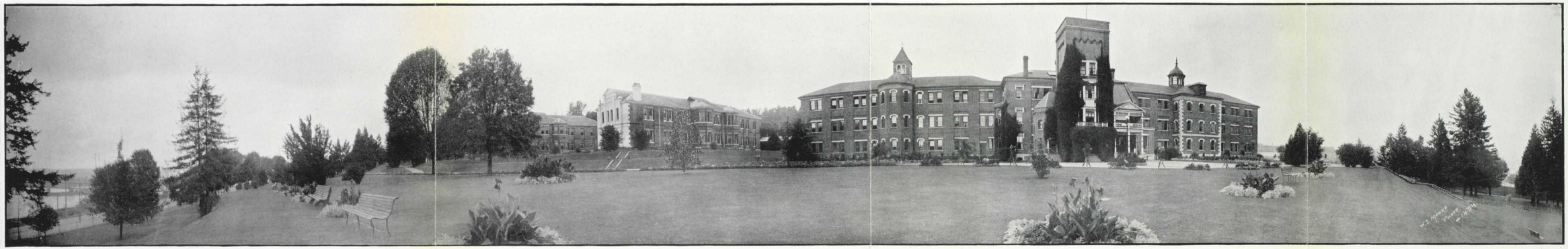

PROVINCIAL MENTAL HOSPITAL (BRANCH) AT NEW WESTMINSTER, B.C.

REPORT

OF THE

ROYAL COMMISSION

ON

MENTAL HYGIENE

(Appointed under the "Public Inquiries Act" by Order in Council dated December 30th, 1925)

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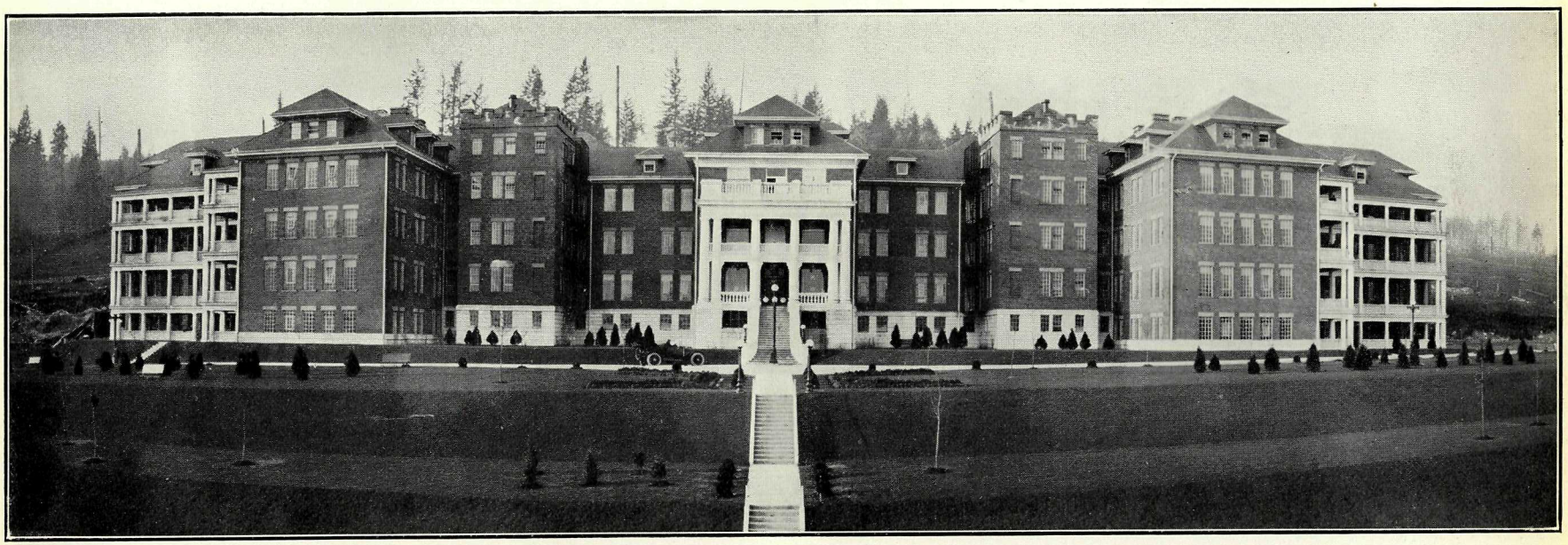

PROVINCIAL MENTAL HOSPITAL, ESSONDALE, B.C.

Appointment of the Commission.

FROM VOTES AND PROCEEDINGS OF THE LEGISLATIVE ASSEMBLY OF BRITISH COLUMBIA, NOVEMBER 18TH, 1925.

On the motion of the Hon. Mr. *Sloan*, seconded by Dr. *Rothwell*, it was *Resolved*,—

Whereas, in accordance with the provisions of the "British North America Act," the Province of British Columbia is maintaining a Mental Hospital:

And whereas the number of persons treated in the said Mental Hospital and its branches is increasing to an alarming extent:

And whereas 66 per cent. of the inmates of the Mental Hospital are not Canadian-born and 90 per cent. not natives of this Province:

And whereas it is necessary to provide for the erection of further buildings to house the increasing number of patients:

And whereas the cost to the people of this Province for the maintenance of the mentally afflicted is now over $750,000 per annum, exclusive of capital charges:

And whereas the treatment and care of subnormal and mentally deficient children has also become an urgent and very serious question:

Now, therefore, be it Resolved, That a Select Committee of this House be appointed to investigate and report upon the following matters:—

(1.) The reasons for the increase in the number of patients maintained in the Provincial Mental Hospital and branches thereof:

(2.) The causes and prevention of lunacy in the Province generally:

(3.) The entry into the Province of insane, mentally deficient, and subnormal persons:

(4.) The care and treatment of subnormal children:

(5.) All such other matters and things relating to the subject of insanity, especially as they affect the Province of British Columbia, as the said Committee may deem pertinent to their inquiry.

The Resolution was carried unanimously.

FROM VOTES AND PROCEEDINGS, NOVEMBER 19TH, 1925.

With the leave of the House, on the motion of the Hon. Mr. *Sloan*, seconded by the Hon. Mr. *Manson*, it was *Resolved*,—

That under and by virtue of the terms of the Resolution unanimously passed by this Legislature on November 18th, 1925, a Select Committee of this House, consisting of Messrs. *Rothwell*, *Odlum*, *W. A. McKenzie*, *Hayward*, and *Harrison*, be appointed to investigate and report upon the following matters:—

(1.) The reasons for the increase in the number of patients maintained in the Provincial Mental Hospital and branches thereof:

(2.) The causes and prevention of lunacy in the Province generally:

(3.) The entry into the Province of insane, mentally deficient, and subnormal persons:

(4.) The care and treatment of subnormal children:

(5.) All such other matters and things relating to the subject of insanity, especially as they affect the Province of British Columbia, as the said Committee may deem pertinent to their inquiry.

That instructions be given to the said Committee to report its findings and recommendations to this House; and that the said Committee shall have power to call for the attendance of persons, the production of books, papers, and to do all things necessary in carrying out a full inquiry.

The members named proceeded with their inquiry as a Special Committee of the House, and on December 17th, 1925, asked permission to continue their investigations and to report at the next Session of the Legislative Assembly.

On December 30th, 1925, they were accordingly appointed Commissioners under the provisions of the "Public Inquiries Act."

Report of Commission on Mental Hygiene.

To His Honour the Lieutenant-Governor in Council:

MAY IT PLEASE YOUR HONOUR:

In pursuance of a Commission under the Great Seal, bearing date December 30th, 1925, directing and empowering us to hold a general inquiry into matters affecting the mental health of residents of this Province, we beg to report as follows:—

We have inspected the Provincial Mental Hospital and its branches and have made a survey of the records of all patients admitted during the past ten years.

Public hearings have been held in Vancouver and Victoria, at which evidence was given and recommendations made by members of the medical profession, public officials, representatives of various welfare organizations, and other interested persons.

We have made no inquiry into individual cases and complaints, as we considered it to be outside the scope of this inquiry to enter into any questions affecting individual cases in our mental institutions.

So far as possible in the time at our disposal we have secured and studied such information as has been available on the subject in other places, particularly in the other Provinces of Canada, the United States, Great Britain, and the other Dominions.

GENERAL OBSERVATIONS.

Before proceeding to specific findings and recommendations for this Province, we deem it necessary to make the following general observations:—

Mental disorder should be recognized by the public as a disease like other diseases, and mental deficiency as an abnormality like any bodily abnormality. A mind diseased may be treated no less effectively than a body diseased. The duty of society and the State to the mentally afflicted in no way differs from its recognized duty towards the afflicted in body.

Treatment of the mentally afflicted, the science of psychiatry, has in the past lagged far behind other branches of medicine, but has made great advances in recent years and promises to make even greater advances as the result of an awakened interest and a growing sense of the importance of the problem. It is therefore advisable that all proposed State undertakings in this respect should be very carefully considered, that they may be placed on foundations that will admit of adaptation, thus avoiding unnecessary loss.

A clear distinction must be recognized between mental disorder (commonly known as insanity), which in many cases may be prevented or cured, and mental deficiency (commonly known as feeble-mindedness), which cannot be cured, but the effects of which may be mitigated in many cases by suitable training. The two groups constitute separate problems requiring entirely different care and treatment.

Problems of prevention and care are greatly complicated in British Columbia by reason of its great area and the scattered nature of settlement outside a few large centres.

FINDINGS.

1. With regard to the large increase in the number of patients in the Provincial Mental Hospitals in recent years, we find:—

(*a.*) That there is no reason to believe that the increase is disproportionate to the increase in the general population during the same period:

(*b.*) That it is not due to, or to be regarded as proof of, any great increase in the proportionate amount of mental abnormality in the population, but is largely accounted for by a growing tendency of the public to seek hospital accommodation when the occasion arises:

(*c.*) That, in proportion to population, the increase in hospital patients is not greater in British Columbia than in the other Provinces of Canada or other parts of the civilized world.

2. We find that our present mental hospitals are seriously overcrowded and now at the limit of their capacity. This is accounted for by the fact that they have been required to provide accommodation for mental deficients for whom no other provision has ever been made in our system of mental institutions.

3. We find that our mental hospitals, in respect of equipment, methods of care, and curative treatment, compare favourably with any on this continent and are held generally in high regard, not only by our own medical profession, but by authorities elsewhere.

4. We find from the records of the Provincial Mental Hospitals that the foreign-born in our population appear to have contributed a considerably larger proportion of mental cases than should be expected from their numbers in the general population of the Province. While hesitating to draw invidious conclusions from what may be insufficient data, we find that these records are proof of the imperative need for greater care in the examination of all immigrants to Canada.

RECOMMENDATIONS.

We therefore beg to recommend:—

1. The creation of a Provincial Board of Control, to be composed of officials already in the public service who shall serve on this Board without added remuneration, to act in an advisory capacity in co-ordinating and supervising the work of Provincial mental institutions and to perform such other duties as may be entrusted to it.

2. The establishment of a psychopathic hospital, to be operated by the Province as a unit of the mental institution system and preferably in close co-operation with a leading general hospital. Equipment to include provision for out-patient service and travelling clinics to cover other parts of the Province.

3. Removal from the mental hospitals, as soon as other accommodation can be provided, of mental deficients (including idiots and imbeciles) now domiciled there and their establishment in other appropriate quarters. Those suited for training should be segregated under the colony system, which affords the best practical facilities for making them self-supporting; for the remainder all that is required is comfortable housing and appropriate care.

4. Sterilization of such individuals in mental institutions as, following treatment or training, or both, might safely be recommended for parole from the institution and trial return to community life, if the danger of procreation with its atten-

dant risk of multiplication of the evil by transmission of the disability to progeny were eliminated. Sterilization in any case to be performed only with the written consent of the following described persons: (*a*) The patient, if capable of giving such consent; and (*b*) the husband or wife if the patient be married; or (*c*) the parent or guardian if the patient be unmarried and said parent or guardian be resident within the Province, or the Minister of the Department charged with the administration of mental institutions if the patient be without parent or guardian resident within the Province; and in every case only after recommendation by the superintendent of the institution and approval of the Board of Control.

5. Conference with other Provinces of Canada looking to an agreement whereby the cost of maintenance of patients from other Provinces will be borne by the Province to which their support properly belongs.

6. Representations to the Dominion Government requesting: Greater care in the examination of immigrants to ensure the total exclusion of the mentally unfit and those liable to insanity; that this Province be given notification and full particulars of all immigrants admitted to Canada under special permit. The other Provinces should be requested to join in such representations to the Dominion Government.

In concluding this report, we find it necessary to record that we cannot regard our inquiry as complete and we therefore submit that it should be continued. We have found that the problem has wider ramifications and presents more difficulties than we had suspected at the outset. Growth of public enlightenment on the subject in nearly all civilized communities has forced radical changes in the attitude and sense of responsibility of society and the State towards the mentally afflicted. The result has been something in the nature of a revolution in methods of care and treatment in recent years. It is only within the last decade that serious attention has been directed to the possibilities of preventive measures which may well prove as fruitful as our modern successes in combating such scourges as tuberculosis, typhoid, and venereal diseases. New methods and new types of institutions are of such recent and varied development that there has not yet been time for a standard to be evolved. Consequently the greatest care must be exercised in selecting those which appear to be best suited to our conditions in British Columbia. The problem is largely economic; to decide what methods offer the greatest practical promise, and then to decide to what extent they can be adapted to our particular geographical problems and how far the public purse can or should go.

In appendices to this report we elaborate some of our findings and recommendations and review the more important evidence on which they have been based. We wish to direct particular attention to the report of Miss Helen Davidson on her expert analysis of the case records of the mental hospitals of British Columbia for the last ten years. Miss Davidson, who is a resident of New Westminster and formerly a teacher in the special classes for subnormal children in that city, has pursued her studies in the Department of Psychology at Stanford University, California. Her survey was made primarily for the information of this Commission, but is of permanent value to the institutions as it affords for the first time definite statistics needed for some time by the directors, but which they had had no previous opportunity of securing. It should prove of interest to all concerned in the problem of mental infirmity in this Province.

The cost of this inquiry to date is $4,633.74, made up as follows:—

Salary of Assistant Secretary (J. A. Macdonald)	$2,950 00
Fee and expenses, Miss Helen Davidson	1,001 90
Travelling expenses	478 50
Office and sundry expenses, including reporting of evidence and advertising	203 34
	$4,633 74

Members of the Commission have served without remuneration, receiving only their out-of-pocket travelling expenses.

All of which is respectfully submitted.

E. J. ROTHWELL.
VICTOR W. ODLUM.
W. A. McKENZIE.
R. HAYWARD.
P. P. HARRISON.

Victoria, B.C., February 28th, 1927.

Appendix A.

Reasons for the Increase in Numbers of Patients Maintained in the Provincial Mental Hospitals.

With respect to the first question in the commission under which we have made our investigations, "The reasons for the increase in the number of patients maintained in the Provincial Mental Hospital and branches thereof," we find that, while there has been a steady increase, it has not been out of proportion to the increase in the population of British Columbia when viewed in the light of conditions in other Provinces of Canada and other parts of the English-speaking world.

We find ourselves satisfied that British Columbia has not established any undesirable pre-eminence either in the proportion of her population afflicted with mental disease or mental deficiency, or in the burden such citizens entail upon the State and the community. Where the proportion of cases in institutions in other places is less than in British Columbia, an explanation is found in the fact that in those places provision for institutional care is not so advanced. The inevitable inference is that in such places there are fewer cases in institutions and more cases at large in the community than in British Columbia.

The late Dr. H. C. Steeves, Medical Superintendent of our Provincial Mental Hospitals since 1920 and connected with these institutions since 1913, gave evidence on this point. Questioned as to whether he had seen any abnormal growth in the insane group in the population, Dr. Steeves said:—

"Our admission rate has increased slightly. It used to be an average of 400 yearly; it has gradually crept up from that number until this year (fiscal year 1925–26) it will be in the vicinity of 480. I think that is not in any way disproportionate to the general increase in population in the Province as a whole. The population of our institutions, when compared with institutions for mental diseases in the State of Washington and Alberta, looks out of proportion for the reason that we have not only the insane, but the feeble-minded as well; the latter are all counted in the one category with the insane without any particular segregation in our statistics.

"In Washington, Oregon, California, Alberta, and practically all the Canadian Provinces, they do not admit to their mental hospitals the feeble-minded and epileptics. So we are rather prone to think our mental hospital population does not compare favourably with other Provinces. If the population of all their institutions were taken and added together, perhaps our population would be within a fair parallel."

We find a general agreement that there is an increasing demand for institutional care of mental cases. This is not interpreted as meaning any great increase in numbers of the afflicted, but rather a steadily growing realization on the part of the public that the institution is the best place for them, not only because it lightens the burden on those immediately concerned in their care, but also because there is a wider recognition of the fact that cure is possible in many cases and that the mental institution is the best place for that cure to be effected.

