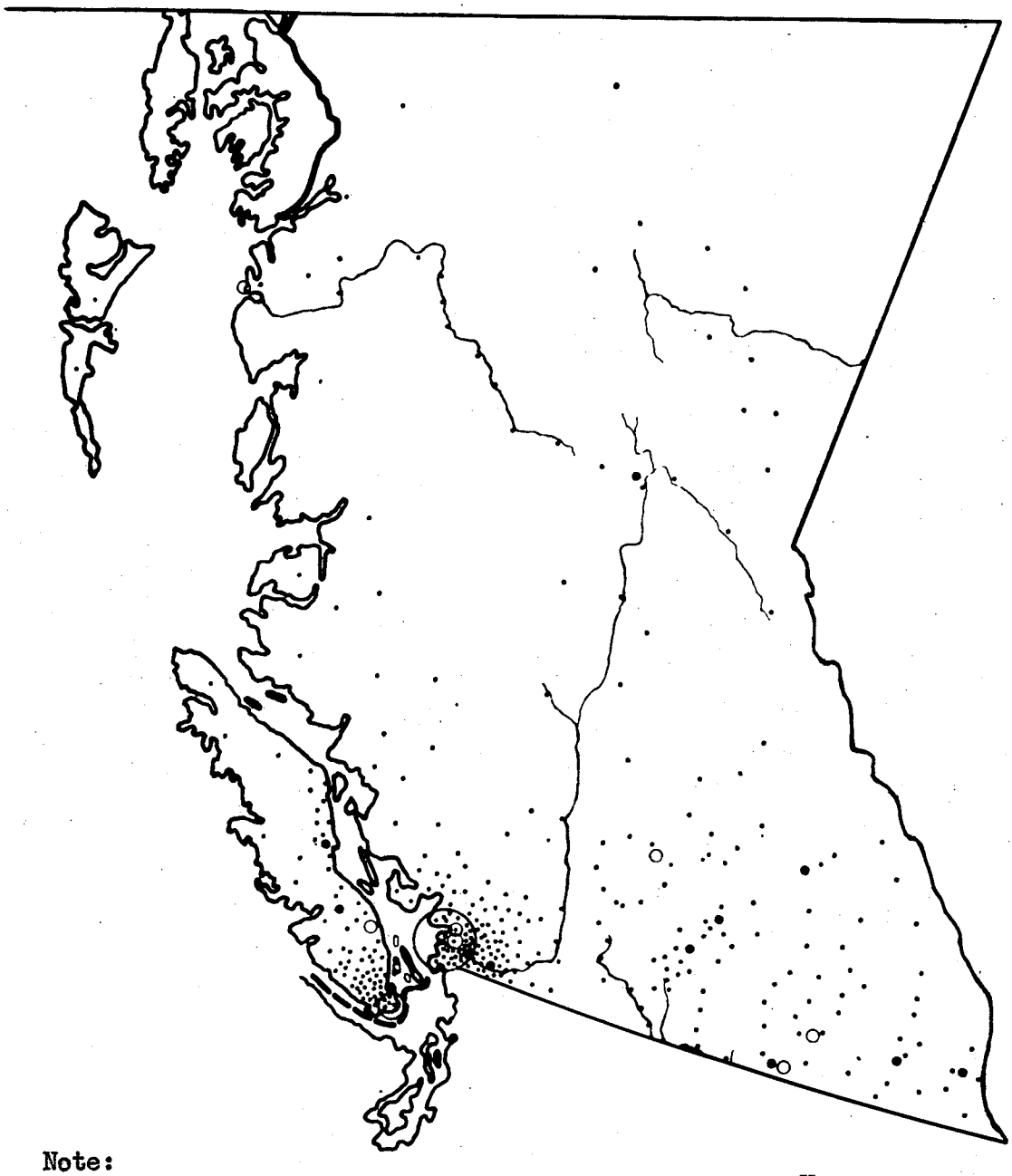
Note:
A dot represents 1,000 people. The population of Edmonton and of Calgary is shown by discs proportionate in area to the dot, and their population is additional to the dot distribution.

Fig. 5 - Showing population density for Alberta in 1931.



Note:
A dot represents 1,000 people. The population of Edmonton and Calgary is shown by discs proportionate in area to the dot, and their population is additional to the dot distribution.

