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PETER H. BRYCE, M.A., M.D.,

*Chief Medical Officer, Department of the Interior, Ottawa, Canada.*

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A PAPER

READ BEFORE THE

AMERICAN PUBLIC HEALTH ASSOCIATION. AT RICHMOND, VA.,  
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# INSANITY IN IMMIGRANTS.\*

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\* Read before the Section on Vital Statistics, American Public Health Association at Richmond, Va., October, 1909.

The charge having been made in some quarters that there was an unduly large number of immigrants being admitted to Canada, who became subsequently or were at the time of admission insane, it became a duty to endeavour to determine, as far as statistics were possible, what the exact situation was.

For comparison, it was necessary that estimations of populations be made as regards age periods, sex, nationality, &c., according to the last census. The population by age periods in the three countries was:—

	England, Wales.		Canada.		United States.
	1901.		1901.		1900.
Under 15.. . . . .	32.4		34.0		34.4
15-24.. . . . .	19.5	} 47.8%	20.0	} 43.6%	19.6
25-34.. . . . .	16.1		14.5		15.9
35-44.. . . . .	12.2		9.1		12.1
45-54.. . . . .	8.9		11.5		8.4
55-64.. . . . .	6.0	} 19.5%	8.2	} 25.3%	5.3
65.. . . . .	4.6		5.6		4.0

The notable differences at different age periods in Canada, especially as compared with either England or the United States, point to the fact that if a small population, as a Canadian Province or Eastern State, lost during a ten-year period a notable number of its young population, or on the other hand had added to it an abnormal number, it must be apparent that the proportion of persons normally present in any age period would be notably altered. The first is the explanation of the excessive number of persons in the three later age periods in 1901 in Canada, which had for twenty years been losing to the United States a notable number of young men and women; while as will be seen in the figures for the three new Western Provinces, made up of a young population, the difference in the age periods in the 1906 census by an enormous immigration of nearly 100 per cent over 1901, makes the variation from the normal even more marked. Thus:—

Age Period.	Canada.	Manitoba, Saskatchewan, Alberta.	Manitoba, Saskatchewan, Alberta.
	1901.	1901.	1906.
0-15.. . . . .	34.0	38.4	34.3
15-24.. . . . .	20.0	} 47.2%	19.2
25-34.. . . . .	14.5		15.9
35-44.. . . . .	9.1		12.0
45-54.. . . . .	11.5		7.3
55-64.. . . . .	8.2	} 25.3%	3.7
Over 65.. . . . .	5.6		2.3

The causes of these differences are at once apparent if we note the number of children in an immigrant population. Taking the years 1905-6-7-8, it is found that of the 187,519 American immigrants to Western Canada there were of men 106,040,

women 40,359, and children 41,090, or an average of 21.91 per cent of children of 14 years and under, as compared with that in a normal population of 34 per cent. This variation in the number of children is even more marked in the immigration from Europe, &c., to the United States, which was for 1904-1908 but 12.1 per cent in a total of over 4,000,000.

Having these primary facts before me, it became essential that in any study of insanity in a given population the number of immigrants in each age period be carefully compared with its relative population, and as up to the end of 1908 the total immigration returns to Canada were available, I attempted to study the effect of this immigration to the three Northwest Provinces of Canada, whose population had increased by almost 150 per cent between 1900 and December, 1908.

It was especially difficult to determine the true population of Canadians and Americans in these provinces, because a very notable proportion of the immigrants had been from Eastern Canada, and of those from the United States many were returned in the census of 1906 as 'returned' Canadians, although in the immigration returns many of these were given as Americans. Estimate had also to be made of the natural increase both in the population of 1901 and that of the immigrants of each successive year.

With the errors so far as possible eliminated in estimating population by nationalities, I was fortunate in being able to obtain a yearly return of the admissions into the several insane asylums from 1901 to 1908.

ADMISSIONS TO ASYLUMS IN MANITOBA, SASKATCHEWAN AND ALBERTA, 1900-1908.