Dr. C. M. Hinks, Medical Director of the Canadian National Committee for Mental Hygiene, which must be regarded as the foremost authority in Canada, answering a direct question on this subject, said: "There is unquestionably an increasing demand throughout Canada for the institutional care of mental cases. In 1917, for example, there were 5,891 mental hospital patients in Ontario, as compared with 8,364 in 1922. All Provinces in Canada show an increase in the institutional rate and this is also true of the United States and England. We are not warranted in stating, however, that the insanity rate of the population as a whole is on the increase, because with the betterment of institutions an increasing number are seeking State care. Many of us believe, however, that, with the increasing complexity of community life, mental and nervous disorders are actually on the increase."

Official reports of other Provinces indicate a similar conclusion. The report of W. W. Dunlop, Ontario Inspector of Hospitals for the Insane, Feeble-minded, and Epileptic, for the year ended October 31st, 1923, notes that the history of these hospitals does not vary much from year to year.

"It is a history of a progressive increase in numbers and a corresponding increase in the cost of maintenance." After recording an increase of 133 in general admissions during the year, an increase of 530 in numbers treated, and a net increase of 531 in numbers in residence and on application at the end of the year, the report explains that, owing to the high standard of the hospitals with modern methods of treatment, "the old asylum idea has become blotted out and the Ontario hospitals are now popular institutions. As a logical consequence they attract a larger population and hundreds of patients now come to us because there is no longer the fear or dread which existed twenty-five or thirty years ago."

Dr. A. T. Mathers, Provincial Psychiatrist for Manitoba, giving his views to this Commission, said:—

"Your Province, like some other parts of the English-speaking world, has apparently been impressed with the increase in the number of mental cases coming under care in the last few years. We in Manitoba have been similarly impressed, but in thinking the situation over carefully and comparing conclusions with those interested in other parts of the world, I have come to the conclusion that, while there has been an actual increase in the number of patients under care, the actual number of cases of mental disease in the Province has probably increased little, if any. This seems to indicate that what has actually happened is that people at large have a greater confidence in their mental hospitals and that a great many patients are now being admitted to care who in former years would have been kept at home simply because their interested relatives were loath to trust the unfortunate patient to the care of institutions that were regarded with so much distrust and suspicion. There is another thing that we have noted, and that other localities, especially Ontario and New York, have also noted, and that is that with the improvement of provision for the insane the number of visible insane immediately increases."

Australia, with a total of 19,929 in mental institutions in 1923, or 3.47 per 1,000 of the population, has a similar finding. The official report quoted in the Year Book of the Commonwealth for 1925 says that "a more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an earlier stage. Hence an increase in the number of cases recorded does not necessarily imply any actual increase in insanity." United States and British official reports, and the published discussions of leading psychiatrists and investigators, bristle with allusions to the same finding as an accepted fact.

In England and Wales at January 1st, 1926, according to the report of the Board of Control, there were 133,883 notified insane persons (not including mental deficients), an increase of 2,708 during the year 1925. This works out at approximately 3 per 1,000 of the population. Deducting from the total of 1,995 in British Columbia institutions at March 31st, 1926, the (approximate) 250 feeble-minded who should not be in mental hospitals, and assuming the population of the Province to be about 600,000, it will be seen that the proportion of insane in institutions here is rather less than in England and Wales.

Other reasons for the general increase in the numbers of insane in institutions include: (*a*) Increasing longevity of the patients, due to better care and more scientific treatment in recent years; (*b*) the increasing strain of modern living conditions; and (*c*) change in the standard adopted by the authorities in deciding what degree of mental disorder justifies certification to an institution. In Great Britain, according to Leonard Darwin in his new book "The Need for Eugenic Reform" (1926), "the number of certified insane has, in large measure, been dependent on the accommodation available, and it has increased with every additional asylum built."

British Columbia, we therefore find, has no special problem out of line with that which confronts the rest of the civilized world. Its proportion of mentally afflicted persons is not abnormal; nor is there any perceptible increase in that proportion. But, with the modern methods and increasing attention now given to the possibility of mental cures, fewer cases are "hidden" and consequently a greater number are being brought to official notice and are being recorded. Only when a system of compulsory reporting is adopted will all the facts be disclosed, and not till then can final deductions be drawn.

Appendix B.

Causes and Prevention of Mental Disorder.

As to the second reference of the Commission, "The cause and prevention of lunacy in the Province generally," we find ourselves on exceedingly difficult ground. As before observed, it is generally agreed that the science of psychiatry has lagged far behind other branches of medicine. Search of the recorded opinions of men prominent in the profession in various countries forces the conclusion that not enough is yet known as to the causation of mental disorder to justify any definite general pronouncement. Apart from that, records of what is known are too complicated to find a place in a report of this nature.

The British Royal Commission on Lunacy and Mental Disorder, which reported to Parliament in 1926, observes at the outset of its report that "It has become increasingly evident to us that there is no clear line of demarcation between mental illness and physical illness. The distinction as commonly drawn is based on a difference of symptoms. In ordinary parlance a disease is mental if its symptoms manifest themselves predominantly in derangement of conduct, and as physical if its symptoms manifest themselves predominantly in derangement of bodily function. This classification is manifestly imperfect. A mental illness may have physical concomitants; probably it always has, although they may be difficult of detection. A physical illness on the other hand may have, and probably always has, mental concomitants. And there are many cases in which it is a question whether the physical or the mental symptoms predominate."

Professor George M. Robertson, President of the Royal College of Surgeons, Edinburgh, Professor of Psychiatry of Edinburgh University, and one of the recognized authorities, we believe speaks for the great majority of the profession when he divides insanity into three distinct types, the hereditary, the acquired, and the decadent, associated with three age periods —early adult life, middle age, and senescence, although not limited to them. It should be remarked here that insanity rarely appears in childhood; the age of 15 is about the earliest and it is then generally accepted as one of the complications of adolescence. Professor Robertson finds there is a general tendency for insanity to become more frequent as one grows older.

It will be noted that Professor Robertson puts heredity first in his list. We find this to be in accord with the conclusions of the great majority of authorities, although there appears to be wide variance of opinion as to the proportion of insanity due, either partially or wholly, to this cause. Estimates are found to run all the way from 15 to 90 per cent., but it would appear that the higher figures must include feeble-mindedness, in which the influence of heredity is generally accepted to be paramount.

The acquired insanities appear mostly in middle life and it is held that here the benefits of prevention are more noticeable than in any other category. Alcoholism and syphilis (the latter now regarded as the only factor in causing general paralysis of the insane) contribute the major proportion of acquired insanity. It is believed that the gradual mending in the drinking habits of the race is lessening the incidence of insanity due to alcoholism, although a complete abstinence from alcohol would not wipe out all insanity now attributed to that cause for the reason that many drink excessively because of their mental condition. In others the mental condition is, to some extent at least, the result of the alcoholic habit. As to general paralysis, the success of the widespread public campaign against venereal diseases is already being noticed in many quarters in the diminishing number of cases of this kind. In England and Wales the drop in general paralysis has been very noticeable, and the late Dr. H. C. Steeves stated that he attributed a remarkable falling-off in G.P.I. among new admissions to our Mental Hospitals in the past two or three years almost entirely to the preventive campaign of the Provincial Board of Health.

For the prevention of senile insanity little is advanced except greater attention to general bodily hygiene in earlier years. "The diseases of old age are usually insidious in origin and gradual in development and their seeds have been sown in middle life or even earlier." When old age comes, prevention is then too late.

Investigations in United States by the U.S. National Committee for Mental Hygiene were the basis some time ago of the following general statement by the statistician of the Committee :—

"The reduction in the use of alcohol, the gradual elimination of venereal diseases, and the dissemination of more complete knowledge of the principles of mental hygiene tend to lower the rate of mental disease. On the other hand, the crowding of the population into cities, the increasing economic stress, and the reduction of the birth-rate among the more stable elements of the population are conditions unfavourable to mental health."

Dr. C. M. Hincks, Medical Director of the Canadian National Committee for Mental Hygiene, summarizing the views of his organization in a private communication to this Commission, says :—

"There is no short-cut to the solution of the problem of mental abnormality. Those of us who are working in the field believe, however, that much can be done on the preventive side by establishing Psychiatric or Habit Clinics, by introducing mental hygiene into schools, by parent education, by incorporating mental hygiene in public health and social service endeavour, by careful immigrant selection, and, perhaps, by sterilization. There will always be the necessity for mental hospitals, for psychopathic hospitals that provide facilities for observation and short-term treatments, and for residential training-schools for the feeble-minded. It is probable, however, that institution costs can be greatly reduced if more attention is given to parole and the community supervision of suitable cases."

Early Treatment.—A survey of current opinion among authorities, both in Europe and on this continent, and of records which indicate the trend of new methods being adopted, shows a steadily increasing belief in the preventive value of early treatment.

The reform of a few years ago which changed our institutions from "asylums," where detention and safeguarding of the patient was the only consideration, into mental hospitals, where curative methods take first place, marked a notable advance in the whole attitude of the public and the State towards the mentally afflicted. While this change has undoubtedly resulted in a much larger percentage of cures and thus has shortened the term of illness in many cases, and has added greatly to the comfort and general well-being of the patient, it has had no preventive effect whatever. The mental hospital has no concern with any case until it has reached the stage where it can be certified for admission. In British Columbia, as in other places, we have done practically nothing towards caring for the incipient case that may be prevented from developing, or in affording treatment for young persons whose general make-up indicates a disposition to later mental break-down.

The British Royal Commission recognized this when it observed that "the key-note of the past has been detention; the key-note of the future should be prevention and treatment."

Dr. C. M. Hincks, of the Canadian National Committee for Mental Hygiene, spent six months in Europe during the past year. His findings with regard to early treatment are summed up in the following communication to this Commission :—

"I had the opportunity recently of consulting medical specialists in six countries and all advocated psychiatric or child-guidance clinics. It has been discovered that many cases of mental abnormality that eventually become institutional wards of the State could have been successfully treated during childhood. Certain types of insanity manifest their beginnings in childhood and psychiatric clinics can perhaps in many cases furnish advice and treatment that will ward off mental disaster. At the present time clinics are to be found in many countries and new clinic organizations are coming into being, yearly.

"In England I was particularly impressed with the record of the clinic at Oxford. Through the operation of the clinic service the mental hospital population has been cut down noticeably each year. This finding is of importance because the Oxford district has a practically stationary population, and while the patients in the local institution were decreasing in numbers, the patient population of England and Wales, as a whole, had been increasing.

"In Canada we have psychiatric clinic activities in Montreal, Toronto, Hamilton, London, and Winnipeg. Our Canadian experience leads us to the belief that clinics constitute the best method of prevention of which we have knowledge.

"An interesting piece of work, connected with mental clinics, is now being conducted in Zurich, Switzerland, and in Nuremburg, Germany. The clinics at both places mentioned have assumed the obligation of paroling cases from mental hospitals. In Nuremburg no less than three thousand institutional-type cases are being supervised in the general community. The

psychiatrist in the Nuremburg experiment, Dr. Kolb, told me that community supervision was saving the State enormous sums of money and was of great advantage to the patients themselves. This Nuremburg demonstration should be of interest to British Columbia because it, perhaps, points the way to cutting down of institutional costs. Before inaugurating any such scheme in Canada, however, I would advise handling the work in a thoroughly scientific and experimental fashion.

"In concluding remarks on clinics, one can emphasize the fact that the clinic should be able to reduce institutional population by prevention on the one hand, and by community supervision of institutional-type cases on the other."

The Board of Control for England and Wales, regarded by many as the foremost authority in the world in all matters pertaining to State provision for the mentally afflicted, has stressed the value and necessity of early treatment in several of its reports. In 1925 it made a special plea for out-patient clinics, declaring that "there is a wide field of usefulness for out-patient treatment in regard to early cases of mental disorder and the case of psycho-neurotics for whom no effective treatment is organized."

Dr. C. B. Farrar, of Toronto, a leading Canadian authority, giving evidence before this Commission, said:—

"Mental disease, like any other disability, and probably more so, suffers from lack of prophylaxis. I do not think that any man who has really studied mental disabilities and their causes has failed to realize that, when we get a case in middle life, we find we are dealing with the main product of a process that has been going on for years, and, in many instances, right from early life. We have two factors co-operative—the hereditary factor and the constitutional factor; both are intimately tied up together. By constitutional I mean training, influence: all these come to bear on one in early life, making certain abnormal tendencies more like second nature. The individual grows up in a semi-warped fashion. The factor of heredity is more important than all others put together, and, while our statistics are somewhat conflicting and in different groups, they give the hereditary percentages from 50 to 60 and even 75 per cent."

Dr. Farrar, it may be noted, made this statement while discussing the preventive value of the early treatment provided in such an institution as the Toronto Psychopathic Hospital, of which he is director.

Writing in the Bulletin of the Canadian National Committee for Mental Hygiene, March, 1926, Dr. Farrar said:—

"There is a fairly prevalent idea that mental disorders are hopeless, and that a patient's doom is sealed once he is sent to an institution on account of such a disability. It is certainly not commonly known that the improvement and recovery rates among nervous and mental patients compare favourably with those in other kinds of illness. To be sure, there are cases which do not recover—there are those who are handicapped from birth and by heredity, and there are those in whom disease has made such inroads when they come under treatment that little hope can be held out. But the same is true of other types of disease which affect by preference the organic systems of the body. Neither the internist nor the surgeon can cure all his patients; and the neurologist and the psychiatrist are precisely in the same case."

The foregoing quotations, particularly those from the report of the British Royal Commission, serve to strengthen the opinion, reached early in the investigation by this Commission, that the most immediate need in British Columbia is for facilities for early ascertainment and treatment of mental disorder, and that such facilities should be as readily accessible and as free from legal formality as treatment for any bodily ailment now is under our general hospital system.

Provision of such facilities should be the ultimate aim of a well-balanced programme of mental hygiene. Careful investigation leaves no doubt that the first practical step should be the provision of the specialized type of institution known on this continent as the Psychopathic Hospital, the functions and operation of which are described in another section of this report.

In concluding for the present these observations on the possibilities of practical preventive measures, the Commission finds itself in entire accord with the British Royal Commission that "The problem of insanity is essentially a public-health problem to be dealt with on modern public-health lines."

Appendix C.

The Psychopathic Hospital—Its Place in the System of Mental Institutions.

The lack of facilities of any kind in British Columbia for the observation and early treatment of cases of incipient mental trouble has been impressed on this Commission from the outset of its inquiry.

Without a single exception, all medical witnesses appearing at the public hearings in Vancouver and Victoria stressed the need for public service of this nature and put it first among their recommendations. Lay witnesses, including public officials and other men and women acquainted with the problems arising from mental disorder, also were unanimous in the opinion that there is a deplorable lack of facilities of this kind.

The Commission has been fortunate in getting at first hand the expert opinion and experience of two of the foremost psychiatrists in Canada engaged in this special work. It has secured authoritative information from many other quarters. The conclusion is clear that what is known on this continent as the psychopathic hospital is an absolute essential to any practical and efficient programme of mental hygiene. The lack of the service such hospitals afford is a condition that should be cured in British Columbia at the earliest possible moment.

Even if viewed only from the economic side, the psychopathic hospital more than justifies itself. The evidence is abundant that its immediate short-term treatment effects complete and often permanent cure in many cases that without this treatment would progress to a stage where there is no alternative but commitment to a mental hospital. In many other cases it defers, sometimes for years, the inevitable day when commitment becomes necessary, or, by mitigating the severity of the attack, shortens its term. In all such cases it lightens the burden of the mental hospitals with their heavy cost to the Province.

The primary functions of a psychopathic hospital may be summed up as follows:—

(*a.*) To receive, without formal process, cases of mental abnormality of any kind for observation and diagnosis.

(*b.*) To give brief treatment (usually limited to ten days) in cases where it is indicated that such treatment will "clear up" the trouble and prevent necessity of commitment to a mental hospital.

(*c.*) To operate an out-patient clinic for cases where diagnosis has shown that hospital treatment is not required.

(*d.*) To operate a social service visiting department, which, in addition to securing the information required for proper psychiatric treatment, will keep contact with cases discharged from the psychopathic hospital, and cases on parole from the mental hospitals. This we consider to be one of the greatest needs of our Provincial system to-day.

(*e.*) To provide an emergency shelter for suddenly acute cases of mental disorder, thus relieving the general hospitals which have no proper facilities, and doing away with the present necessity of keeping persons in that condition in police cells until they are committed to a mental hospital.

(*f.*) To act as headquarters for travelling clinics which should visit other parts of the Province.

Secondary duties of such a hospital as is envisaged to meet the present requirements and conditions of this Province would include psychiatric examinations for Juvenile Courts, advice to social agencies about difficult cases, co-operation with school authorities in respect to subnormal and retarded children, and generally functioning as headquarters for the mental hygiene activities of the community.