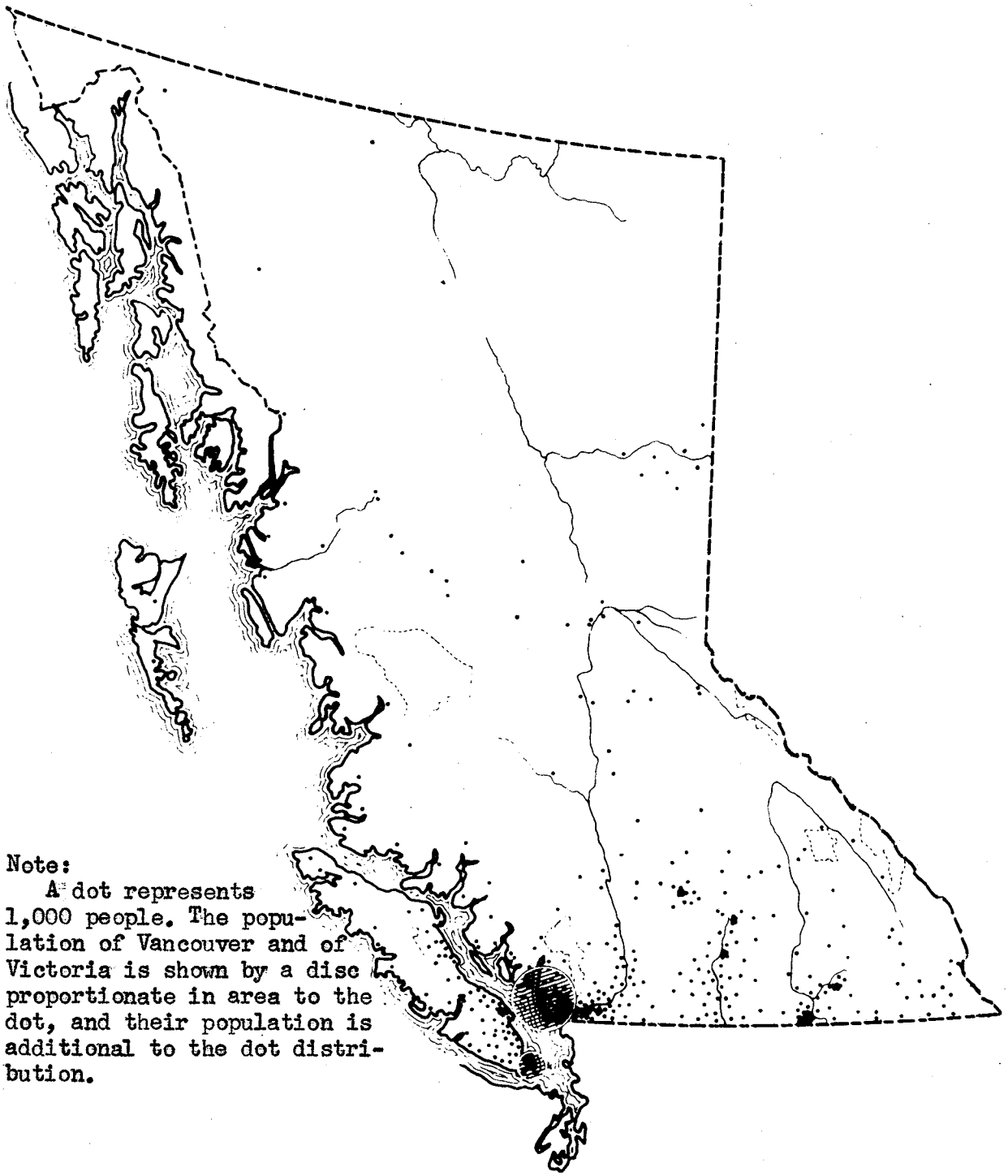
Fig. 6 - Showing population density for Alberta in 1941.



Note:

A dot represents 1,000 people. The population of Vancouver and of Victoria is shown by discs proportionate in area to the dot, and their population is additional to the dot distribution.

Fig. 7 - Showing population density for British Columbia in 1931.



Note:
A dot represents 1,000 people. The population of Vancouver and of Victoria is shown by a disc proportionate in area to the dot, and their population is additional to the dot distribution.

Fig. 8 - Showing population density for British Columbia in 1941.

APPENDIX C

Discussion of Relationship Between Western Canadian Sex And Marriage Ratios By Provinces

After tabulating the sex and marriage ratios for the four Western Provinces of Canada, the writer noticed that a decrease in the sex ratio coincided with an increase in the marriage ratio. A slight change in the sex ratio appeared to coincide with a change in the marriage ratio. This suggested to the writer that the product of the sex and marriage ratios equalled approximately unity. Such a mathematical relationship can be shown by the graph of an hyperbola, $xy = k$. Therefore, the marriage and sex ratios by provinces were plotted on the graph $xy = 1$ to see how closely the curves for the sex and marriage ratios followed the curve for the hyperbola $xy = 1$.

In Figure 9, showing the relationship between the sex and marriage ratios for Manitoba for the 1911 to 1956 period, the uppermost curve represents the hyperbola $xy = 1$. The values used to plot this curve are tabulated in Tables VII to X for Manitoba, Saskatchewan, Alberta, and British Columbia, respectively. In this hyperbola "x" approaches infinity when "y" approaches zero, and "y" approaches infinity when "x" approaches zero. The sex ratio, $\frac{\text{Male}}{\text{Female}}$, approaches infinity as the number of females approaches zero. Therefore, the sex ratio was equated to "x" and plotted along the x-axis. The marriage ratio, $\frac{\text{Married}}{\text{Single}}$, would have to approach zero as the sex ratio approaches infinity. This is exactly what happens to the hyperbola, $xy = 1$, as it moves to the right. Therefore, the marriage ratio was equated to "y" and plotted along the y-axis. The same argument does