	Total for 9 Years.	Total of 1st 5 Years.	Total of 2nd 4 Years.
Canadian.....	759	353	397
English.....	353	146	207
Irish.....	80	29	51
Scotch.....	106	53	53
United States.....	149	42	107
Germany.....	56	23	33
France.....	53	24	29
British possessions.....	13	4	9
Norway and Sweden.....	133	54	79
Austria.....	145	55	90
Russian.....	95	43	52
Italy.....	3	1	2
China and Japan.....	6	1	5
Unknown.....	31	4	27
Total.....	1,982	840	1,142

Comparing the admissions at the end of 1900 with those at the end of December, 1908, the fact is found that in one of the two asylums 40 per cent of those present in 1900 were still inmates in 1908, and in the other 61 per cent, indicating not only the probably young age at which such were admitted, but also how without any per 1,000 increase of insane, asylums do rapidly fill up. That is, with a total of 407 in the asylums in 1900 there were, including those, to the end of 1908, 1,982 admissions; but with a population increased by 150 per cent in 1908 as compared with that in 1900, the admissions were 358, as compared with 142, or estimated per thousand population the admissions in 1908 were .335, while those admitted in 1901 were .329 per 1,000.

It is of importance as regards the number of immigrant insane that the Canadians in the population of 1901 were 62 per cent of the total population, and in 1908 but 54 per cent. If a larger group be taken, as the first five years compared with the latter four years, which, with a population of just 1.7 more persons had 1,142 admissions as compared with 840 or with 961 if the population be made of the same ratio, it appears that there is a slight increase; but it will be observed that the movement of a portion of the 38 per cent of the total population from below the 15-year age period to that between 15 and 24, which was 8 per cent of the total admissions in any year, and of

those between 50 and 60 to the period beyond that, will fairly account for this increase. If we turn to the rate per 1,000 of admissions of different nationalities for the nine years and reduce them to an average for one year, we obtain the following:—

Nationality.	Population.	Admission per 1,000 to N. W. Asylums average of 9 years reduced to one year.
Canadians..	461,229	0.19
British Islands..	185,401	0.32
British possessions (total 1,533) ..	1,533	0.94
United States..	218,347	0.076
Germany and Holland..	18,132	0.34
France, Belgium and Switzerland..	28,711	0.52
Austro-Hungary, Galicia, &c..	85,091	0.18
Russia and Finland..	47,206	0.22
Italy and Spain..	2,134	0.16
China and Japan..	1,464	0.45
Others..	1,197	2.30

What is worthy of remark in these tables is the relatively low rate of native Canadians and of Americans; but it must be remembered that of the latter probably a larger percentage are of Americanized Germans, Scandinavians and their families than of the old Anglo-Saxon stock.

However, it has been remarked by others as well as by myself, that the Teutonic peoples, both German and Scandinavian, have in America a relatively high number of insane. What further is equally notable is that the Slav races, whether native Russians or Galicians, Poles, &c., have year in and year out a remarkably low percentage of insane, and the same may be said especially of the Italians.

Another rather remarkable fact is shown by the tables, viz., that of 1,982 admissions to these asylums, 1,274 were men and 708 were women. Compared with the ratio per capita, it is found that while males to females in the population were:

Census.	Males.	Females.
1901..	54.6%	45.4%
1906..	57.6%	42.4%

the ratio of admissions was:

1901..	64%	36%
1906..	66%	34%

The idea that life on the wide western prairies is especially fatal to the healthy mentality of women seems absolutely without foundation, and is, I trust, permanently exploded.

To make our tables yet more valuable, I may give the ratio per 1,000 of admissions to the asylums of these provinces. Averaged to a rate per 1,000 population for one year:—

Age-periods.	Rate per 1,000 population at each age period.
15-24..	0.11
25-34..	0.52
35-44..	0.66
45-54..	0.72
55-64..	0.70
65 and over..	1.05

The comparison of the percentage of admissions as compared with the percentage of population for the same period to the total is of much interest. For 1901-1906, the admissions between 25 and 44 were 58 per cent of the total, compared with 44.2 per cent for the same period in English asylums. For the period over 44, the percentage is 33 per cent of the total, as compared with 39.8 for English asylums. If we take the population percentage for the same age period, 25-44, we find in the Northwest Provinces it was 31 per cent of the total, as compared with 28.3 in England.