It is only to a limited extent that a psychopathic hospital should be a reception ward for cases which obviously require committal to a mental hospital. It can fulfil this function in emergency. The main function of the psychopathic hospital is to care temporarily for the case

whose ultimate disposition is uncertain and needs to be determined. It has been rather aptly termed a "clearing-house," filling the gap between the general hospital and the mental hospital, and thus performing a function which no other type of hospital under our present system can fulfil.

There are other advantages connected with a psychopathic hospital which may not appear so obvious to the layman. One of the most important is that it provides specialized training in psychiatric nursing and general instruction in mental care to successive batches of nurses receiving training in the general hospital to which the psychopathic hospital is attached. Very great value is set upon this feature, as the nurse who goes out into the community with a knowledge of mental hygiene disseminates that knowledge in her contacts with the general population and thus aids in the greatly needed spread of popular understanding of the subject.

Briefly put, a psychopathic hospital is an essential integral part of a complete Provincial hospital system; it will help check the present rapid increase in the number of insane by heading off the stream at its source; by preventing and curing cases of mental disease in incipient and early stages, it will prevent a considerable proportion from becoming chronic insane patients, and it will save the State the expense of continuous care of chronic cases for a long term of years in regular Provincial hospitals.

As it is at present, mental disease goes largely unrecognized and no effort is made to help incipient cases. These people have no place to go, except in rare instances, where they may get intelligent advice, and so the problem is not recognized until it becomes self-evident, by which time the period has passed when treatment might be of its greatest value.

The person who falls down on the street and breaks his leg may, and does, receive prompt and skilful treatment in a general hospital in the city for the asking. But the person who is suffering from a broken mind has no place to go. There is nothing left for him to do but to seek admission, through the tedious and humiliating process of the law, which brands him, in addition to his mental disability, with a legal disability before he is permitted to receive relief.

As to the demand from our own community for the special service a psychopathic hospital affords, it is necessary only to summarize the representations made by witnesses appearing at the public hearings of this Commission.

The late Dr. H. C. Steeves, then Medical Superintendent of Mental Hospitals, and the first witness heard, opened the question with the statement that "there are too many mental cases allowed to become too pronounced before they are taken under treatment; cases may be handled more quickly and more thoroughly if placed under treatment sooner."

Dr. F. C. Bell, Superintendent of the Vancouver General Hospital, followed with a survey of the troubles of his institution in endeavouring to care for mental cases without adequate facilities. During the year 1925, he said, his hospital had had between 125 and 135 of such cases, most of which were sent along on commitment to Essondale. He continued: "The question of providing proper custody for these cases is a very serious one, and points to the necessity for accommodation similar to that provided by the modern psychopathic type of ward or hospital. . . . I think perhaps this point has been definitely settled, if one may judge by the experience of hospitals in the United States, and particularly if one views the experience in Winnipeg, where the Psychopathic Hospital is located immediately in the grounds of the General Hospital, works in co-operation with it, and forms a link between the committable cases from the General Hospital and the Hospital for the Insane."

Dr. Bell also laid stress on the desirability of doing away with the present system which practically forces cases of mental break-down to be taken to gaol because there is no other place for them until the formality of commitment to a mental hospital has been concluded. The gaol procedure, he said, had a very detrimental effect on the already deranged condition of the patient. It would largely be obviated by a psychopathic hospital whose function would be to receive these cases.

Speaking of the Winnipeg Psychopathic Hospital, of which he had had intimate knowledge, Dr. Bell said he found that through its operation the stigma attached to a mental case was very much lessened. The patient had no objection, neither had the family, to his going to the General Hospital, and there was no distinction in the public mind between the Psychopathic and the General.

Dr. J. G. McKay, Vancouver psychiatrist and former Superintendent of Provincial Mental Hospitals, voiced similar opinion and recommended a psychopathic hospital closely associated

with a general hospital. Dr. W. A. Dobson, also a Vancouver psychiatrist and neurologist, strongly urged the need of facilities for psychopathic treatment, placing particular value on the established fact that incipient cases would come voluntarily to such an institution, whereas, with this facility lacking, they would develop without treatment until there was no place for them but the mental hospital. He was convinced that a psychopathic hospital would have an economic value, as it had been recognized by authorities all over the world that early treatment had a great deal to do with shortening the term of illness.

Dr. K. D. Panton, medical officer of the Vancouver Police Department, appeared before the Commission to explain the great need of suitable facilities for immediate care and short-term treatment for cases picked up by the police when found to be "behaving peculiarly." Many of these, he said, were not cases for a mental hospital, but there was no other place to send them. During 1925 some eighty-four cases were sent to Essondale. He urged that there should be a suitable place for reception and examination by an expert psychiatrist, also for short-term treatment for cases that did not need to go to a mental hospital.

Dr. J. W. McIntosh, Medical Health Officer for Burnaby, speaking from his experience as gaol surgeon, endorsed Dr. Panton's recommendations. "The psychopathic hospital is a great need and would do much towards helping these cases," he said.

The need of psychopathic clinic service was again impressed upon the Commission by every medical witness at Victoria, also by representatives of various welfare organizations.

Dr. George Hall, representing the Victoria Medical Association, stressed the need on two broad grounds: First, because mental cases do not now receive the early treatment which is so important, and because their friends and relatives hesitate to send them to asylums until such time as their care becomes a difficult problem at home; second, because all suspected mental cases should receive a careful physical as well as mental examination, which is extremely difficult under existing conditions as there is no place to send them but the police station. Dr. A. G. Price, City Medical Health Officer for Victoria, Dr. E. M. Baillie, and Dr. H. E. Young, Provincial Health Officer, concurred in Dr. Hall's statement.

In addition to this volume of local opinion added to the information we have secured from other parts of the world, the Commission has had the advantage of getting detailed advice, based on actual experience in Canada, from two of our leading Canadian psychiatrists. These are Dr. C. B. Farrar, Director of the Toronto Psychopathic Hospital, Professor of Psychiatry in the University of Toronto, and Dr. A. T. Mathers, Provincial Psychiatrist for the Province of Manitoba and Director of the Winnipeg Psychopathic Hospital.

Dr. Farrar, regarded as one of the foremost authorities in Canada, giving evidence before the Commission, said that in his opinion "the psychopathic hospital is one of the most essential medical services that can be provided."

As to its practical value in relieving the mental hospitals, Dr. Farrar said: "By treating the cases earlier we prevent many of them from eventually coming to the Provincial institutions. Undoubtedly in these early cases, where insight is still good, compensation is still possible, and I am quite sure a great many of them can be carried on and probably would never get to the stage where they would have to be admitted to a mental hospital."

Questioned as to the economic value of the psychopathic hospital, Dr. Farrar said: "It will take care of a good deal that the mental hospital has now to take care of. I should say there is no doubt about the economic value." The Toronto Psychopathic Hospital, he explained, is a new institution, the first of its kind in Ontario and the second in Canada, the Winnipeg Psychopathic having been opened in 1919. It is operated in close co-operation with the Toronto General Hospital and has accommodation for sixty in-patients in addition to facilities for a fairly elaborate out-patient service, to which nearly all applicants are first referred. It has been found that a large proportion of cases can be handled as out-patients, reporting from time to time for instruction, advice, and treatment, in addition to being visited by a social worker and, if necessary, by a member of the medical staff.

An in-patient is only in the hospital for a relatively short period for further observation and examination, and intensive treatment if such in indicated. A proportion of these, about one in three, have to be sent on to the mental hospital for more prolonged treatment, possibly for permanent custodial care, but the majority can soon be discharged to the out-patient department, or even to a third class which requires only the occasional visit of the Social Service Department before it can be written off the record as cured.

Apart from these in-patients and out-patient classes, there is provision for another class of service for cases which, for one reason or another, cannot come in to the hospital. Operating through the out-patient department, cases of this kind may be visited and examined to determine their disposal and, if necessary, to bring them at once to the psychopathic hospital. There is also provision for attention to cases picked up by the police or in custody of the courts. The whole system, Dr. Farrar testified, works out in a very practical and satisfactory way. Speaking particularly of the casual incipient case, which is often adjustable without the necessity even of quitting work, Dr. Farrar stressed the value of this service which a psychopathic hospital affords as "the greatest service such a clinic can accomplish, not only from a social point of view but as a great economic service, preventing these cases becoming State wards later on."

Dr. A. T. Mathers, personally in charge of the Winnipeg Psychopathic Hospital, testified that as a result of nearly six years of experience since the psychopathic hospital was established he had no hesitation in recommending a service of this nature for British Columbia. "I think our community recognizes now that it could not do without it," he said. This hospital has only thirty-two beds, and has been taxed to its utmost since its opening. Statistics for the first five years of operation show that approximately 65 per cent., or two out of every three patients treated, have gone back to their ordinary life, and many of these have been permanently restored and thus prevented from progressing to the mental hospital.

The practical advantages of the psychopathic hospital were proven from the first year of the Winnipeg institution, Dr. Mathers reports. "The importance of getting cases of mental disease under treatment at the earliest possible date is demonstrated by the work of the psychopathic hospital. The legal formality necessary for admission to hospitals for mental diseases, and the undeserved stigma that is still attached to them, has operated heretofore to keep most victims of mental disorder out of the hands of the proper institutions until it was evident they could no longer be looked after at home. With the opening of the psychopathic hospital it was evident that both patients and friends were showing a distinct desire to start treatment early. This has resulted in the return of a fair proportion of cases to their former position in society and has relieved both Provincial hospitals of the care of what otherwise would have been a greatly increased number of patients," his report states.

Dr. Mathers places a particularly high value on the out-patient and social service branches of the work of his hospital. The out-patient clinic handles an average of 1,500 visits a year, of which between 600 and 700 are original "first-time" cases. A large proportion require examination and instruction at the clinic only once, and are then followed by the social service worker to their homes to make sure that they are not developing a condition requiring more intensive treatment. Only a comparatively small proportion of those presenting themselves require bed treatment in the hospital, and a still smaller proportion have to be sent on to the mental hospital.

The value of the social service department is by no means confined to the individual affected, Dr. Mathers has found. The condition of the patient is often the result of family conditions which the trained social service worker soon recognizes and is often able to adjust, so that the cause of the trouble is removed and the whole family thereby benefited. Another very valuable side of the social service work is the aiding of recovered patients to adjust themselves both at home and in employment.

Many of the patients of the psychopathic hospital are referred there by social agencies such as the Children's Aid Society, the Salvation Army, and the public school authorities, which formerly had no place to which to send their problem cases. The Director, in addition to his routine work at the hospital with patients, holds occasional clinics at the Children's Hospital, acts as consultant with the general hospitals of the city, and co-operates with the Juvenile Court and the Government Employment Service in examination of problem individuals.

Through the agency of the Winnipeg Psycopathic regular clinics have been established in two of the smaller cities of Manitoba. Organization of travelling clinics to cover other parts of the Province is now being planned with the assistance of the Department of Education and the Department of Public Health. These travelling clinics are to be operated by experts from the Psycopathic Hospital or the Provincial Mental Hospitals. Dr. Mathers strongly advised travelling clinic service in British Columbia in view of the scattered population and the long distances of many good-sized communities from the medical centres of the Province.

Dr. B. J. Brandson, Professor of Surgery in the Medical Department of the University of Manitoba, who visited British Columbia recently, offered strong testimony to the practical value of the Winnipeg Psychopathic to the whole of the Province of Manitoba. He endorsed without reserve the statement of Dr. Mathers that "after more than five years' experience the community would not be without it."

Hon. Thos. H. Johnson, of Winnipeg, former Minister of Public Works and Attorney-General of Manitoba, also gave testimony as to the value of the Winnipeg Psychopathic Hospital which was instituted during his term of office. In his opinion it had been an immense success from its inception; records showed that about two-thirds of all cases treated there were discharged to their homes, many of these being cured while others required only to be kept under occasional observation. He believed that many were thus cured who might otherwise have gone to mental hospitals, while the admission of others was deferred for years. Mr. Johnson strongly advised the establishment of a psychopathic hospital in this Province.

In summing up, it may be observed that there is agreement that early treatment is the greatest factor in preventing, or shortening the term of, mental ill-health. In the past few years there has been a steadily mounting demand for places to which the mentally sick or maladjusted citizen can go for examination and advice, just as he can go to a general hospital with his bodily troubles. In the British Isles and Europe such places are known variously as mental wards, mental clinics, or psychiatric hospitals. In Canada and United States they are generally known as psychopathic hospitals. The service which such an institution affords is a very real need to-day in British Columbia.

In recommending that the proposed psychopathic hospital should be established in close co-operation with a leading general hospital, we have in mind practical and economic advantages that should greatly reduce initial building and equipment costs, as well as subsequent upkeep and operation. By securing heat from the central heating plant of the general and food from its kitchens, the necessity of building these services into the new psychopathic, and of maintaining separate staffs for their operation, would be obviated. Likewise, the laboratory-work of the psychopathic might be done in the laboratories of the general and duplication of other special services might be avoided.

From the technical side there would be notable advantages to both institutions, particularly for the psychopathic in having at hand the various specialists connected with the general in dealing with the physical ailments that so often accompany mental disorder; also for the general in having psychiatrists of the psychopathic always available for consultation on cases in the general. Another advantage of the greatest value, proved in the experience of such institutions in other places, lies in the fact that the apparently instinctive but nevertheless unreasonable aversion of the public to facing the necessity of treatment for mental disability is largely overcome when the mental institution is an integral part of a large health centre such as a general hospital.

We have secured considerable information as to the probable cost of a psychopathic hospital and have arrived at the conclusion that by avoiding ornate architecture and unnecessarily expensive type of construction, a hospital with accommodation for sixty bed-patients, together with adequate facilities for occupational therapy, out-patient and social services, and the necessary administration offices, could be built and equipped at the present time for approximately $250,000. The plan should provide for additions to the bed accommodation as required, without alteration in the other sections of the hospital.

Appendix D.

Mental Deficiency: Care and Teatment of Subnormal Children.

The fourth reference of the Commission, "The care and treatment of subnormal children," opens the whole problem of mental deficiency, of which these children constitute but a part.

As we have observed before, mental deficiency, commonly known on this continent under the general term of feeble-mindedness, must be regarded as being entirely separate from mental disease (insanity). So clearly is this distinction recognized that in England and in some other countries there are entirely separate laws governing mental deficients, while institutions and other provisions for their care have no connection whatever with those provided for the insane. There are many definitions of the two classes from which the general distinction may be drawn that insanity is a disorder or break-down of a normal and developed faculty, whereas mental deficiency is a condition of arrested development of the mind usually due to some physical defect in the brain. The mental deficient, as compared with a normal individual, suffers from lack of quantity rather than of quality of mind, and although living to old age never develops intelligence beyond that of a child.

The problem of dealing with this class is complicated by the fact that there is every gradation of mental defect between the idiots who may be said to have practically no mind at all, to the high-grade morons or "border-line" cases who are so nearly normal that they often "get by" in the community fairly well until faced by problems of life to which their stunted mentality is not equal.

Probably because mental defect is usually apparent from earliest life there is a general tendency, particularly on this continent, to regard it as a problem of childhood. Our investigation leads us to the conclusion that this is one more popular error due to the unfortunate lack of public knowledge concerning the whole field of mental abnormality.

A very large number of mental deficients live to adult life and even to old age. The consensus of authoritative opinion is that there are at least as many adults as children in the ranks of the mentally deficient. The reason there are not more adults is the high mortality among deficient children, and one of the chief factors in this high mortality, apart from the child's inability to care for itself like a normal child, is lack of proper home care due to the fact that in so many cases the parents themselves are defective and incapable.

It is from adolescence, say from 15 or 16 years onward, that the mental deficient becomes the greatest problem if not indeed an actual menace to the community. On the other hand, it is only before that stage of life that care and training are likely to have any beneficial effect in safeguarding or helping the future of the unfortunate individual. For that reason the "care and treatment of subnormal children" is of prime importance, second only to the possibility of preventing their existence. In the present light of scientific knowledge there is no "cure" for mental deficiency, but it is now recognized that a considerable proportion of the morons can be trained to do some of the simpler forms of manual work and thus can be made partially if not wholly self-supporting.

The lower grades of mental deficients do not present any problem. There is only one thing to do for idiots, imbeciles, and the very low-grade morons, and that is to place them in institutions where they can live out their helpless, hopeless existence in reasonable bodily comfort. We are impressed with the suggestion that except in very rare cases where proper facilities for care can be afforded in the home, this type should, in the interests of the community, be housed in institutions. Their care in the average home is too great a burden and too often results in the break-down of other members of the family.

The greatest problem of mental deficiency lies in that large class who, while not helpless or altogether dependent, are unable by reason of their defect to make their way in the world. They have been aptly described as "those who do not get along." The battle of life is often

too much for them and many drift into chronic pauperism, delinquency, or crime because that seems the easiest way out of their troubles.

Mental deficients are generally recognized to be the most frequently dependent class in the community. Local proof of this, if such were required, was heard by this Commission in the evidence of an official of the Vancouver City Relief Department that low mentality was undoubtedly at the root of the difficulties of a large proportion of their chronic dependent cases. Generally these people, while unable to provide for themselves or their families, were not in such condition as to require restraint.