TABLE VII

SEX AND MARRIAGE RATIOS AND PRODUCTS FOR MANITOBA

AND VALUES FOR THE HYPERBOLA XY = I

Year	Sex Ratio	Marriage Ratio	Products of Sex and Marriage Ratios	x	y
1901		.50		1.28	.77
1911	1.38	.57	.79	1.44	.68
1921	1.12	.61	.68	.48	2.0
1931	1.11	.62	.69	.64	1.6
1941	1.03	.74	.76	.80	1.25
1951	.97	.97	.94	.96	1.0
1956	1.02	.86	.88	1.12	.89

TABLE VIII

SEX AND MARRIAGE RATIOS AND PRODUCTS FOR SASKATCHEWAN

AND VALUES FOR THE HYPERBOLA XY = I

Year	Sex Ratio	Marriage Ratio	Products of Sex and Marriage Ratios	x	y
1901		.54		.48	2.0
1911	1.90	.55	1.05	.64	1.6
1921	1.35	.58	.78	.80	1.25
1931	1.26	.58	.73	.96	1.0
1941	1.10	.67	.74	1.12	.89
1951	1.03	.81	.83	1.28	.77
1956	1.04	.81	.84	1.44	.68

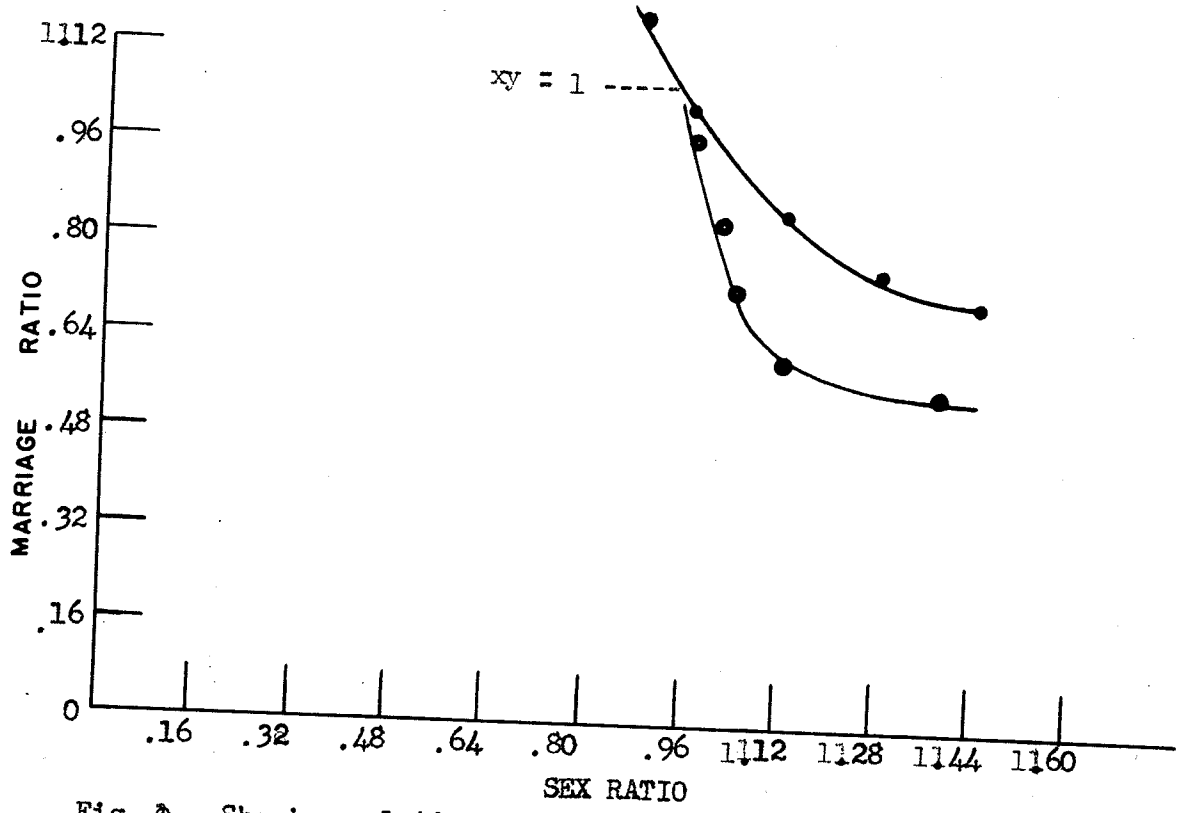


Fig. 9 - Showing relationship between sex and marriage ratios for Manitoba for the 1911 to 1956 period for every ten years.