What, however, is very remarkable is that while in the Northwest Provinces the percentage of admissions between 15-24 was but 7 per cent of the total, while the population was 21.4 of the total in 1906, the admissions in England were 13.4 per cent, although the population was but 19.4 per cent of the total over 15 years. It would appear that the mental breakdowns in England were greater in the early period of life, and thus would reduce somewhat the number of insane in later periods.

In the period between 25 and 44 the figures for New York State show a similar rate to that of England. Assuming the great difference to be real and not accidental, is it to be explained by the great difference due to the high proportion of urban to rural population in the two latter cases? These comparisons have an important bearing upon the total insane in any population, since while a high percentage, if under 15 years, tends to lessen the total admissions over a low percentage of population in this period, and a relatively high population in the years beyond 45 years tends to increase the total admissions, yet it is the population in the years 25-45 of stress, wage-earning and child-bearing, which tells most directly on the total admissions.

As we have already seen, the percentage of the total population in England between 25-44 was nearly 5 per cent greater than in Canada in 1901, but is almost exactly the same as in the United States in 1900. Hence it will be of interest to compare the rate per 1,000 of admissions in the three countries.

The following table, taking New York State figures, is illustrative:—

	N. W. Canadian Provinces, 1900 to 1908 (average).	England, 1902 to 1908 (average).	New York State, 1901.
Under 15.. . . . .	....	0.03	0.006
15-24.. . . . .	0.11	0.46	0.7
25-34.. . . . .	0.52	0.93	1.2
35-44.. . . . .	0.66	1.22	1.49
45-54.. . . . .	0.72	1.37	1.80
55-64.. . . . .	0.70	1.36	2.00
65 and over.. . . . .	1.05	1.53	2.80
Unknown age.. . . . .	....	....	6.00

Owing to the age periods from which the figures of 1901 census for all Canada are given, they are not exactly comparable with the above; but the total insane was 3.07 per 1,000.

Accepting the figures for England as a standard, we find that 0.5, or one in 2,000 population, were admitted in a year to asylums there. If the population for New York be taken for 1900 as a divisor, then the admissions, taking these for 1904, were 0.91 per 1,000 annually, but if we take the population increase of New York cities for the four years as it was, at 10 per cent, then we may reduce this to 0.80 per 1,000.

The admissions for the Northwest Provinces with their 150 per cent increase, chiefly through immigration, reduced to an average, give 0.27 per 1,000, or about one-third those of New York and one-half those of England.

To illustrate how much care must be taken in comparisons, the following table is given of the official insane in different countries:—

Country.	Year.	No. per 1,000 in Asylums.	Class of Included.
England.. . . . .	1903	3.40	All notified lunatics.
Scotland.. . . . .	1903	3.63	All in asylums, prisons, &c.
Ireland.. . . . .	1903	4.90	Does not include those in private houses.
Canada.. . . . .	1901	2.38	All present during census year.
France.. . . . .	1904	1.77	Inmates of all institutions.
Germany.. . . . .	1903	1.91	Inmates of all asylums.
Norway.. . . . .	1902	0.80	Inmates of all asylums 2.35 by enumeration.
Sweden.. . . . .	1903	0.97	1.54 official insane notified.
Denmark.. . . . .	1901	1.40	1.71 official insane.
New York State.. . . . .	1903	3.39	All inmates of asylums at a fixed date.
Massachusetts.. . . . .	1903	2.88	All inmates of asylums at a fixed date.
Michigan.. . . . .	1903	2.15	All inmates of asylums at a fixed date.
Wisconsin.. . . . .	1903	2.47	All inmates of asylums at a fixed date.
Minnesota.. . . . .	1903	2.13	All inmates of asylums at a fixed date.
Austria.. . . . .	1901	0.51	In asylums.
Italy.. . . . .	1899	1.09	In asylums.

How inadequately expressed is the exact situation as judged by these figures may be seen in the fact that in those western states, Wisconsin and Minnesota, where the foreign population in 1900 was 60 per cent, chiefly Teutonic, and a young population, the asylum admissions are greater than in Germany, three times as great as Norway and Sweden, while they are four times greater than in Austria, and twice that of Italy.