There is also abundant proof that mental deficiency is the major factor in producing the habitual criminal, particularly of the petty class which graduates through the Juvenile Court and Industrial Homes and becomes the confirmed "repeater" or "recidivist" who, in many cases, spends half his life in gaol. From all the evidence and information examined, we have no hesitation in reaching the conclusion that mental deficiency creates a great burden on the community, and that it contributes largely to dependency, delinquency, crime, prostitution, illegitimacy, vagrancy, and destitution. The community at large bears the economic burden whether such people are cared for or not. We are therefore strongly of the opinion that, so far as the economic side of the question is concerned, whatever may be spent on care and treatment or on prevention will be largely if not entirely offset by lessening of the indirect burden.

No survey of the Province has ever been made to ascertain the number of mental deficients, but it may be safely assumed, on the basis of what is known in other places, that they would number between 30 and 40 per 10,000 of the population. The Canadian National Committee for Mental Hygiene, basing its findings on small sectional surveys from time to time, advises us that a fair estimate would be one in every 250 of the population, or 40 in 10,000. That Committee also advises that one of the surprising findings has been the uniform incidence in the various Provinces; that the Provinces taken as a whole were very much alike.

From these findings we must assume that the number of mental deficients in British Columbia at present is over 2,000. It is not to be suggested, however, that all of these would require institutional care even if it were available.

At the present time there are approximately 250 mental deficients of low type housed in our mental hospitals because there is no other place for them. No provision has ever been made for the segregation or training of any of the others. In this respect British Columbia is no more derelict than some other Canadian Provinces or a few of the neighbouring States, but we are far behind many other parts of the world, notably Great Britain, the majority of the United States, and some of the countries of Europe. England, it is generally accepted, leads the rest of the world not only in special legislation but in institutional care and training and the provision of special tuition for subnormals. But even in England the actual work done is yet far behind the standard aimed at by public and authorities alike. The war and its after effects greatly retarded plans adopted in 1913 after a Royal Commission had devoted almost four years to study of the problem, but a constant and growing agitation for renewed effort shows how seriously the matter is regarded in all parts of Great Britain.

In this Province, apart from the housing of a small number of the most helpless cases in our mental hospitals, which are not fit or proper places for them, and which are seriously overcrowded as a result, practically nothing is being done except in special classes for retarded children of school age in Vancouver, Victoria, and New Westminster. This, we are convinced, is a very valuable and very necessary work which might well be intensified in these centres and extended to other parts of the Province where there may be a sufficient number of children of this class to warrant the establishment of this special tuition. The Canadian National Committee for Mental Hygiene advises that wherever fifteen or twenty children of this class can be assembled with reasonable convenience it will pay the community to establish facilities for their special teaching. It is not easy to estimate the loss, economic and otherwise, in our educational system when whole classes are kept from making normal progress in their studies because of perhaps only one or two retarded pupils.

It is estimated that 2 per cent. of our public-school children require specialized training. Not all of these are to be classed as mentally deficient; on the contrary, there is a small percentage abnormally bright, perhaps precocious, whose restlessness and inclination to defy authority makes them an even greater individual problem than the dull, backward individuals. Others are retarded by reason of bodily illness or neurotic tendencies which might be overcome

by appropriate attention. In this connection we are impressed with the advisability of skilled psychiatric examination of all school-children whose behaviour or class-work indicates a departure from the normal, and especially of all pupils in special classes. The usual psychological examination or intelligence test cannot be expected to reveal the true condition of the abnormal or subnormal child, nor to indicate the treatment that may be required to prevent development of the trouble responsible for the child's inability to "keep up with the procession." We hope that the establishment of a psychopathic hospital and clinics may enable this valuable work to be done systematically and at small cost.

In considering specific recommendations we have kept always before us the inescapable fact that any practical or useful programme for bettering mental conditions must entail a considerable new burden on the public funds, although there may be reasonable hope that such expenditures will prove an ultimate economy.

In recommending the establishment of separate facilities for the care of mental deficients and the removal of cases of that class from the mental hospitals, we regard this merely as a step in the right direction. When this removal has been accomplished arrangements would follow for the setting-up of training facilities for a higher class, and thus the separate institution for mental deficients would grow and develop its services as requirements and means justified.

Similarly, in recommending the establishment of a psychopathic hospital, which would play a very important part in ascertaining cases of mental deficiency and classifying them for the care or training called for, we do not contemplate that the out-patient department or the travelling clinics to be operated as part of the hospital's functions should be complete and fully developed when the hospital is opened. Judging from experience in other places, the hospital accommodation would probably meet a demand that would fairly fill its capacity within a very short time after its opening, but the out-patient department would grow much more slowly as the service it afforded became better understood and appreciated. The establishment of the first travelling clinic would, in the nature of things, be deferred until the work of the hospital itself had been solidly organized. The travelling clinic service would then grow as the need indicated.

There are some details of the problem presented by mental deficiency to which we should like to give more study. This is one of the chief reasons for recommending that the work of this Commission be continued. More exact information than we have yet been able to obtain as to the actual practical results of some of the more recent efforts in other places might prove exceedingly valuable in laying a foundation for the work here. Our investigation so far indicates that the problem involves our educational system as much as our social and public-health activities, but just where the line is to be drawn or to what extent these can be dovetailed into a complete and practical programme we are not yet prepared to recommend.

Evidence and representations to this Commission show us very plainly that the general public, particularly the women of this Province in various organizations, are alive to the problem of mental deficiency, especially as it affects child-life. There is a strong demand for action of some kind. To carry out all the suggestions that have been made would involve an outlay of public funds that could not be considered at this time. In our opinion the practical thing to do is to make a start on carefully laid foundations and work, as means permit, towards the ideal that cannot be realized at once.

In conclusion, we think it well to warn against exaggeration or over-emphasis of the problem, a tendency apparent in some well-meaning quarters, and especially among writers in some magazines and sociological journals. The number of mental deficients is not known definitely, but the number requiring institutional care is comparatively small.

APPENDIX E.

Sterilization.

Decision to recommend a restricted measure of sterilization in certain well-defined cases of mental infirmity has been reached by this Commission only after careful study of a mass of evidence secured from many sources.

In the first place, we must assume that organized effort looking towards the prevention of any increase in the prevalence of mental infirmity is a vital economic necessity in an age when success in life calls for a higher degree of mental and bodily fitness than ever before.

Two primary facts must be faced in any attempt to formulate a practical plan of prevention. First, we find that for a large proportion of mental infirmity, and particularly for mental deficiency, no cure has yet been discovered. Secondly, we find it generally accepted that heredity is a large factor, probably the greatest factor, in the production of mental deficiency. If we accept the estimate based on clinical experience of the Canadian National Committee for Mental Hygiene that 50 per cent. of all cases of mental deficiency in Canada are of hereditary origin (many authorities put the percentage higher), it becomes plain that a very considerable number of persons are doomed before birth to a misery and helplessness from which there is little, if any, hope for deliverance. Prevention in this case becomes a problem of ensuring as far as possible that there shall be no reproduction of persons of this type. We find no difference of opinion as to the desirability, and even the necessity, of attaining this end. The large volume of discussion that has arisen recently is confined to examination of the means whereby it may be attained.

As a concrete illustration of the workings of heredity in spreading mental infirmity from generation to generation we may cite the evidence afforded in the records of our Mental Hospitals in British Columbia as shown under the heading "Family Histories" at page 50 of this report.

We find strong endorsement of eugenical sterilization from practically all communities in which it has been practised, and, what is to us even more convincing, a significant absence of criticism or opposition in these communities where its workings are understood and where objections, if any, would surely be known. We have been particularly impressed with the record in California, where permissive eugenical sterilization has now been practised for sixteen years, and feel bound to put greater reliance on the actual experience in that State than upon the theoretical objections of those who have not had the same opportunity of ascertaining by direct observation whether or not these objections are justified.

Speaking generally, we are convinced that the bulk of the arguments against the principle of sterilization do not apply to the specifically restricted measure which we have in view as immediately practicable in this Province. Most of the recent discussion on the subject is based on the much broader proposal that sterilization should be utilized to cleanse society of all heritable social and physical taint. In some places it has even been advocated as a punitive measure; in others as a therapeutic agency. Such proposals have no practical relation to the immediate problem with which this Commission is concerned; we mention them only because of the confusion created in the public mind. As an illustration we may cite the case of an eminent British sociologist and eugenist whose very doubtful conclusions as to the practical possibilities of sterilization were drawn to our attention. On investigation we found that the doubtful finding which had so impressed our informant applied to the broader proposal mentioned and that in fact this acknowledged authority, in the next chapter of his treatise, strongly advocated sterilization of the very type of mental deficients specified in our recommendation for a permissive law in this Province.

The argument most commonly advanced against sterilization is that it is an unwarranted invasion of the personal rights of the individual. Apart from any question as to whether or not the rights of the individual may be held to be above the good of society at large, this argument has no application to the sterilization of a restricted class of the mentally abnormal as contemplated in our recommendation which specifically provides for the consent of the individual

and responsible relatives. We question very seriously if the alternative proposed by opponents of sterilization—that is, complete institutional segregation during the whole of the reproductive period of life—is not a much greater invasion of personal rights, particularly in cases where the individual might live out a nearly normal life in the community after the possibility of procreation had been removed.

Evidence given at the public hearings of this Commission and representations made through other channels lead us to the conclusion that there is a considerable weight of public opinion in British Columbia in favour of a reasonably restricted and safeguarded measure of eugenical sterilization. Of nine representatives of the medical profession who discussed the subject as witnesses, seven were outspokenly in favour of at least a permissive law, one was opposed on ethical and moral grounds but prepared to face the necessity for a much more drastic operation, and the ninth, while not opposed to the principle, withheld definite judgment. The statement of Dr. George Hall, representing the Victoria Medical Association, that sterilization in certain well-indicated cases is "advisable and justifiable" fairly represents the burden of medical testimony.

Turning to our lay witnesses, it is to be noted that all of the five who discussed the subject were favourable to sterilization as a eugenical measure. The five mentioned included two police magistrates, the chief probation officer of the Vancouver Juvenile Court, the supervisor of special classes for subnormal children in Vancouver, and a representative of the Child Welfare Association of Vancouver.

In addition to this direct evidence, we have learned that the principle of eugenical sterilization for the prevention of mental abnormality has been endorsed at a number of meetings of Local Councils of Women and other women's organizations in different parts of the Province.

In England a definite move was made in January, 1926, when ten leading medical men headed by Sir W. Arbuthnot Lane made public demand through the press for the legalizing of sterilization of the mentally unfit as "the only effective means of preventing propagation." In declaring that "it is a very simple operation which, while preventing reproduction, in no way interferes with the ordinary habits of life," these ten eminent medical doctors added that they were "strongly of the opinion that sentiment and ignorance should not be allowed to interfere with a means of treatment by which the capacity to produce an imbecile progeny should be arrested." The discussion following this declaration has not yet subsided and the question has become a decidedly live issue.

Equally significant of the trend of investigation in Great Britain is the fact that the annual report of the Board of Control for England and Wales for 1925 discussed at considerable length the advisability of sterilization of a restricted class of mental defectives who might thereby be rendered safe to be allowed at large in the community and thus relieve the pressure on public institutions. With the caution characteristic of British official bodies, the Board of Control had not "reached a decision" at that time, but it may be noted that the two women members of the Board have since then publicly voiced their belief that the matter "deserved the fullest consideration."

The history of eugenical sterilization in the State of California should, we believe, be regarded as furnishing the most valuable and most important evidence as yet available, because there it has been practised longer and on a larger scale than in any other community of which we have learned.

Eugenical sterilization was legalized in California in 1909; and up to July 1st, 1925, official reports show that 4,636 operations had been performed under the law. Unofficial reports state that the number has now reached approximately 5,000. The law restricts the operation to certain specified classes of inmates of State institutions and the practice has been to secure the consent of relatives or guardians of the patient. The success of the measure is vouched for by the State Department of Institutions and by various officials of these institutions. Diligent inquiry has failed to unearth either criticism or opposition by any responsible individual or organization in all the years during which the law, twice amended as the result of practical experience, has been in operation. On the other hand, we find that the sterilization law, both as to principle and practice, was endorsed by the California State Conference of Social Agencies in 1916, and again in 1920 by the California Conference of Social Work. We also have copy of a letter dated December 16th, 1926, from the Secretary of the California State Board of Health, in which he states that "the work which the State institutions have done in the way of steriliza-

tion should meet with the approval of medical associations and all others interested in welfare-work."

Dr. F. O. Butler, Medical Superintendent of the Sonoma State Home for the Feeble-minded at Eldridge, Cal., informs us that there have been no ill-effects of any nature from the operation, but in fact just the reverse: better physical and mental condition, especially with the insane. Answering from his experience one of the theoretical objections against sterilization, that it might increase prostitution and venereal disease, Dr. Butler says: "From observation at all our institutions we are decidedly of the opinion that it does not."

Concluding a lengthy statement to this Commission, Dr. Butler says: "In California we think the law permitting sterilization of the insane and mentally deficient is one of the best things that has been done to prevent the unfit from reproducing their kind and adding to the State's burden of caring for the same." Many similar statements might be quoted from officials in various States where sterilization laws have been in operation. In some of the States laws of this nature have been declared unconstitutional, usually because they were partially or wholly punitive in intent and therefore applicable mostly to criminals, a circumstance which has no bearing on this inquiry.

We have carefully considered the suggestion of some witnesses that propagation of the mentally unfit might be lessened by stricter marriage laws, and specifically by the requirement of certificates of health before the marriage ceremony can legally be performed. While we cannot doubt that some good results would follow the enforcement of such a restriction, the weight of evidence and information shows that there is little hope of immediate practical achievement. Dr. H. E. Young, Provincial Health Officer, who is also registrar of births, marriages, and deaths, testified that laws of this kind have been tried in seventeen States of the American Union and that in practically every case they had become a dead letter because they could so easily be evaded by going to some other place for the ceremony. There is also to be considered the very grave doubt as to how far prohibition of marriage would prevent procreation among mental deficients because of the fact that these unfortunates have little, if any, sense of responsibility for the present or care for the future and are restrained neither by moral motives nor by public opinion.

In conclusion, we wish again to give assurance that we have given every consideration to the measurable volume of expert opinion which not only questions the practical value of eugenical sterilization, but doubts the feasibility of its application on a scale sufficiently broad to make it worth while.

We believe, however, that this is outweighed by the volume of similarly expert opinion which holds that sterilization for eugenical purposes is scientifically sound, that it is a justifiable measure in the interests of society at large from which the subject will derive nothing but benefit, and that it will prove a practical success as further experience dictates its application.

We are not suggesting that sterilization, even on a broader scale than contemplated in our present recommendation, can be expected ever to put an end to all inherited mental abnormality, but we do believe that there is sufficient evidence of its value as a single rational method of preventing reproduction in certain definitely ascertained cases to warrant its employment to this restricted extent.

Appendix F.

Immigration.

In order to ascertain the extent to which foreign-born immigrants contribute to the total of the mentally abnormal in the Province it would be necessary to have much more accurate data than are now available. The evidence we have been able to secure certainly tends on its face to indicate that the foreign-born contribute a disproportionate number of patients to our mental institutions, not only in British Columbia, but throughout Canada. The issue is, however, so clouded by the lack of positive information and the meaning of such figures as we have might be modified so much by close analysis of all factors that we hesitate to make any positive pronouncement. At the same time we have no hesitation in arriving at the conclusion that far too many people of this unfit class have been allowed to enter Canada in the past and that greater effort should be made by our immigration authorities to ensure their exclusion.

Analysis of records of admissions to British Columbia mental hospitals during ten years from July 1st, 1916, to June 30th, 1926, made specially for this Commission, shows a total of 3,485 individuals admitted as insane and 353 admitted as feeble-minded.

Of the 3,485 insane, only 27.8 per cent. were Canadian-born. In other words, the Canadian-born 50 per cent. of our population furnished only 28 per cent. of the insane admitted to our institutions, while the foreign-born immigrant 50 per cent. furnished 72 per cent.

Detailed analysis shows as follows:—

British Isles, 29.31 per cent. of population furnished 39.52 per cent. of the insane.
Europeans, 6.04 per cent. of population furnished 17.22 per cent. of the insane.
United States, 6.66 per cent. of population furnished 8.18 per cent. of the insane.
Asiatics, 6.20 per cent. of population furnished 4.47 per cent. of the insane.
British possessions, 1.31 per cent. of population furnished 2.47 per cent. of the insane.

While it seems reasonable to expect that the disparity between immigrant and Canadian-born insane may be lessened as our Canadian-born children reach the age when mental disease begins to appear, statistics for recent years fail to show much change. Thus the annual report of mental hospitals for the year ended March 31st, 1924, shows that of a total of 447 admissions only 133, or 29.7 per cent., were Canadian-born. For the year ended March 31st, 1925, there were 461 admissions, of which only 155, or 33 per cent., were Canadian-born. In his report for the latter year the late Dr. Steeves, Medical Superintendent, said:—

"These figures indicate to me the necessity for a more searching examination of immigrants coming to the country; otherwise it would seem that, rather than being valuable assets as citizens, they are to become liabilities as residents of public institutions to be maintained at the expense of the Province. . . . It would appear that additional facilities should be provided by the Dominion Immigration Department to more effectively cull out the unfitted before they are admitted to the country."