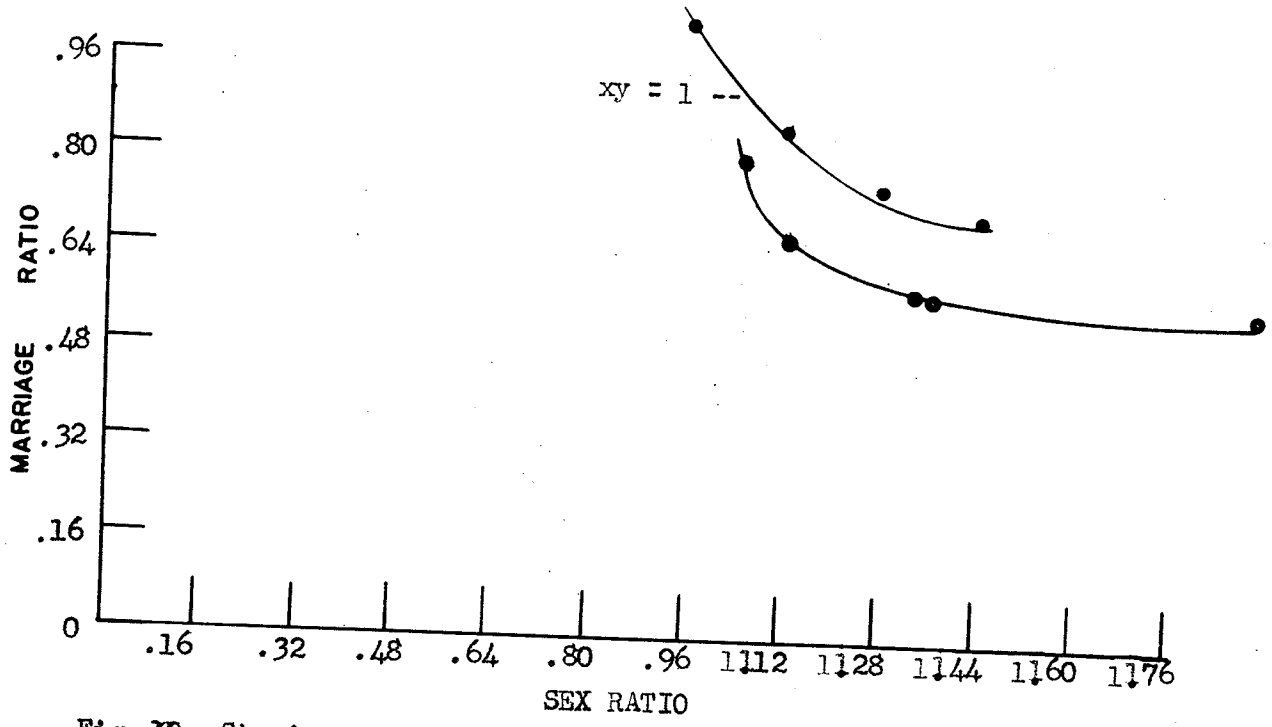


Fig. 10 - Showing relationship between sex and marriage ratios for Saskatchewan for the 1911 to 1956 period for every ten years.

TABLE IX·

SEX AND MARRIAGE RATIOS AND PRODUCTS FOR ALBERTA

AND VALUES FOR THE HYPERBOLA XY = I

Year	Sex Ratio	Marriage Ratio	Products of Sex and Marriage Ratios	x	y
1901		.53		.48	2.0
1911	1.72	.59	.96	.64	1.6
1921	1.37	.63	.86	.80	1.25
1931	1.29	.64	.83	.96	1.0
1941	1.13	.73	.82	1.12	.89
1951	1.03	.94	.87	1.28	.77
1956	1.05	.83	.87	1.44	.68

TABLE X

SEX AND MARRIAGE RATIOS AND PRODUCTS FOR BRITISH COLUMBIA

AND VALUES FOR THE HYPERBOLA XY = I

Year	Sex Ratio	Marriage Ratio	Products of Sex and Marriage Ratios	x	y
1901		.53		.80	1.25
1911	2.35	.60	1.41	1.0	1.0
1921	1.35	.78	1.05	1.2	.83
1931	1.25	.79	.99	1.4	.71
1941	1.08	.92	.99	1.6	.63
1951	.96	1.01	.97	1.8	.55
1956	1.04	.95	.99	2.0	.5