It will be recalled that in the Canadian West the Teutonic immigrants admitted to asylums per 1,000, averaged for Germans, 0.34, Norway and Sweden and Denmark, 0.52, so that it is plain that the clearest distinction must be made in comparisons, between the official insane, and the insane by census enumeration. Further, it must not be forgotten that it is only the 15-24 year age period, of all ages prior to 25 in which insane are found, so that an immigrant population with its relatively low child population will always show higher in the rate per 1,000 of population than it normally should.

How hospital and asylum accommodation is the chiefest factor in increasing the asylum population is seen in different states. Thus, from 1880 to 1903, the ratio of increase of insane in the asylums of New York was 62.5 per cent; Wisconsin, 35.9 per cent; Minnesota, 66.5 per cent. The latter, however, was relatively lower to start with in 1880, the rate being 1.46, as compared with 2.76 in 1903. The comparative study must, however, be much further refined if we wish accurate information. Thus the statistics of the Metropolitan asylums of London for 1907 are most instructive. Patients admitted were 5,285 (but if corrected for transfers from one asylum to another, is 3,554). This made an actual decrease of 43 over 1906. Of the attacks in 1907:

- 1,512 were first attacks of less than 3 months' duration.
- 417 were more than 3 and less than 12 months' duration.
- 651 were not first attacks of less than 12 months' duration.
- 46 were less than 12, but not known if first attacks.
- 522 were more than 12 months' duration.
- 278 were of unknown duration.
- 126 had congenital signs of insanity.
- 6 not insane.

The percentage of first attacks to total admissions in 1907 was 55.3 per cent.

In pursuing my investigations into the asylums themselves in Canada, I found that the transfers and repeated admissions of the same person, as is seen in London, practically precluded the use of the year by year admissions as a basis of accurate comparison. But apart from this the problem, especially in the older provinces, was complicated by the fact that the place of birth if outside Canada caused the insane person to be registered as foreign-born, and he was often classed as an immigrant without the fact being mentioned that he was admitted perhaps as a senile dement of 70 years and had been 50 years in the country.

Again, in certain of the asylum districts into which for departmental purposes Ontario is divided, the population is largely rural, and has had between 1900 and 1908 few immigrants. In such it was found that the native-born Canadians in 1905-1908 gave a higher percentage of admissions than in 1901-1904, or 90 per cent in the latter as compared with 77.7 per cent in the former, in the Brockville district. Superficial examination would lead us to the conclusion that the native-born Canadians were becoming increasingly insane; whereas, the fact really is that year by year the old settlers, foreign-born, are dying off and the native-born is yearly increasing in the population. The same was shown in the French Canadian population in the asylums of Quebec. In effect a study of the insane in the foreign-born in America is only of any value where it is taken as we have done in Manitoba and studied it by age periods. This was especially seen in Ontario, where there are eight asylum districts, and comparisons of admissions to each of these by ages was made. For instance, the Toronto district, which probably receives 50 per cent of the annual immigration to the province, as New York city does, was compared with the old-settled Brockville district. The



admissions in Toronto per 1,000 were higher in the youngest population period, and in the oldest in Brockville, than in any of the other districts. But while Toronto had nearly 50 per cent more per 1,000 population for the age period 15-24 than Brockville, the latter had actually four times as many admissions per 1,000 for the period over 65 years as Toronto.

What is further of great interest is that the Northwest Provinces, with a population increase in eight years of 150 per cent mostly by immigration as compared with that to Ontario of but one-tenth of the population, had but slightly more insane in the 15-44 age period than in 1900, this being that to which immigrants almost wholly belong.

The total admissions to Ontario asylums in 1907 over 1905 was but 47, while outside of Toronto there was, in five asylums, an actual decrease of 31 admissions. As a matter of fact there seemed but one province, that of British Columbia, where during the four-year period of 1904-1908 the increase in admissions to the asylum of English-born immigrants seemed disproportionate to the total of immigrants who are known to have entered the province.

But the subject is one of extreme importance, and the existence and enforcement of immigration laws are alone likely to prevent the ingress of persons who are undesirable aliens.