Dr. Steeves's report bears testimony to the fact that he had the fullest co-operation of the Dominion Immigration Service in deporting cases of this kind who were found not to have completed the five years of residence in Canada during which they are subject to deportation, but the very fact that seventeen former patients were repatriated during 1924 appeals to us as rather concrete and conclusive evidence that more might be done to prevent their entry to the country. Incidentally it may be noted that the deportation of these seventeen in 1924 cost us approximately $20,000, to say nothing of their previous cost to the Province.

Apart from the facts cited as to conditions in this Province, we have found a mass of evidence tending to show that there is throughout Canada very decided general opinion that medical inspection of immigrants, particularly with respect to mental condition, is not sufficiently strict.

The late Dr. W. C. Laidlaw, Deputy Minister of Health for Alberta, at a meeting of the Dominion Council of Health at Ottawa in December, 1925, declared that 70 per cent. of the patients in mental hospitals in his Province were foreign-born, whereas the foreign-born constituted only

53 per cent. of the population. Dr. M. M. Seymour, Deputy Minister of Health for Saskatchewan, at the same meeting, stated that the proportion of foreign-born insane in Saskatchewan was even greater than in Alberta. Statistics of Manitoba institutions show a similar condition there, and even in Ontario, where the percentage of foreign-born residents is not so great, the percentage of these in institutional statistics has been such as to cause public protest. Thus we find in the annual report for 1922 of the Inspector of Hospitals for Insane, Feeble-minded, and Epileptics, special attention is drawn to the fact that 110 of those admitted that year were from Southern Europe and that the cost of maintaining them ran to $40,000 for the year.

The Toronto Board of Education, on October 16th, 1926, voiced public protest against the bringing into Canada of immigrant families with children who are mentally deficient. The Mental Hygiene Division of the Department of Public Health, which is responsible for school examinations into mental condition, reported that 18 per cent. of the feeble-minded children in Toronto public schools were born outside of Canada, that 49 per cent. were born in Canada of parents who had immigrated into Canada since 1900, and that only 33 per cent. were born in Canada of Canadian parents. This finding is of particular importance when it is remembered that feeble-mindedness is a condition that obtains in the great majority of cases "from birth or an early age." The finding that 49 per cent. of Toronto's feeble-minded school-children were born in Canada of foreign-born parents is also of extreme significance as showing that the problem is not limited to the unfit who get into Canada but is multiplied in their progeny.

The Canadian National Committee for Mental Hygiene, basing its action on research extending over a number of years, has consistently urged the need of stricter examination of all immigrants. Dealing specifically with its study of British Columbia statistics, it has declared that "these figures demonstrate the fact that poorly supervised immigration is adding burdens to the Province."

The conclusion that too many mentally unfit immigrants have been allowed to enter Canada is an almost superfluous statement of fact if viewed from the incontestable assumption that we have the moral and legal right to refuse them entrance. If the intent of our immigration laws and regulations could be carried out entirely, then none of this class could enter the country. We are aware that the difficulties are considerable; that the symptoms of mental unfitness are often elusive and difficult of recognition, particularly in the incipient stages. We are also cognizant of the mechanical difficulties of inspection when ship-loads of immigrants arrive and trains are waiting to carry them away to distant parts. We agree that nothing should be allowed to hinder the inflow of the right class of immigrants so much needed in Canada for the development of our resources and the lightening of our heavy economic burdens. At the same time we are convinced that increased population by immigration is bought at too great a price if it entails the admission of any considerable number of individuals who will add to the burden of the nation caused by mental abnormality.

As intimated at the outset, information and statistics now available are not sufficient to warrant any definite assertion that immigration does or would contribute disproportionately to the total of mental abnormality in this Province. We are not prepared to say that there is a greater proportion of mental abnormality in the countries from which our immigrants come than there is in Canada. It may be that the prima facie evidence of our Provincial statistics is to be accounted for by the proportion of unfit individuals among our immigrants being larger than their proportion in the whole population of the countries from which they come. There may be ground for this assumption in the fact that individuals of this type are naturally restless; that they move because they are unsuccessful at home owing to their disability; that sometimes they are "shipped away" to a new land by their relatives.

Consideration of various official reports of those concerned in the medical inspection of immigrants, and in the matter of deporting those who do not come up to the standard at present required, leads to the conclusion that all immigrants should undergo the most strict medical examination before embarking, possibly when on the steamer, and again on landing. Study of the immigration laws and regulations would indicate that the fault lies in lack of facilities for examination rather than in the law.

Section 3 of the "Immigration Act" includes the following prohibited classes:—

(*a.*) Idiots, imbeciles, feeble-minded persons, epileptics, insane persons, and persons that have been insane at any time previously:

(*b.*) Persons afflicted with tuberculosis in any form or with any loathsome disease, or with a disease which is contagious or infectious, or which may become dangerous to the public health:

(*c.*) Immigrants who are dumb, blind, or otherwise physically defective, unless in the opinion of a Board of Inquiry or official acting as such they have sufficient money, or have such profession, occupation, trade, employment, or other legitimate mode of earning a living that they are not liable to become a public charge, or unless they belong to a family accompanying them or already in Canada and which gives security satisfactory to the Minister against such immigrant becoming a public charge:

(*k.*) Persons of constitutional psychopathic inferiority:

(*l.*) Persons with chronic alcoholism:

(*m.*) Persons not included within any of the foregoing prohibited classes, who upon examination by a medical officer are certified as being mentally or physically defective to such a degree as to affect their ability to earn a living.

Apparently immigrants coming under subsection (*m*) may be admitted, notwithstanding their disability, provided they fulfil certain requirements of the Act. In other words, persons who are mentally defective to such a degree as to affect their ability to earn a living may, under certain statutory regulations, enter and remain in Canada. In view of the large part that heredity plays in the causation of mental abnormality, it is plain that the greatest care should be exercised in allowing mentally affected persons coming under the category (*m*) to remain in Canada for fear that they may have offspring that may inherit the disability of the parent.

HAROLD CHAPMAN STEEVES, M.D., C.M.
McGill, 1912.
Appointed Superintendent, Provincial Mental Hospitals, 1921.
Died December 6th, 1926.

APPENDIX G.

REPORT

ON THE

HEREDITY AND PLACE OF ORIGIN OF THE PATIENTS ADMITTED TO THE PROVINCIAL MENTAL HOSPITALS OF BRITISH COLUMBIA

PREPARED FOR THE

MENTAL HYGIENE COMMISSION

BY

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I wish to take this opportunity of thanking Dr. H. C. Steeves, Medical Superintendent, and Dr. E. J. Ryan, Assistant Medical Superintendent, and every member of the medical staff of the Provincial Mental Hospitals for their courtesy and kindly interest in this investigation.

I wish also to extend my thanks to the clinical staff for their co-operation at all times.—H.P.D.

Introduction.

The following are the main points covered by this report:—

1. Heredity.
2. Country of Birth.
3. Length of Residence in British Columbia.
4. Length of Residence in Canada.

As the records of the feeble-minded were mixed up with those of the insane, except for those of patients in the Feeble-minded Cottage, it was necessary to make two classifications—Insane and F.M. A further complicating factor was that several of the F.M. had also developed a psychosis. This necessitated a third classification at times. This last group is referred to as F.M.+Psychoses to differentiate it from straight uncomplicated feeble-mindedness, usually designated as F.M. for brevity's sake.

Forms were printed on which the desired data could easily be tabulated.

It was considered best, after consultation with Dr. Rothwell, Chairman of the Mental Hygiene Commission; Dr. Steeves, Medical Superintendent; and Dr. Ryan, Assistant Superintendent of the Mental Hospital, to confine the investigation to all admissions to the Mental Hospital at Essondale and to the Provincial Hospital for the Insane at New Westminster during the last ten years. The period covered is from July 1st, 1916, to June 30th, 1926.

Information is not complete on all points and is not always reliable. This is due to several causes. In the first place, no field worker is employed to investigate the cases, to obtain further particulars of family history and to corroborate those already obtained. In general, the information is contained in the committal papers, particularly, for our purpose, in the "C Form." This is generally filled out by a close relative, sometimes only by an acquaintance or a police magistrate. Often it is very meagre, and, at times, entirely absent through lack of relatives and the inability of the patient himself to give any information. The chief source, however, is the information obtained by the doctor from the patient and his relatives.

All records of patients admitted during the above period named, and who were still in residence, or had recently been discharged on probation, or who had recently died, were first examined. These were distributed in three buildings—namely, Provincial Hospital for the Insane (P.H.I.) in New Westminster, and in the Chronic and Acute Buildings at Essondale. After that, all records of discharged (and dead) patients for the same period, and which are kept in the stack-room at Essondale, were examined. This constituted by far the largest group.

When a patient was found to have been an inmate on a former occasion, all his previous records were consulted, even if they occurred at a time prior to the period under investigation. Likewise, all records of his relatives were carefully scrutinized if they were found to be or to have been inmates of these institutes. Reference to these was generally clearly indicated on the records, but there were numerous occasions where they were located only with considerable difficulty.

Care was taken to see that the same patient was counted only once. This was indeed somewhat difficult since the same filing system is not used throughout, and no single alphabetical index of all the patients is kept. (An alphabetical admission-book is, indeed, kept, but it is alphabetical in chronological order; that is, as each new patient arrives his name is added to the last one beginning with the same letter. Unless, then, one knows the filing number of the patient, or the year in which he was admitted, one has to go through all the A's or B's, as the case may be, in order to locate the patient.) It is felt, however, that the figures are reasonably accurate.

TABLE I.—NUMBER OF ADMISSIONS FROM JULY 1ST, 1916, TO JUNE 30TH, 1926.

Number of insane	3,485
Number of F.M. (including F.M.+Psychoses)	353
Number found not insane	44
Total	3,882
Number of readmissions of above patients	552
Total number of records examined (exclusive of records of relatives)	4,434

Accordingly, 3,882 patients are responsible for 4,434 admissions, or an average of 1.14 admissions per person. (Two patients have 10 admissions each to their names.) This compares favourably with the results found by Myerson[1] at the Taunton Hospital, where 16,000 patients are responsible for 22,300 commitments, or 1.39 admissions per person.

A closer analysis revealed the fact that 265 of these patients were related to each other, or 6.8 per cent. of all the patients. Myerson[2] found that 1,547 of his 16,000 patients were related, or 9.7 per cent.

These 265 related patients represented 123 families, while Myerson's represented 664 families.

It was also found that 299 of these 3,882 individuals had been in institutions before coming to British Columbia. Of these, 8 had had nervous break-downs and 15 were in military hospitals. This gives a total of 7.5 per cent. for all individuals when the nervous break-downs are excluded.

INHERITANCE OF MENTAL DISEASE.

"The present is the child of the past; our start in life is no haphazard affair, but is vigorously determined by our parentage and ancestry; all kinds of inborn characteristics may be transmitted from generation to generation."—*Prof. Arthur Thomson.*

A cursory survey of the literature in this field shows remarkable disagreement among the authorities as to the amount of what is popularly termed insanity that is due to heredity. Results of investigations vary from 15 per cent., or even less, up to 90 per cent. All, however, seem to agree that heredity does play some part in the transmission of the insane diathesis.

Holmes[3] gives the following quotations from recent authors. Mott declares that "The large majority of the insane are hereditarily disposed." Clouston states: "An evil nervous heredity commonly underlies all other causes. Without its existence there would be very little unsoundness of mind in the world."

White[4] in his discussion of causes states that "the average mind, under the influence of stress, does not become deranged unless from the operation of traumatism, toxæmia, or extreme degrees of exhaustion, and not even then with anything like the facility of the mind predisposed to disease by bad heredity or unconscious complexes."

Rosanoff[5] states: "At least three-fourths of all cases of mental disorders occur on the basis of bad heredity, alcoholism, drug addictions, or syphilis."

On the other hand, H. A. Cotton,[6] Medical Director of the New Jersey State Hospital at Trenton, sounds a warning to a too placid acceptance of the theory of heredity, though he does not deny its presence entirely. He states: "The doctrine of heredity as applied in the field of mental disorders has been detrimental and destructive. Not only have the individuals directly concerned suffered great hardships, but others as well. For example, children having a parent mentally affected have hesitated to marry because of a possible 'taint,' and in addition have been terrified at the prospect of developing the same condition. Furthermore, it has exerted a pernicious influence on both the study and treatment of mental disorders. For if we firmly believe in these doctrines of heredity and the 'inherited constitution,' which means in a broader sense that in certain cases mental disease is inevitable and that nothing can be done to prevent or to cure it, then evidently it would be futile to try to arrest the disease or search for methods of relief except along eugenic lines. It cannot be denied that such has been the attitude of psychiatrists in general, and when everything is blamed on heredity, this fatalism assumes the rôle of a cloak to hide our ignorance and stifle initiative in the investigation of causation looking to prevention and relief.

"Fortunately we are to-day in a position to show that the doctrine of heredity as applied to mental disorders is not in harmony with modern biological knowledge and is, therefore, obsolescent. The inherited constitution in the newer sense would refer specifically to the individual's constitutional resistance to various toxins, rather than to merely mental instability."

We will now attempt to point out the chief reasons for these discrepancies in results. The first is due to different opinions as to what is meant by the inheritance of insanity, and until

[1] Myerson, Abraham: The Inheritance of Mental Diseases, 1925, page 114.
[2] Myerson, Abraham: op. cit.
[3] Holmes, S. J.: The Trend of the Race, 1921, page 46.
[4] White, Wm. A.: Outlines of Psychiatry, 1923, page 35.
[5] Rosanoff, A. J.: Manual of Psychiatry, 1920, page 170.
[6] Cotton, H. A.: The Defective, Delinquent, and Insane, 1921, page 21.

the same standards are used we will continue to get very different results. Buckle[7] states in his History of Civilization in England: "We often hear of hereditary talents, hereditary vices, and hereditary virtues, but whoever will critically examine the evidence will find that we have no proof of their existence. The way in which they are commonly proved is in the highest degree illogical, the usual course being for writers to collect instances of some mental peculiarity found in a parent and his child and then to infer that the peculiarity was bequeathed. By this mode of reasoning we might demonstrate any proposition; since in all large fields of inquiry there are a sufficient number of empirical coincidences to make a plausible case in favour of whatever view a man chooses to advocate. But this is not the way in which truth is discovered, and we ought to inquire not only how many instances there are of hereditary talents, etc., but how many instances there are of such qualities not being hereditary. Until something of this sort is attempted we can know nothing about the matter inductively; while until physiology and chemistry are much more advanced we can know nothing about it deductively."

Mott[8] says: "I have often found in the collecting of pedigrees the association of insanity and suicide in a stock preceded by or associated with the existence of individuals possessing the melancholic, suspicious, brooding, self-centred, hypochondriacal temperament; and it is not uncommon for suicide of one or more members of a stock in successive generations to occur. Associated with these temperamental evidences of degeneracy of a stock may be chronic alcoholism, dipsomania, hysteria, hypochondriases, psychasthenia, goitre, neurasthenia, migraine, petitmal or neurosis of an epileptic character, often unrecognized because not manifesting fits of the major form of the disease. In searching for the neuropathic tendency, there are, therefore, many possibilities of missing the inborn factor of a neurosis or psychosis though a careful inquiry be made, even when aided by intelligent co-operation on the part of friends."

But who is to be the judge of these neuropathic tendencies? How suspicious and self-centred must an individual be in order to be considered to possess this neuropathic tendency?

Heron[9] finds similar grounds for criticizing the work of Rosanoff and Orr in their "A Study of Heredity in the Light of the Mendelian Theory." He finds them using the term "insanity" very loosely. In fact, he states: "These papers deal, not with the inheritance of insanity, but with what the authors term a neuropathic condition, which is so comprehensive that it is a matter of surprise that there are any normal individuals at all." Examples of such neuropathic conditions are "quick-tempered," "restless," "very fidgety especially when he has a cold or a headache," "odd, very quiet disposition," etc.

A second point for criticism is closely allied to the first. Frequently the onus for judging the sanity or insanity of a relative rests with the field worker who has usually little training in the diagnosis of mental disease.

A third cause is to be found in the biased attitude of the investigator who finds what he wishes to find.

A fourth source of error lies in the incompleteness and unreliability of some of the case history records of patients in institutions, especially where there are no field workers to check the statements contained therein.

A fifth source is to be found in the degree of excellence of the facilities for the care of the mentally diseased. Districts where there is ample accommodation will care for a larger percentage of the mentally diseased. Where conditions are not so favourable a large number will be found in the population at large, for it is very well known that a very large number is to be found outside of institutions, due to either lack of accommodation for them, or the ignorance of relatives as to the value of institutional treatment, or to the lack of the recognition of the early mental symptoms.