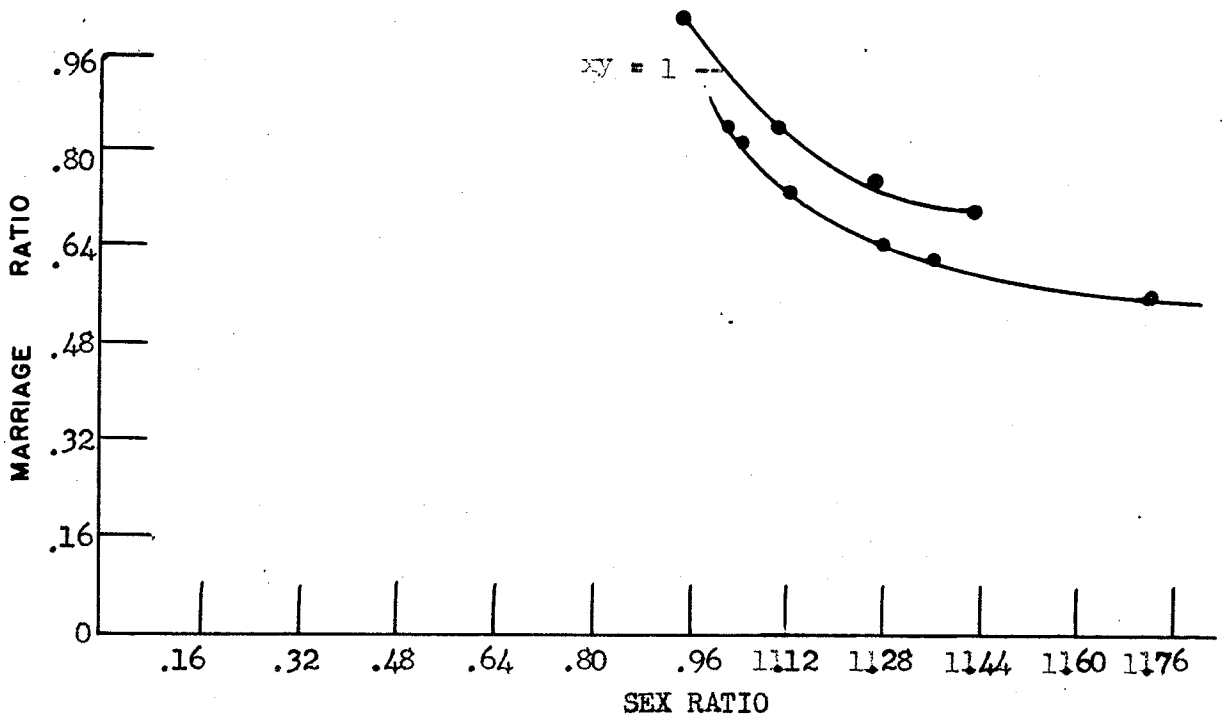


Fig. 11 - Showing the relationship between sex and marriage ratios for Alberta for the 1911 to 1956 period for every ten years.

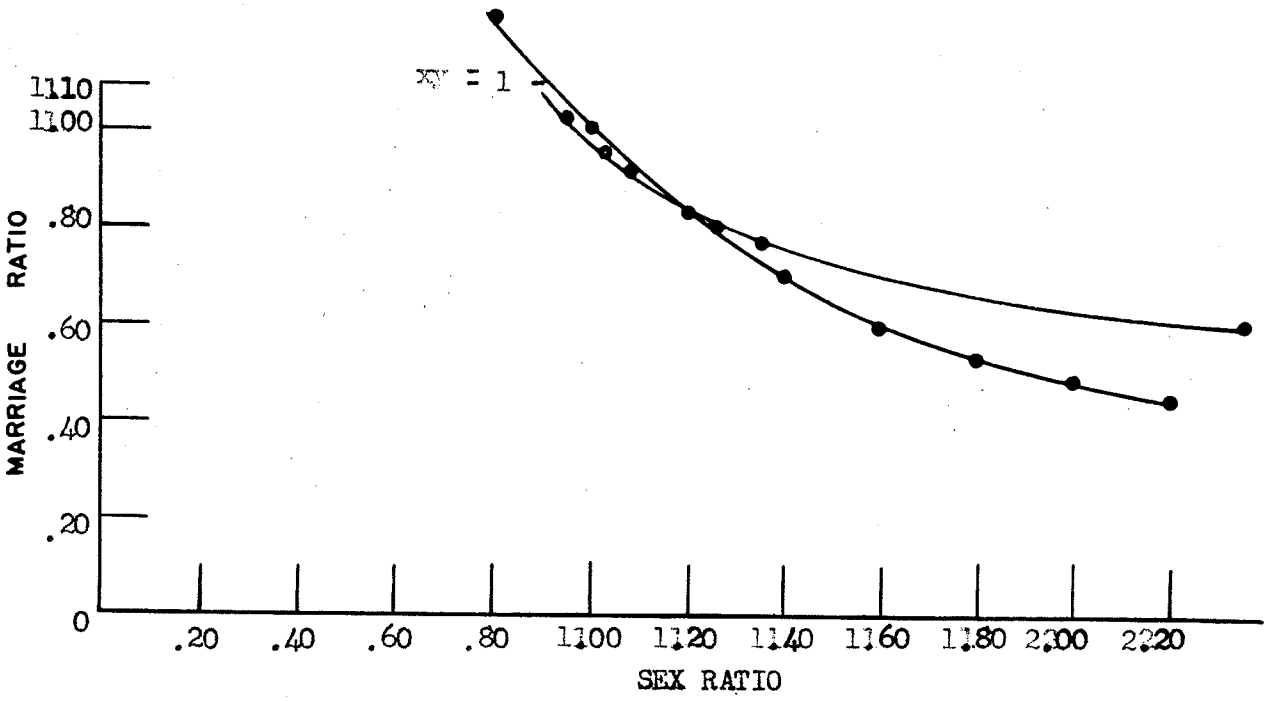


Fig. 12 - Showing relationship between sex and marriage ratios for British Columbia for the 1911 to 1956 period for every ten years.

not hold when the hyperbola moves to the left. As the sex ratio approaches zero the marriage ratio, according to the curve would approach infinity, which is impossible. However, the sex and marriage data seem to suggest that as one increases the other decreases. However, the marriage ratio would have to reach a maximum before the sex ratio approaches zero. Just when this maximum would occur cannot be established from the data. Perhaps, given a community which has already passed through the frontier stage, and barring any economic or other catastrophes, the slope of the curve, as it moves to the right, might approach zero.