A sixth source of error lies in neglecting to use a control group. It is very important to know how many insane relatives a random sampling of the general population has, in order to know whether the percentages obtained in institutions are significant.

In this study an effort has been made to avoid the worst of these errors, but we are handicapped by being limited to the information contained in the institutional records. We do not have a control group.

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[7] Buckle: History of Civilization in England, cit. by Myerson.
[8] Mott, F. W.: Heredity and Eugenics in Relation to Insanity, page 16, Eugenics Educ. Society, London.
[9] Heron, David: Mendelism and the Problem of Mental Defects. A Criticism of Recent American Work, Galton Lab., 1913.

The first point to be settled was to decide what was to be taken as evidence of inheritance of mental disease. Great caution was necessary since we were dependent upon the statements found in the records, some of which were bound to be unreliable. There is often a reluctance on the part of relatives to acknowledge the presence of insanity in their family relations and hence our records have a decisive "No" where further investigation would probably reveal the existence of such in many cases. On the other hand, we get vague responses that some one remembers that his mother had said that she had a brother or an uncle, etc., who was crazy. Further, the committal paper, "Form C," inquires if the patient has any relatives suffering from a "similar" disorder. The answer was frequently "an uncle" or "a brother" or "mother," etc. In many of these cases it was found that these vague uncles and brothers had actually been in an institution; in fact, some of them had been in Essondale at one time. But where further information was not available, what weight should be given to these? It was decided to make three categories, clearly defining the same to avoid ambiguity. They are as follows:—

1. *Heredity.*—All patients who have or have had one or more relatives committed to an institution for the insane or feeble-minded were considered to show marks of an heredity taint and were classified in the "Heredity" group.

Even this seemingly definite and undeniable evidence leaves room for error. Apart from the fact that it will probably be smaller than it would be if more particulars of family history were known, we are including cases of similar and dissimilar heredity as well as direct and indirect heredity. The cases of indirect heredity are few and will not affect the results to any great extent. With regard to the former (similar and dissimilar), however, it was felt to be impossible to go into greater detail in the time available for this study, and perhaps unnecessary as well, since so little is definitely known with regard to how these defects are transmitted.

2. *Heredity Inferred.*—All patients in whose records is a statement that some relative is or has been similarly afflicted, or insane, but no evidence is given as to his having been in an institution or so diagnosed by a competent psychiatrist, are placed in the "Heredity Inferred" group. Included also in this group are those who have *more than one close* relative (sibs or parents) stated to have been alcoholic or very nervous. These and cases of suicide constitute a very small percentage of this group.

3. *Doubtful Heredity (?).*—Those patients who have one close relative (usually a parent) who is stated to be an "alcoholic," or "nervous," or "peculiar," or "crazy" have been placed in this third category. It is a very small one, but it was thought best to group these apart from the others.

The following abbreviations are used throughout:—

Ins.—Insane only (uncomplicated by F.M.); embraces any and all psychoses irrespective of the cause.

F.M.—Feeble-minded only (uncomplicated by psychoses).

F.M.+Psychoses—Those feeble-minded who have a psychosis superimposed on the primary feeble-minded condition.

M.D.—Manic-depressive Psychosis.

D.P.—Dementia Præcox Psychosis.

Par.—Paranoia.

S.D.—Senile Dementia Psychosis.

Arter.—Arteriosclerosis.

G.P.—General Paresis.

Toxic—Includes all other toxic and traumatic psychoses.

N.Y.D.—Not yet diagnosed, for various reasons—namely, newly admitted, or died before a satisfactory diagnosis could be made.

H.—Heredity (Category I.).

H. Inf.—Heredity Inferred (Category II.).

(?)—Doubtful Heredity (Category III.).

N.K.—Not known (Category IV.).

Tables II., III., and IV. give the percentage of heredity found for our total number of cases classified into the four categories outlined above.

Table II.—Percentage of Hereditary Taint amongst 3,485 Insane.

H.	H. Inf.	(?).	N.K.
11.74	10.41	1.67	76.18

Table III.—The same as II., but including 72 F.M.+Psychoses (3,557 Cases in all).

H.	H. Inf.	(?).	N.K.
12.03	10.31	1.70	75.96

Table IV.—Percentage of Hereditary Taint amongst the F.M. (No Psychosis).

H.	H. Inf.	(?).	N.K.
16.37	8.54	1.78	73.31

Although we believe that a considerable proportion of the Heredity Inferred group would be found to belong to our Heredity group, we will limit our discussion to the latter group only.

We find that 11.74 per cent. of our insane have or have had one or more relatives in institutions. This is somewhat less than the lowest findings as given by Toulouse and quoted by Holmes[10]:—

	Per Cent.
Ellis	15.50
Morel	20.00
Esquirol (Statist. de Charenton)	24.50
Esquirol (Statist. de la maison d'Ivry)	56.81
English Asylum Statistics	20.50
Prussian Asylum Statistics	27.96
Guislaid	45.00
Moreau	90.00

It is also considerably less than Maudsley (quoted by the same author) anticipates. He states: "Suffice it to say broadly that the most careful researches agree to fix it as certainly not lower than one-fourth, probably as high as one-half, possibly as high even as three-fourths."

A. R. Urquhart[11] states: "I have shown elsewhere that persons admitted to James Murray's Royal Asylum, Perth, show 48 per cent. of insane heredity and 81 per cent. of neuropathic heredity. That those percentages are underestimated cannot be doubted, for deliberately false or accidentally false information is often corrected by patient investigation, while invincible or wilful ignorance baffles all efforts to arrive at the exact truth."

Heron[12] in a statistical study using the data collected by Urquhart, which he considers unusually reliable, finds that out of 315 families with 1 sib insane there were 404 insane individuals and 1,433 sane individuals, "when we have excluded children who have died in infancy or who are under 20 years of age, and have not entered the danger-zone." He also states in the same article that Pearson's Family Records give 66 per cent. offspring insane when both parents are insane, 40 per cent. insane when one parent only is insane, and 44 per cent. when one or both parents are insane. In estimating these percentages only those children who live to be over 50 years are classed as sane. He (Pearson) believes that 25 per cent. is a too low estimate. In general the English Biometric School consider mental disease inherited to the same extent as physical attributes, such as eye colour, height, etc.

[10] Holmes, S. A.: op. cit., page 46.
[11] Urquhart, A. R.: Insanity, page 9. Treasure of Human Inheritance, Galton Lab.
[12] Heron, D.: The Inheritance of the Insane Diathesis. Eugenics Lab.

Since we know that certain psychoses have an actual organic or toxic basis, and we suspect others of having such, common sense suggested that in all probability heredity would play a very small part in the causation of these, and that by their inclusion we were obscuring its rôle in these so-called functional psychoses which have not so far been satisfactorily accounted for on any other basis. With this in mind we decided to classify all our data into our three heredity groups according to the psychosis.

Eight main groups were formed—namely, M.D., D.P., and Par. (the so-called functional psychoses), S.D. and Arter., which are accompanied by arterial degeneration and other physical symptoms, and in which heredity may or may not play a part; Epilepsy, which presents a very different picture from the other psychoses; G.P., which is gross organic syphilitic disease of the brain, but which forms such a large class by itself that it was thought best to keep it apart from the other organic psychoses; and the Toxic Psychoses. Since our purpose was to differentiate clearly between the functional and organic psychoses, we included in the last group all psychoses of toxic origin, whether caused by alcohol, T.B., Paralysis agitans, etc., as well as the traumatic psychoses. There were seven cases not readily classified into the above groupings, and they were placed by themselves. Two other groups were formed, one for the "Not yet diagnosed" and the other for the cases found to be "Not Insane."

Table V. gives the gross numbers in each of these groups and Table VI. is the same converted into percentages.

TABLE V.—GROSS NUMBERS SHOWING HEREDITARY TAINT DISTRIBUTED BY PSYCHOSES.

Psychosis.	H.		H. INF.		(?).		N.K.		TOTAL.	
	F.M.	Ins.	F.M.	Ins.	F.M.	Ins.	F.M.	Ins.	F.M.	Ins.
M.D.	5	174	....	145	....	18	4	752	9	1,089
D.P.	5	131	1	101	1	16	9	678	16	926
Par.	....	17	....	23	....	5	....	158	....	203
S.D.	....	23	....	34	....	3	....	355	....	415
Arter.	....	4	....	5	....	....	....	45	....	54
G.P.	1	20	....	20	....	6	1	261	2	307
Tox.	1	17	....	27	....	7	2	297	3	348
Epi.	8	19	3	6	1	1	30	90	42	116
Pure F.M.	46	....	24	....	5	....	206	....	281	.....
N.Y.D.	....	3	....	1	....	....	....	16	....	20
Not Ins.	....	5	....	....	....	....	....	39	....	44
Other	....	....	....	1	....	2	....	4	....	7
Totals	....	....	....	....	....	....	....	....	353	3,529

TABLE VI.—PERCENTAGES OF HEREDITY FOR THE INSANE OF TABLE V.

Psychosis.	H.	H. Inf.	(?).	N.K.	H.+H. Inf.+F.M.+Psych.*
M.D.	15.98	13.30	1.67	69.05	29.50
D.P.	14.15	10.91	1.72	73.22	15.27
Par.	8.37	11.33	3.16	77.14	19.70
S.D.	5.54	8.19	0.73	85.54	13.73
Arter.	7.41	9.26	.....	83.33	16.67
G.P.	6.51	6.51	1.96	85.02	13.02
Tox.	4.89	7.75	2.03	85.33	12.80
Epi.	16.38	5.17	0.86	77.59	22.78
Pure F.M.	16.37	8.54	1.78	73.31	24.91

* The last column is obtained by adding together columns 1, 2, 3, and 4 of Table V. This was done to get the effect of the F.M.+Psychoses whose numbers are so very small, except amongst the Epileptics, to not make it worth while calculating the percentage for each. Conclusions should not be based on these figures since they include the "H. Inf." group.

Confining our attention to the Heredity group of Table VI., we find that heredity plays the largest rôle in Epilepsy—possibly because it is more easily detected than the other psychoses. Then, in order of decreasing importance, come M.D., D.P., Par. (our functional groups); then Arter., G.P., S.D., and last of all our Toxic group, almost as we expected. It is a little surprising, perhaps, to find so large a difference between the Paranoiac group and the D.P. and so little difference between it and the Arteriosclerotics. It should be noted, however, that the Arteriosclerotics are by far the smallest group and so there is room for a chance error. A glance at the last column of Table VI. will reveal a similar situation; the functional psychoses show the greatest amount of hereditary taint, and the toxic, the least. (G.P. and S.D. change places now.) We also find that F.M. and Epi. have the same amount of hereditary taint, both being somewhat in excess of the M.D., column 1.

The F.M.+Psychoses form a very small portion of the insane. The largest group, forty-two in number, is to be found amongst the epileptics. Though this number is too small to make generalizations, it is interesting to note that 19.05 per cent. of them belong to the Heredity group, 7.14 per cent. of the Heredity Inferred, and 2.38 per cent. to the doubtful group.

PREVENTION OF INSANITY.

Putting the worst complexion on our figures, we find that 30 per cent. is the largest amount of insanity due to hereditary taint of varying degrees. That leaves us with 70 per cent., a goodly proportion, not due to heredity as far as known. Can any of this 30 per cent. be prevented? Referring to Table V., we find 307 cases, or 8.8 per cent. of G.P. White[13] says: "The etiology of paresis has long been a matter of contention, but the opinion that syphilis is a necessary precondition to the development of the disease has been held for a considerable time and is at the present time a settled issue."

According to Rosanoff,[14] syphilis is responsible for 21.2 per cent. of all male first admissions and 6.5 per cent. of all female admissions to New York State Hospital for the year ended June 30th, 1918. Myerson[15] states: "Civilization is Syphilization." In discussing this subject he says: "Wherever greater freedom exists, wherever there is less regard for conventional morality, there is a greater increase of syphilis. If syphilis is a blastophoric influence injuring the race, then no matter whether or not conventional morality is justified on ethical grounds, it is justified on hygienic and eugenical grounds. Free love fosters free syphilis." Holmes,[16] discussing toxic effects, goes on to say: "The disease whose hereditary effects are the most obvious is syphilis, which may be transmitted from parent to offspring through one or two generations and possibly more. It is not necessary to describe the disastrous consequences to offspring resulting from this terrible malady. It is only too well known as a very patent cause of abortions, still-births, early deaths, and much misery to those to whom it does not mercifully prove fatal."

Here, then, is a psychosis due to something very definite, and which can be detected by refined laboratory technique. Public education to the dangers of this dread disease and facilities for early hospital treatment may do much to reduce this part of our problem.

The next group that holds our hope is the Toxic group, forming about 10 per cent. of the total insane population. For the purpose of this study we grouped all psychoses of toxic origin together with those due to trauma. The largest number were directly due to alcohol, while drugs, T.B., and other somatic diseases and febrile conditions (including puerperal) were included. Generally speaking, this psychosis disappears with the removal of the cause, whether alcohol or disease. Prevention of these diseases and reduction in excessive alcohol-drinking will reduce the number of patients in our institutions.

It is impossible here to do more than mention that the question as to whether alcoholism is the cause or result of mental disease is still the centre of controversy. There is perhaps a growing tendency to agree, with Elderton[17] and Pearson, that it is the latter. On the other hand, Stockard and others have clearly demonstrated that alcohol can seriously injure the germ-plasm of guinea-pigs, and this defective germ-plasm can be handed down from one generation to the

[13] White, W. A.: op. cit., page 144.
[14] Rosanoff, A. J.: op. cit.
[15] Myerson: op. cit., page 314.
[16] Holmes: op. cit., page 293.
[17] Elderton and Pearson, K.: A First Study of the Influence of Parental Alcoholism on the Physique and Ability of the Offspring. Eugen. Lab. Mem.

next. And, if alcohol can do this, may not other diseases cause sufficiently grave toxic conditions to do likewise?

Turning our attention now to the functional groups, M.D., D.P., and Par., which form 60.6 per cent. of the insane patients, we are confronted with a much more difficult problem. The most hopeful writer dealing with these cases is A. H. Cotton.[18] In direct opposition to the psychoanalytical school, which has directed its energies to the solution of mental complexes, he believes that every psychosis has a material basis, and gives first place to toxic infections in the causation of these so-called functional psychoses. He states: "While the cause and termination of the various types in this class may differ materially, it has been found that the causative factors are the same. In one type hereditary influences may be more prominent, in another the psychogenic factors, but in the entire class we have found that the presence of chronic infection and resulting toxæmia is the constant and most important factor. In this 'functional' group, now classed as toxic, the spontaneous recovery rate was only 37 per cent. for the decade prior to 1918. Since then and as a result of instituting the detoxicating treatment the rate has reached 77 per cent." Adolf Meyer, in his prefatory remarks to Cotton's book, states that he himself has not met with such marked success in this type of treatment as has Cotton.

But what can be done to prevent these psychoses? Homer Folks,[19] in an address to the New York Academy of Medicine in 1910, advocated a campaign to educate the public similar to the one used in combating T.B., together with the establishment of many accessible dispensaries, where individuals may receive early advice and treatment. Both are very necessary. The public is woefully ignorant about mental diseases, their cause and symptoms. It is familiar, however, with the words "insanity" and "asylum," and the connotations which have grown up with these words are such that it veers from them with dread. It is, then, the duty of the State to educate the public to the real significance of mental diseases, to help it to recognize the earlier symptoms, and to seek aid immediately: to establish confidence in psychiatrists and to look on mental hospitals in the same light as it now does upon hospitals for bodily diseases, as the best place to go for the best kind of treatment. But, above all, early recognition of symptoms is essential, and for such the establishment of a psychopathic hospital is a prime necessity. Such a one as advocated by Cotton,[20] where the advice of specialists in every branch of the medical world is available, is greatly to be commended. In addition, there is another fruitful field where much could be done in the prevention of these psychoses—namely, in the schools. The conception that mental disorders are the results of failure to adjust harmoniously to one's environment is becoming more commonly accepted. This process of adjustment is a continuous one from birth and differs for each individual. The schools are only beginning to realize that this is their primary function. Thus the training of teachers to detect pupils who are maladjusted, and the employment of psychologists to diagnose and advise, is proving in many quarters a valuable means of helping an individual to a fuller life of usefulness, happiness, and the prevention of many incipient psychoses.

PLACE OF BIRTH.

All data were tabulated according to country of birth for those born outside, and by province for those born within the Dominion. The F.M. and the Insane were, as usual, tabulated separately. Percentages were then calculated and compared with those obtained in the 1921 census. We were fortunate in obtaining figures for this particular year, since it is about the mid-point of the period we are studying and therefore will be fairly indicative of the average tendencies for the ten-year period. As the war brought about many changes in the boundaries of certain European countries we have followed the classification indicated in the census wherever possible.

[18] Cotton, H. A.: op. cit., page 79.
[19] Folks, Homer: A Plan of Campaign for the Prevention of Insanity, 1912. State Charities Aid Assoc., New York.
[20] Cotton, H. A.: op. cit., page 186.

Table VII.—Population of British Columbia according to Place of Birth, expressed in Percentages and compared with 1921 Census.

	I. Insane.	II. 1921 Census.	III. I.–II.	IV. Per Cent. Excess III. is over Iv.	V. F.M.	VI. V.–II.	VII. Per Cent. Excess VI. is over II.
Canada.							
B.C. (white)	4.85	29.94	—25.43	.....	40.63	13.00	43.40
B.C. (Indian)	0.66				2.31		
Alberta	0.34	1.78	— 1.44	.....	2.31	0.53	29.70
Saskatchewan	0.34	1.60	— 1.26	.....	2.02	0.42	26.20
Manitoba	1.80	2.31	— 0.51	.....	7.20	4.89	211.70
Ontario	11.76	9.60	2.16	22.50	4.90	—4.70	.....
Quebec	3.11	1.57	1.54	98.10	1.73	0.16	10.20
Nova Scotia	2.20	1.63	0.57	34.90	1.15	—0.48	.....
New Brunswick	1.77	1.20	0.57	47.50	2.88	1.68	140.00
Prince Edward Island	0.66	0.48	0.18	.....	0.29	0.19	.....
Yukon (Indian)	0.085	0.04	0.045	.....	.....	.....	.....
N.W. Territories (Indian)	0.029	0.01	0.019	.....	.....	.....	.....
Not stated	0.20	0.18	0.02	.....	.....	.....	.....
Totals	27.804	50.34	—22.536	.....	65.42	15.08	29.90
British Isles.							
England	25.47	19.21	6.26	32.60	16.14	—3.07	.....
Scotland	8.51	7.24	1.27	17.50	3.75	—3.49	.....
Ireland	4.34	2.06	2.28	110.70	1.15	—0.91	.....
Wales	1.20	0.61	0.59	.....	0.58	—0.01	.....
Other	.....	0.19	.....	.....	.....	.....	.....
Totals	39.52	29.31	10.21	34.80	21.62	—7.69	.....
British Possessions.							
Australia	0.43	0.26	.....	.....	0.87	0.61	.....
India (native)	0.23	0.35	.....	.....	0.29	0.06	.....
India (white)	0.34						
Newfoundland	0.77	0.36	.....	.....	.....	.....	.....
New Zealand	0.17	0.10	.....	.....	.....	.....	.....
South Africa	0.17	0.11	.....	.....	0.29	0.18	.....
West Indies (negro)	0.085	0.05	.....	.....	0.29	0.24	.....
West Indies (white)	0.11						
Egypt	.....	.....	.....	.....	0.29	.....	.....
Channel Islands	0.057	.....	.....	.....	.....	.....	.....
Cyprus	0.029	.....	.....	.....	.....	.....	.....
Gibraltar	0.029	.....	.....	.....	.....	.....	.....
Malta	0.029	.....	.....	.....	.....	.....	.....
St. Helena	0.029	.....	.....	.....	.....	.....	.....
Other	.....	0.08	.....	.....	.....	.....	.....
Totals	2.478	1.31	1.168	89.20	2.03	0.72	54.90
Europe.							
Austria	1.91	0.27	1.64	607.40	0.58	.....	.....
Belgium	0.114	0.15	— 0.036	.....	.....	.....	.....
Bulgaria	0.057	0.01	0.047	.....	.....	.....	.....
Czechoslav.	0.17	0.11	0.06	.....	.....	.....	.....
Denmark	0.63	0.18	0.45	.....	.....	.....	.....
Finland	1.77	0.36	1.41	391.70	.....	.....	.....
France	0.54	0.36	0.28	.....	0.29	.....	.....
Galicia	0.23	0.08	0.15	.....	.....	.....	.....
Germany	1.09	0.29	0.80	275.80	.....	.....	.....
Greece	0.23	0.09	0.14	.....	.....	.....	.....
Holland	0.26	0.10	0.16	.....	.....	.....	.....
Hungary	0.17	0.04	0.13	.....	.....	.....	.....
Iceland	0.114	0.06	0.054	.....	.....	.....	.....
Italy	1.57	0.92	0.65	70.70	0.29	.....	.....
Jugoslav	0.20	0.09	0.11	.....	.....	.....	.....
Norway	1.94	0.68	1.26	185.30	.....	.....	.....

TABLE VII.—POPULATION OF BRITISH COLUMBIA ACCORDING TO PLACE OF BIRTH, EXPRESSED IN PERCENTAGES AND COMPARED WITH 1921 CENSUS—*Continued.*

	I. Insane.	II. 1921 Census.	III. I.–II.	IV. Per Cent. Excess III. is over IV.	V. F.M.	VI. V.–II.	VII. Per Cent. Excess VI. is over II.
Europe—Continued.							
Poland	0.66	0.17	0.49	.....	.....	.....	.....
Roumania	0.14	0.06	0.38	.....	.....	.....	.....
Russia	1.57	0.83	0.74	89.20	.....	.....	.....
Sweden	3.43	1.09	2.34	214.70	0.29	.....	.....
Switzerland	0.20	0.10	0.10	.....	.....	.....	.....
Ukraine	0.029	0.04	— 0.011	.....	.....	.....	.....
Spain	0.057	.....	.....	.....	.....	.....	.....
Turkey	0.057	.....	.....	.....	.....	.....	.....
Lithuanea	0.057	.....	.....	.....	.....	.....	.....
Luxemburg	0.029	.....	.....	.....	.....	.....	.....
Others	.....	0.06	.....	.....	.....	.....	.....
Totals	17.224	6.04	11.184	185.20	1.74	—4.30	.....
Asia.							
China	2.88	4.10	.....	.....	.....	.....	.....
Japan	1.51	2.08	.....	.....	0.29	.....	.....
Syria	0.057	0.02	.....	.....	.....	.....	.....
Other	.....	0.02	.....	.....	.....	.....	.....
Totals	4.447	6.20	— 1.753	.....	0.29	—5.91	.....
U.S.A. (white)	7.85	6.66	1.529	22.96	8.93	2.27	34.08
U.S.A. (negro)	0.31						
Hawaii	0.029	.....	.....	.....	.....	.....	.....
Totals	8.189	6.66	1.529	22.96	8.93	2.27	34.08
Mexico	0.085	.....	.....	.....	.....	.....	.....
Central America	0.029	.....	.....	.....	.....	.....	.....
South America	0.17	.....	.....	.....	.....	.....	.....
Danish West India	0.029	.....	.....	.....	.....	.....	.....
Others	.....	0.12	.....	.....	.....	.....	.....
Totals	0.313	0.12	0.193	.....	.....	.....	.....

It will be seen from the above table that the Canadian born insane form 27.804 per cent. of our total institutional cases, while the Canadian born form 50.34 per cent. of the general population according to the 1921 census. Here is a large difference. A closer analysis reveals another striking difference. British Columbia born inhabitants form 29.94 of the British Columbia population, while they only form 5.51 per cent. of the institutional cases. If we total the rest of the Canadian born (excluding only the British Columbia born), we find they comprise 22.294 per cent. of the insane population and 20.40 per cent. of the general British Columbia population. In other words, Canadian born inhabitants are not found in the British Columbia institutions to a greater degree than you would expect from their numbers in the population at large. The discrepancy is to be found, therefore, in the British Columbia born inhabitants, who are only one-fifth as numerous in the institutions as you would expect if distributed in proportion to their frequency in the general population. The explanation seems to be simple. Generally speaking, we would expect a larger percentage of children in the native born than amongst those who have migrated to British Columbia from other parts. In other words, immigrants (using that word to mean new-comers from outside the Province) are more likely to be adults than children. Insanity does not generally show itself much before 20 years of age. A goodly proportion of the native born, then, is still too young to exhibit signs of mental disease. Unfortunately, the census does not give figures which would enable us to determine the number of individuals under 20 years born in British Columbia separately from those born in the other Provinces in order to determine whether the above is an adequate explanation.

Column III. shows which Provinces are contributing to our institutions in excess of their representation in the general population. (A minus-sign means they have fewer insane than one would expect from their numbers in the population at large.) This excess, expressed in percentages for the Provinces forming at least 1 per cent. of the population, will be found in column IV. It will be seen that the Prairie Provinces contribute a lesser proportion than might be expected from column II., and that (in order of size) Quebec, New Brunswick, Nova Scotia, and Ontario contribute a larger proportion, Quebec having almost double her share.

Turning to the British Isles, we find that they are represented in our institutions to the degree of 39.52 per cent., which is 34.8 per cent. more than would be expected from their share in the general population. Column IV. shows that Ireland contributes the greatest excess (more than double), then Wales (however, the numbers are too small to be reliable), then England, and finally Scotland.

The British possessions contribute 1.31 per cent. to the general population and 2.478 per cent. to the insane population, an excess of about double—namely, 89.2 per cent. The proportion contributed by the different countries in this group are too small to base conclusions upon (0.029 per cent. means that one individual is represented).

European countries are responsible for 6.04 per cent. of the general population and 17.2 per cent. (or nearly treble) of the insane population, an excess of 185.2 per cent., a rather considerable amount.

Only one country, Sweden, contributes more than 1 per cent. to the general population and is represented in the institutions by more than three times that amount—namely, an excess of 214 per cent., a very considerable number. Percentages were calculated for those countries contributing more than 1 per cent. to the insane population, to find the degree of over-representation with respect to their distribution in the general population. From greatest to least we find Austria, Finland, Germany, Sweden, Norway, Russia, and Italy. A large number of the above Austrians were interned aliens, and the period of confinement may have been a precipitating factor in the psychosis.

Asiatics form 6.2 per cent. of the general population—very close to that of European countries—and 4.45 per cent. of the insane population. Therefore, they contribute fewer insane with respect to their numbers than do Europe, the British Isles and possessions.

Separating the American born from out the next census group, we find that they form 6.66 per cent. of the general population and 8.189 per cent. of the insane population, an excess of 22.96 per cent. Other countries contribute less than 1 per cent.

Turning our attention now to the F.M., we note some interesting differences. This time the proportion of Canadian born F.M. exceeds the proportion of Canadian born in the general population. Again totalling the percentages born in other Provinces (i.e., excluding British Columbia born), we find 22.48 per cent., which approximates closely the same figures for the insane—namely, 22.294 per cent.; and those for the general population—namely, 20.40 per cent. Again we find the discrepancy arising in the figures of the British Columbia born, this time the native born contributing a gross excess of 13 per cent., or a real percentage excess of 43.4 per cent. Here, again, the explanation seems to lie in the age at which the mental defect becomes noticeable; in this case, at birth or shortly after. Our records show that the majority of these patients are young children. If our previous hypothesis is correct, we expect a greater number of children amongst the British Columbia born than amongst those born elsewhere. This would tend, then, to increase the percentage of F.M. amongst the British Columbia born as against those from other Provinces. Further, individuals suffering from mental defect to as great an extent as the majority of these are not liable to move about apart from their families. This is in contrast to the insane, many of whom seem to be driven from pillar to post by persecuting voices, their history being a record of a continuous migration.

A closer analysis reveals the fact that Manitoba contributes more than three times as many F.M. than is justifiable by the percentage of individuals it gives to the general population; i.e., the number of inhabitants born in Manitoba forms 2.31 per cent. of the British Columbia population, while the number of F.M. born in Manitoba forms 7.20 per cent. of the F.M. population, the difference being 4.89 per cent., or a percentage excess of 211.7 New Brunswick also contributes F.M. out of proportion to her numbers—namely, an excess of 140 per cent. As the numbers are rather small the chance error will probably be large. The part played by the Provinces in the matter of F.M. is very different from that played by them in insanity. Now

the greatest contributors in proportion to the general population are, from greatest to least, Manitoba, Alberta, Saskatchewan, and Quebec. Here the Prairie Provinces are prominent, while they contribute less than their share of insanity.

The British Isles contribute 21.62 per cent. of the F.M., a little less than the proportion of the British Columbia population born there.

The British possessions give us 2.03 per cent. F.M., Australia contributing the largest proportion. This constitutes an excess representation of 54.9 per cent. Again the numbers are too small to make generalizations.

Europe gives us only 1.74 per cent. of our F.M., in comparison with 6.04 per cent. of the general population.

Asia gives us a very small portion of our F.M.—namely, 0.29 per cent.—while it contributes 6.2 per cent. to the general population.

The United States, on the other hand, contributes 8.93 per cent. of our F.M., this being 34.08 per cent. more than would be expected from its contribution of 6.66 per cent. to the general population.

SUMMARY.

1. Individuals born in—

British Isles form 39.52 per cent. of the insane and 21.62 per cent. of F.M.
Canada form 27.8 per cent. of the insane and 65.42 per cent. of F.M.
Europe form 17.224 per cent. of the insane and 1.74 per cent. of F.M.
United States form 8.189 per cent. of the insane and 8.93 per cent. of F.M.
Asia form 4.447 per cent. of the insane and 0.29 per cent. of F.M.
British possessions form 2.478 per cent. of the insane and 2.03 per cent. of F.M.
Other countries form 0.313 per cent. of the insane and 0.0 per cent. of F.M.

2. Comparing the percentage which these countries contribute to the general population with the percentage which they contribute to the institutional population, we find the following groups of countries the heaviest contributors to our institutions, in order from greatest to least:—

(*a.*) *Insane.*—Europe (185.2 per cent. excess); British possessions (89.2 per cent.); British Isles (34.8 per cent.); United States (22.96 per cent.) (i.e., Europe contributes 185.2 per cent. more insane than is justifiable by the percentage it forms of the general British Columbia population, etc.).

(*b.*) *Feeble-minded.*—British possessions (54.9 per cent.); United States (34.08 per cent.); Canada (29.9 per cent.).

NOTE.—Groups not mentioned above contribute less than the percentage they form of the general population.

3. Of the Provinces forming more than 1 per cent. of the general population, the following are the largest contributors with respect to the percentages they form of the general population:—

(*a.*) *Insane.*—Quebec (98.1 per cent. excess); New Brunswick (47.5 per cent.); Nova Scotia (34.9 per cent.); Ontario (22.5 per cent.).

(*b.*) *Feeble-minded.*—Manitoba (211.7 per cent. excess); New Brunswick (140 per cent.); British Columbia (35.7 per cent.); Alberta (29.7 per cent.); Saskatchewan (26.2 per cent.); Quebec (10.2 per cent.).

4. The Immigration authorities should take more stringent steps in order to exclude more of these individuals, especially those from Europe and the United States.

LENGTH OF RESIDENCE IN BRITISH COLUMBIA AND CANADA.

The length of time a patient had been resident in British Columbia and in Canada before his first committal to the British Columbia Mental Hospital was tabulated. This information was very unsatisfactory in many respects. It was frequently vague and often lacking in either one or both regards, especially so in the earlier records. Some individuals were continually moving from one place to another, six weeks here and one month there, and so on. Others moved constantly backwards and forwards between the United States and Canada. All this made it exceedingly difficult to get satisfactory data. Further, very frequently our only information was the committal "Form C," on which the patient's place of residence for the last three years is stated. From this we merely know that he has been at least three years in British Columbia, but whether three or thirty years is an open question. Where this is our only information, we have designated it "3+" in the following table. The column marked "0–1" means less than

one year's residence, 1–2 means one year but less than two years, and so forth. The column marked "50+" means fifty or more years. The "Life" column means those who have spent their whole life there. The last column gives the total number of cases about which we have information.

Table VIII.—Length of Residence in British Columbia and in Canada before the First Committal to the British Columbia Mental Hospital.

Length of Residence in	Years.	0–1.	1–2.	2–3.	3+.	3–4.	4–5.	5–6.	6–7.	7–8.	8–9.	9–10.	10–15.	15–20.	20–25.	25–30.	30–40.	40–50.	50+.	Life.	Total.
Canada	Ins.	107	74	63	288	48	61	63	85	95	84	71	450	261	152	76	127	48	29	884	3,066
Canada	F.M.	4	4	1	19	2	2	2	2	1	5	4	23	16	7	1	1	1	....	214	309
British Columbia	Ins.	286	196	120	518	109	117	121	106	93	92	72	384	211	100	73	80	13	9	156	2,856
British Columbia	F.M.	13	13	10	52	4	6	4	4	4	4	6	21	12	4	2	3	....	....	144	306

Table IX.—Same as above, Grouped in Five-year Percentages.