The sex and marriage ratio data for each of the four Western Provinces, the data for the hyperbola, $xy = 1$, and the products of the sex and marriage ratios are summarized in Tables VII to X. These data are shown graphically in Figures 9 to 12. From the graphs, it appears that the curves for Saskatchewan, Alberta, and British Columbia, resemble the given hyperbola most closely. As the sex ratio decreased in Manitoba, the marriage ratio climbed sharply. The sex and marriage ratio products for British Columbia after 1921 were very close to unity. Obviously, the number of males and females in a community, however, is only one of many factors which determine how many people will get married, but the data do suggest that there might be some mathematical relationship between sex and marriage ratios.

APPENDIX D

Data On Intelligence Distribution

An attempt was made to prove or disprove the writer's assumption that the intelligence distribution curve for Western Canada would coincide closely with the intelligence distribution curve found in Dr. Baker's book, Introduction to Exceptional Children.[1] The data given here are of two types: (1) reference material; and (2) intelligence quotients obtained from directors of research departments in Western Canada.

A survey of the special education of the Winnipeg Public Schools was made several years ago. The writer of the survey report found the following intelligence distribution: (1) mentally retarded - 2.67%; (2) slow-learning - 9%; and (3) gifted - 1.3%.[2]

A second survey of education in a rural municipality of Manitoba was done some time ago. The writer of this survey report found that of the children in the municipality: (1) 36.4% were retarded one, two, or three years; (2) 54.7% had made normal progress; and (3) 8.9% had been accelerated.[3]

Other writers in this field, besides Dr. Baker, have found that Dr. Baker's intelligence distribution curve is a good approximation of the intelligence distribution providing the group tested is nonselected and large enough. Arch O. Heck writes:

Children rated upon the Stanford revision of the Binet-

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[1]Dr. Harry J. Baker, op. cit., p. 239.

[2]Erma Nadine Chidley, "A Survey and Critical Analysis of the Special Education Program of the Winnipeg Public Schools." Unpublished Master's Thesis, Faculty of Education, University of Manitoba, 1956. pp. 64, 87, 132.

[3]Dr. J. M. Brown, "A Survey of Education in the Municipality of Hamiota." Unpublished Master's Thesis, Faculty of Education, University of Manitoba, 1941. p. 69.

> Simon test approximate a normal distribution if the group is nonselected and if there are enough cases. Terman measured 1,000 "representative children." They distributed themselves as shown in Figure 21. The variations from 100 for equal percentages to the right and left are not identical, but they are nearly so. The distribution is approximately normal.[4]

Edward William Dolch, Christine Porter Ingram, and William Roland Featherstone, who wrote about the slow-learners, discovered that between 18% to 20% of the school population is of slow-learning ability.[5, 6, 7] The foregoing authors all agree with Dr. Terman and Dr. Baker.

However, the writer of this report obtained some intelligence distribution data from several directors of research departments in Western Canada. The following tables were prepared by the writer from the data sent to him by Mr. Charles Henry, Director of Research, School Division of Winnipeg No. 1. The writer of this report worked out the frequency, of the cumulative frequency, the percentiles, and the per cent of the particular group that fell into the seven divisions of intelligence on the curve in Figure 18.[8] These data are summarized in Tables XI and XII. The per cents are accurate to one decimal place. They were taken to one decimal place to show the per cent in the groups where the per cent was less then unity.

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[4]Arch O. Heck, The Education of Exceptional Children. (Second Edition). New York, New York: McGraw-Hill Book Company, Inc. 1953, p. 3, 330 - 331.

[5]Edward William Dolch, Ph.D, Helping Handicapped Children in School. Champaign, Illinois: The Garrard Press, 1948, pp. 186, 220, and 277.

[6]Christine P. Ingram, Education of the Slow-Learning Child. (Second Edition). New York, New York: The Ronald Press Company, 1953, pp. 4 - 7.

[7]W. B. Featherstone, Teaching the Slow-Learner. New York, New York: Bureau of Publications, Columbia University, 1953. p. vii.

[8]See p. 63.

TABLE XI

SUMMARY OF C. M. M. SHORT '57 - PRIMARY AND ELEMENTARY INTELLIGENCE SCORES, FREQUENCY, CUMULATIVE FREQUENCY, PERCENTILES AND PER CENTS

GRADE II AND IV, WINNIPEG

Year	I. Q.'s	Frequency	Cumulative Frequency	Percentiles	Per Cent
1955	150-	13	5,793	100	.2
	130-149	261	5,780	99.8	4.5
	110-129	1,934	5,519	95.3	33.4
	90-109	2,724	3,585	61.9	47.0
	70-89	819	861	14.9	14.2
	50-69	42	42	.7	.7
	0-49	0	0		0
		5,793			100.0
1956	150-	12	5,977	100	.2
	130-149	353	5,965	99.8	5.8
	110-129	2,130	5,612	94.0	35.7
	90-109	2,726	3,482	58.3	45.7
	70-89	712	756	12.6	11.9
	50-69	44	44	.7	.7
	0-49	0	0		0
		5,977			100.0
1957	150-	9	5,377	100	.2
	130-149	413	5,368	99.8	7.4

TABLE XI (CONT'D)

Year	I. Q.'s	Frequency	Cumulative Frequency	Percentiles	Per Cent
	110-129	2,117	4,955	92.4	39.7
	90-109	2,252	2,838	52.7	41.8
	70-89	561	586	10.9	10.4
	50-69	25	25	.5	.5
	0-49	0	0	0	0
		5,377			100.0
1958	150-	13	5,744	100	.2
	130-149	380	5,731	99.8	6.5
	110-129	2,013	5,351	93.3	35.1
	90-109	2,616	3,338	58.2	45.8
	70-89	696	722	12.4	11.9
	50-69	26	26	.5	.5
	0-49	0	0	0	0
		5,744			100.0
1959	150-	25	5,492	100	.5
	130-149	381	5,467	99.5	6.8
	110-129	2,074	5,086	92.7	37.8
	90-109	2,439	3,012	54.9	44.4
	70-89	553	573	10.5	10.1
	50-69	20	20	.4	.4
	0-49	0	0	0	0
		5,492			100

TABLE XII

SUMMARY OF DOMINION GROUP TEST OF LEARNING CAPACITY - JUNIOR AND INTERMEDIATE, FREQUENCY, CUMULATIVE FREQUENCY, PERCENTILES AND PER CENTS GRADE IV AND VII, WINNIPEG

Year	I. Q.'s	Frequency	Cumulative Frequency	Percentile	Per Cent
1955	150-	20	3,602	100	.7
	130-149	224	3,582	99.3	6.2
	110-129	1,363	3,358	93.1	37.7
	90-109	1.383	1,995	55.4	38.5
	70-89	560	612	16.9	15.5
	50-69	52	52	1.4	1.4
	0-49	0	0		0
		3,602			100
1956	150-	41	4,611	100	1.0
	130-149	442	4,570	99.0	9.6
	110-129	1,745	4,128	89.4	37.8
	90-109	1,727	2,383	51.6	37.8
	70-89	611	656	14.2	13.2
	50-69	45	45	1.0	1.0
	0-49	0	0		0
		4,611			100.0
1957	150-	29	4,795	100	.6
	130-149	300	4,766	99.4	6.2

TABLE XII (CØNT'D)

Year	I. Q.'s	Frequency	Cumulative Frequency	Percentile	Per cent
	110-129	1,619	4,466	93.2	33.7
	90-109	1,897	2,847	59.5	39.7
	70-89	904	950	19.8	18.8
	50-69	46	46	1.0	1.0
	0-49	0	0		0
		4,795			100.0
1958	150-	47	7,473	100	.6
	130-149	561	7,426	99.4	7.5
	110-129	2,861	6,865	91.9	38.4
	90-109	2,822	4,004	53.5	37.7
	70-89	1,073	1,182	15.8	14.3
	50-69	109	109	1.5	1.5
	0-49	0	0		0
		7,473			100.0
1959	150-	46	5,630	100	.8
	130-149	370	5,584	99.2	6.4
	110-129	2,097	5,214	92.8	37.4
	90-109	2,244	3,117	55.4	39.9
	70-89	839	873	15.5	14.9
	50-69	34	34	.6	.6
	0-49	0	0		0
		5,630			100.0

The following observations may be made from these data about the intelligence distribution: (1) I. Q. 's of 150 - , .2% to 1.0%; (2) I.Q.'s of 130-149, 4.5% to 9.6%; (3) I.Q.'s of 110-129, 33.4% to 38.4%; (4) I.Q.'s of 90-109, 37.7% to 47.0%; (5) I.Q.'s of 70-89, 10.1% to 18.8%; (6) I.Q.'s 50-69, .4% to 1.5%; and (7) I.Q.'s below 49, 0%. Therefore, it appears that the intelligence distribution curve for Winnipeg is flatter than Dr. Baker's curve and the above average intelligent people outnumber the below average intelligent people. About 40% of the people have above average intelligence. (This is, however, not a true picture since some of the people with below average intelligence were in ungraded classes and, therefore have not be included in the foregoing intelligence tests.) Nevertheless, the data seem to show that the special education program should be expanded.

Similar data to the foregoing were obtained from Mr. C. B. Conway, Director, Division of Tests, Standards and Research of British Columbia. The data are summarized in Table XIII. This table was condensed from the material obtained from M. C. B. Conway.

TABLE XIII[a]

PERCENTILES AND PER CENTS FOR INTELLIGENCE QUOTIENTS FOR THE SCHOOL POPULATION OF BRITISH COLUMBIA

Year	Test	Grade	I. Q.	Percentile	Per cent
1946-47	Otis	VIII	130-		1
			110-129	99	34
			90-109	65	50
			70-89	15	15
			50-69		0

TABLE XIII (CONT'D)

Year	Test	Grade	I. Q.	Percentile	Per Cent
1947-48	Hermon Nelson	V	130-	95	5
			110-129	65	30
			90-109	20	45
			70-89	1	19
			50-69		1
1947-48	Hermon Nelson	IX	130-	95	5
			110-129	60	35
			90-109	10	50
			70-89		10
1948-49	Otis	XI	130-	99	1
			110-129	60	39
			90-109	5	55
			70-89		5
1949-50	Otis	VIII	130-	99	1
			110-129	75	24
			90-109	20	55
			70-89		20
1951-52	Otis	XII	130-	95	5
			110-129	35	60
			90-109		35
1955-56	Otis	III	130-	99	1
			110-129	70	29
			90-109	20	50

TABLE XIII (CONT'D)

Year	Test	Grade	I. Q.	Percentile	Per Cent
			70-89	2	18
			50-69		2
1955-56	Otis	VI	130-	96	4
			110-129	57	39
			90-109	14	43
			70-89	2	12
			50-69		2

[a]The data were received from the Division of Tests, Standards and Research, British Columbia.

The following observations may be made from these data about the intelligence distribution: (1) I. Q.'s of 130-, 1% to 5%; (2) I. Q.'s of 110-129, 24% to 60%; (3) 90-109, 35% to 55%; (4) I.Q.'s of 70 to 89, 10% to 20%; and (5) I.Q.'s of 50-69, only 1%. It appears that the intelligence distribution curve for British Columbia would coincide fairly well with Dr. Baker's curve of the intelligence distribution. Furthermore, nobody in grade XII had an I. Q. below 90. The writer of this report assumed in his calculations in Chapters IV to VI that no one with below average intelligence could do high school work successfully.

The intelligence distribution data for 18,121 pupils in grades IV to VIII for Saskatchewan are summarized in Table XIV. These data are based on the Otis Quick-Scoring Mental Ability Test, Beta, form "A" administered by classroom teachers under the direction of the Department of Education in all types of schools in Saskatchewan.

TABLE XIV[a]

DISTRIBUTION OF I. Q. SCORES FOR 18,121 PUPILS, GRADES IV - VIII, INCLUSIVE, OF ALL CLASSIFICATIONS OF SCHOOLS IN SASKATCHEWAN, 1958

I. Q.	Ratio I. Q.			Deviation I. Q.		
	Frequency	Per cent	% - ile	Frequency	Per cent	% - ile
150-	84	.5				
130-149	1,298	7.2	99.5	103	.6	
110-129	5,356	29.5	92.3	4,611	25.5	99.4
90-109	7,568	41.8	62.8	10,660	59.1	73.9
70-89	3,379	18.6	21.0	2,547	14.1	14.8
50-69	436	2.4	2.4	128	.7	.7
	18,121	100.0		18,049	100.0	

[a]Province - Wide Testing Program, 1958. Regina; Saskatchewan: Department of Education, 1958. p. 21.

The following observations may be made from these data under ratio I. Q.: (1) I.Q.'s of 150-, .5%,; (2) I.Q.'s of 130-149, 7.2%; (3) I.Q.'s of 110-129, 29.5%; (4) I.Q.'s of 90-109, 41.8%; (5) I.Q.'s of 70-89, 18.6%; and (6) I.Q.'s of 50-69, 2.4%. From the deviation I.Q.'s, the following observations might be made: (1) I.Q.'s of 130-149, .6%; (2) I.Q.'s of 110-129, 25.5%; (3) I.Q.'s of 90-109, 59.1%; (4) I.Q.'s of 70-89, 14.1%; and I.Q.'s of 50-69, .7%. There are, again, more above average intelligent people than below average intelligent. If the sampling had been done according to age instead of according to grade, and had the sample included people who had dropped out of school, the results might have coincided more

with the results discovered by Dr. Baker.

The Cameron Royal Commission on Education in Alberta reported that: (1) in the population, about 25% would have an I. Q. less than 90, 25% above 110, and the remainder between 90 and 110;[9] (2) of 250 students with I. Q. below 96, 101 (31%) went beyond grade X but only 12 (4.8%) finished high school, of 291 students with I.Q. 97-105, 140 (48%) went beyond grade X but only 82 (14%) finished high school, of the 259 students with I. Q. 106-114, 177 (88%) went beyond grade X but only 88 (34%) finished high school, and of the top group 219 students with I. Q. 115-143 only 179 (81%) went beyond grade X and only 137 (63%) finished high school;[10] (3) of the 12 students with I. Q. below 96, only 2 finished the matriculation course and ten finished the diploma course;[11] and (4) ninety-six per cent of those who achievement matriculation were in the "above average" group intellectually.[12]

In conclusion, on the basis of the foregoing data on the intelligence distribution of the people of Western Canada, the need for special education is greater than indicated in Chapters IV-VI. If the writer is in error in his assumption with regard to the intelligence distribution of the people of Western Canada, he erred because his estimates of the non-average groups were too conservative.

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[9]Report of the Royal Commission on Education in Alberta 1959, pp. 40, 225, 227. Edmonton, Alberta: Queen's Printer, 1959.

[10]Ibid, p. 41.

[11]Ibid, p. 62.

[12]Ibid, p. 63.