Length of Residence in	Years.	0–5.	5–10.	10–15.	15–20.	20–25.	25–30.
Canada	Ins.	353	436	450	261	152	76
Canada	F.M.	13	14	23	16	7	1
British Columbia	Ins.	828	484	384	211	100	73
British Columbia	F.M.	46	22	21	12	4	2

Confining our attention first to the "Length of Residence in Canada" group of Table VIII., we see that the "Life" group is the largest; next comes the 10–15 year group, and then the 3-plus group, about which we can merely state that 288 of the insane patients have been at least three years in Canada before committal to the British Columbia Mental Hospital. (They may have been in an institution elsewhere.) Table IX. affords a better comparison as the data are grouped into five-year periods up to thirty years. The 10–15 year group is still the largest, but it is not much in excess of the 5–10 year group. The 0–5 group is also very considerable. Of this last group a glance at Table VIII. reveals the fact that the largest portion is admitted before it has been in Canada one year, a rather serious situation. Using our total of 3,066 as a basis for calculation, we find that amongst the insane:—

(*a.*) 3.5 per cent. have been in Canada less than 1 year.
(*b.*) 7.95 per cent. have been in Canada less than 3 years.
(*c.*) 11.5 per cent. have been in Canada less than 5 years.
(*d.*) 25.7 per cent. have been in Canada less than 10 years.
(*e.*) 48.9 per cent. have been in Canada less than 20 years.
(*f.*) 28.8 per cent. have been in Canada for life.

Doing the same for the F.M. in the same group, we get, on the basis of 309 cases:—

(*a.*) 1.3 per cent. have been in Canada less than 1 year.
(*b.*) 2.91 per cent. have been in Canada less than 3 years.
(*c.*) 4.2 per cent. have been in Canada less than 5 years.
(*d.*) 8.7 per cent. have been in Canada less than 10 years.
(*e.*) 69.2 per cent. have been in Canada for life.

The situation with regard to the F.M. is not so serious; 69.2 per cent. on the basis of 309 cases have been in Canada for life, and only 4.2 per cent. have been resident less than 5 years.

Now, examining Tables VIII. and IX. with regard to residence in British Columbia, we find some interesting differences. This time the largest group is not the "Life" group, but the 10–15 year group (if we exclude the 3-plus group, which tells us little, as before mentioned). The next largest group, strange to say, is the "0–1" group, which means less than one year's residence in British Columbia before committal to the British Columbia Mental Hospital. Table IX. makes

the figures more startlingly clear. Here we find 828 cases committed to the institution with less than five years' residence in British Columbia, almost twice as many as the next largest group.

Calculating percentages as before, using 2,856 as a basis, we find:—

(*a.*) 10.01 per cent. have been in British Columbia less than 1 year.
(*b.*) 21.08 per cent. have been in British Columbia less than 3 years.
(*c.*) 28.9 per cent. have been in British Columbia less than 5 years.
(*d.*) 45.9 per cent. have been in British Columbia less than 10 years.
(*e.*) 66.8 per cent. have been in British Columbia less than 20 years.
(*f.*) 5.46 per cent. have been in British Columbia for life.

Here is a very serious situation. Perhaps we are obscuring our results by using 2,856, the total population about which we have information regarding length of residence, instead of 3,485, the total insane population. To make certain, calculations were made using 3,485 as the basis, and the following was found:—

(*a.*) 8.2 per cent. have been in British Columbia less than 1 year.
(*b.*) 17.27 per cent. have been in British Columbia less than 3 years.
(*c.*) 23.75 per cent. have been in British Columbia less than 5 years.
(*d.*) 37.6 per cent. have been in British Columbia less than 10 years.
(*e.*) 54.7 per cent. have been in British Columbia less than 20 years.

It will be seen that the figures are somewhat reduced; (*c*), (*d*), and (*e*) are probably more adversely affected, because the "3-plus" group must contain several that by rights should belong to these groups. The main interest lies, however, in (*a*), (*b*), and (*c*). These figures are still somewhat arresting. Another examination of Table VIII. shows that the "0–1" group contributes most; then the "1–2" group the next largest number; then the "2–3" group, the "4–5" group, and finally the "3–4" group, for the first period of five years.

In order to throw some light on this, the raw data sheets were consulted, and the place of residence previous to coming to British Columbia was tabulated for all those with less than five years' residence in British Columbia. Needless to say, this information was lacking in many cases, but the results found prove somewhat interesting. It should be noted that this does not mean place of birth, but merely place of residence before coming to British Columbia.

TABLE X.—RESIDENCE PRIOR TO COMING TO BRITISH COLUMBIA FOR THOSE WITH LESS THAN FIVE YEARS' RESIDENCE IN BRITISH COLUMBIA.

Alberta	154	Finland	8
Manitoba	72	France	2
Ontario	51	Germany	1
Quebec	15	Greece	1
Saskatchewan	6	Holland	1
Nova Scotia	3	Italy	5
New Brunswick	2	Jugoslav.	2
North-west Territories	1	Norway	5
Yukon	3	Poland	1
England	65	Russia	2
Scotland	16	Sweden	10
Ireland	8	Turkey	1
Australia	5	China	9
India	2	Japan	11
New Zealand	1	United States	155
Jamaica	2	Cuba	1
Austria	1	Overseas	35
Bulgaria	2	Sea	9
Denmark	1		

Several surprising things are to be noted in the above table. The first one is the very large number of patients who have lived in Alberta. It will be remembered that Alberta contributed fewer of her own native born inhabitants to the British Columbia insane population than one would expect from the number of Alberta born that live in British Columbia. It becomes still

more striking when it becomes known that Alberta only contributed 12 individuals to the Mental Hospital, while Manitoba contributed 63, Ontario 412, and Quebec 109.

It is difficult to find an adequate explanation, but the following may be partially correct: Alberta, like British Columbia, depends for its numbers on immigrants. Amongst these are many hard-working people, desirous of bettering themselves. On the other hand, there is a portion who come because they have been unsuccessful elsewhere, or who have not the capacity to stay long in one place, the victims, perhaps, of a nervously unstable constitution. They try Alberta for a time, find its climate too rigorous, and move on to a fairer clime, and here they are! There were several cases where it was stated that they had come to British Columbia for their health.

Another country that seems to have been the place of residence of a large number of patients is the United States. It was noted, while recording these figures, that a large percentage of these were not born there, but had come to the United States from European countries and other parts of Canada. Here, again, some of these cases may be accounted for on the basis of an unstable nervous system, these individuals being unable to settle down for long in any one place. It is even possible, probably, judging from their brief sojourn in British Columbia, that they are already the victims of a well-developed psychosis before crossing the boundary-line.

It should be further noted that the United States is the place of residence for more than twice as many individuals as is England (155 compared with 65), yet, according to the 1921 census, English born residents of British Columbia comprise 19.21 per cent. of the total population, while American born forms only 6.66 per cent. Hence, although the immigration problem of unstable American born individuals is a serious matter in itself for the Canadian Immigration authorities, it is still further complicated by the large number of individuals who come to us indirectly through the United States.

Examination of Tables VIII. and IX. reveal a somewhat similar situation with regard to the F.M. In contrast, however, to the Insane, the "Life" group is by far the largest, almost equalling in numbers that of the insane. The next largest group is the 10–15 group (excluding the "3+" group); then come the "0–1" and "1–2" groups with equal numbers. Comparing the numbers in Table IX., we see that the first group is by far the largest, being more than twice the next largest group.

Converting into percentages on the basis of 306 cases, we find:—

(*a.*) 4.24 per cent. have been in British Columbia less than 1 year.
(*b.*) 11.76 per cent. have been in British Columbia less than 3 years.
(*c.*) 15.03 per cent. have been in British Columbia less than 5 years.
(*d.*) 22.2 per cent. have been in British Columbia less than 10 years.
(*e.*) 33 per cent. have been in British Columbia less than 20 years.
(*f.*) 47.05 per cent. have been in British Columbia for life.

As everywhere in this report, the number of F.M. cases is too small to do more than merely indicate the general tendency. This is a condition, it is feared, due, not to the lack of feeble-minded in the Province, but to a lack of accommodation for the same.

The following interesting points were also noted:—

Two individuals had come from Alberta asylums—one had spent two weeks and one two months in British Columbia before committal.

One individual came from a Manitoba asylum.

Four individuals came direct from asylums in the United States, either had escaped or were deported, but none were British Columbia born.

Several individuals were removed from the train and committed.

The last line of Table X. shows that nine individuals came direct to the institution from ships.

The second last line, marked "Overseas," refers to soldiers who had served overseas and who had asked to be discharged in British Columbia. The majority, though not all, had never been resident in Canada before. The last place of residence of the others was not clear, so they were included here.

It should be very clear now, that more active co-operation on the part of immigration authorities is most essential in order to prevent the incoming, if possible, of individuals who are liable to become charges on the State. When it is remembered that 7.5 per cent. of our total insane

population had been confined to institutions outside of British Columbia it would seem that something could be done to alleviate the situation so far as British Columbia is concerned.

FAMILY HISTORIES.

The following family histories show the many different ways and the different degrees in which heredity is manifested in the different generations. An attempt was made to select cases where the data seemed the most complete. It must be remembered that this is only one side of the picture. There are many cases where the second generation seems to escape.

It is interesting to note here that the following was found with respect to the related parents. There were:—

5 cases of husband and wife.
1 case of husband and wife and husband's brother.
1 case of 2 parents and 1 sib.
30 cases of 1 parent and 1 sib.
5 cases of 1 parent and 2 sibs.
1 case of 1 parent and 3 sibs.
51 cases of 2 sibs.
1 case of 2 sibs and 1 other.
2 cases of 3 sibs.
1 case of 4 sibs.
3 cases of 1 grandparent and 1 sib.
3 cases of 1 parent and 1 sib and 1 other relative.
1 case of 1 grandparent, 3 sibs, and 2 grand sibs.
17 cases of 2 other relationships (e.g., uncle and nephew).
1 case of 3 other relationships.

CASE I.

This is an interesting case as three generations have been represented in our institution. No. 2 was one of the earliest patients; in fact, the twenty-ninth, being admitted to P.H.I. on September 2nd, 1873. She was born in British Columbia and had her first attack at the age of 14. From 1854 to 1868 she had yearly attacks and these became practically continuous from 1868 on. This did not prevent her marriage, and when she was first admitted to P.H.I. she had nine children. She was discharged in less than one month, to be readmitted in 1877. Again she was discharged after about one month's residence, only to be readmitted in 1904, but this time to remain until her death from terminal dementia in 1919. At the time of her last admission she had fourteen children.

Little is known of four of the eight sons. Of the others, one committed suicide, one died of T.B. at 15 years and one died of appendicitis at 21, and one (No. 3) was admitted to Essondale for the second time, suffering from M.D., in June, 1924, where he still is. He had enlisted in the Army in May, 1916, and was discharged in 1919. He was in France, but was neither blown up nor wounded. He is married but has no children. He acknowledges that life is too much for him and he is very depressed.

Of the five daughters, one died of heart-failure, one died in infancy, one is "peculiar," and one is now in P.H.I. (No. 6234), admitted February, 1920, and one was in P.H.I., but has since died (No. 1025).

This last daughter, No. 1025, was in P.H.I. from May, 1900, to January, 1901. She died shortly after of T.B. at the age of 35. She was married and had four children.

Of these four children, one died in infancy, one died of T.B. at 20 years, and one (No. 5351) was admitted in December, 1917, and discharged six years later, and the fourth (No. 9273) was admitted while this investigation was in progress, in August, 1926, being discharged on probation the following month. The case was diagnosed as M.D.

No. 5351 gave birth to an illegitimate child nine months after admission. She denied all knowledge of the pregnancy. She was classified as an imbecile and discharged against the wishes of the doctors.

No. 9273 was a high-school graduate and had lived with an uncle and aunt until after her mother's death. She was rather a day-dreamer and made few friends. At the beginning of the present year she went to nurse her father's sister and the strain proved too much for her. She

is very depressed and feels that life is not worth living, especially because of her family history. She tried to drown herself. This paternal aunt was losing her memory and has since lost it at the early age of 56. This may be evidence of a weak strain on this side of the family. On the other hand, two paternal uncles are professional men.

A pathetic feature of the case is that the father married against advice, knowing the taint on the mother's side.

Case II.

Here is another case when three generations have been represented in Essondale. We have no information about generation I. other than that No. 1 died, aged 65 years, "with a spot of blood on the heart," and No. 2 died at 45 years of a stroke of paralysis. In generation II., patient No. 5826 is shown with five unknown sibs. He was admitted when 71 years old, suffering from S.D. brought on by a stroke, and was discharged seven months later. He was born in Wales, had been thirty-five years in Canada and twenty-eight years in British Columbia. He had a common-school education and was a retired watchman.

He was married and had ten children, seven of whom we know nothing of. One son (No. 6123) was admitted at the age of 21 years, suffering from toxic psychosis caused by drugs. He was born in British Columbia, had reached the entrance class at school, and was a chauffeur. He was unmarried. He was discharged after 4 months.

This boy's sister (No. 11 on the chart), of whose sanity we know little, married and had six children. No. 5756 was admitted at the age of 13. He was an epileptic idiot and died, still a patient, six years later. He was born in British Columbia and had attended the special classes in Vancouver for a time. The mother was said to have been in an accident five months before his birth.

Case III.

No. 2473 was born in England. After the birth of her first child in 1901 she was in an English hospital, suffering from puerperal insanity. She came to Canada in May, 1903, on her doctor's advice, and lived for two years in Manitoba, then came to British Columbia. She was admitted to the Essondale M.H. after the birth of her third child. She had six children, one of whom died in infancy of convulsions and dysentery, and another was drowned when 17 years of age. Three others are apparently normal, so far, though possibly still below the danger-zone. One boy (No. 6086) was admitted to the F.M. Cottage when 15 years of age, in October, 1919, where he still is. Tested when 21 years old, he gave a mental age of 6.4 years. He was born in Manitoba, coming to British Columbia two years later. He did not talk or walk until 3 years of age. At birth the doctor noticed something wrong and took several measurements of his head. The opening in the skull was not grown over until 2 years.

Patient No. 2473 had ten sibs, of the majority of whom nothing is known. One sister died of T.B. at 35 years, one brother has been F.M. since birth, and another fell or jumped from the window after he had an operation for polypus. Her mother died at 58 of a general break-up, and her father died of heart-failure at 60 years.

Her husband had eight sibs; one died in infancy and one sister was an inmate of Essondale, suffering from melancholia. His mother died of milk-fever at 35 and his father of fatty degenation of the heart at 62 years.

Case IV.

Here is a case of atavistic transmission. No. 2995 was born in Scotland. Nothing is known of her relatives. It was stated that there was no heredity in the family. She was admitted at the age of 83 years and died six months later of S.D. She was married and had an only daughter, who apparently was normal. She married and had six children. One died in infancy, nothing is known about four, and the sixth is No. 8511.

No. 8511 was born in British Columbia, remained in high school until 16 years of age, served overseas in the Great War, and was admitted to Essondale, suffering from M.D., supposed to have been brought on by his war service. He was discharged in about one year. He is single.

Case V.

In generation I. two sisters are reported as being insane. No. 2 married and had at least one child, No. 548.

No. 548 was born in England. She was admitted to Essondale in 1894 at the age of 55 years, and remained two years, when she was discharged as recovered. She was married and had five children. Nothing is known of No. 9, No. 10, and No. 11. No. 8 was or is in an asylum in England. The other two have both been in Essondale. No. 514 was born in England. He was admitted as a patient three years before his mother. After six years he was deported to England unimproved. The other brother has twice been a patient. He was born in England and had been twenty-four years a resident of British Columbia and of Canada before his first admission. He attended school until 13 years of age and was a carpenter by trade. He was 35 years old at his first admission and 40 years at his second, in 1917. He is still here suffering from D.P., brought on supposedly by overwork and worry.

CASE VI.

Here is rather a disastrous case. Nothing is known of the sibs of generation I. No. 8941 was born in England and has been at least three years in British Columbia and in Canada. He was a soldier by profession. He was admitted in 1925 at the age of 63 years, suffering from arteriosclerosis, and died there shortly after. He was married and had two children, No. 7104 and No. 7105. Both were born in England and have been at least three years in British Columbia. They were admitted together in 1921 and are still here. Both are single. No. 7104 is 20 years of age and an imbecile. No. 7105 is 17 years of age and an idiot. It would be interesting to know if there was any mental defect on the maternal side.

CASE VII.

Here is a case where two parents have been patients in Essondale. There are five instances of this in the records, but in the other cases no mental disease has as yet become manifest in the offspring.

No. 8751 was born in England. He is a carpenter, attended school until 13 years of age, and has been a resident of British Columbia and of Canada for fifteen years. He was admitted in 1925 at the age of 50 years, suffering from M.D., brought on supposedly by worry. There is also a history of excessive drinking. He is still a patient. His wife is No. 7426.

No. 7426 was also born in England. She attended school until 11 years of age. She was admitted at the age of 45 years, after a two-weeks' sojourn in a private institution, suffering from M.D., brought on at the menopause. She died two years later in the institution.

These two patients had two sons (there were no miscarriages). One is apparently normal. The other is No. 8709. He was born in England, has been fifteen years in British Columbia and in Canada, and was a carpenter by trade. He was admitted with his father in 1925, suffering from D.P. He is single and is still a patient.

CASE VIII.

Again we have no information of the sibs in generation I.

No. 6776 was born in Ireland, is a miner, and has had little education. He came to British Columbia from the United States ten years before his admission. He must have lived at least ten years in the United States, since his son was born there. He was admitted in 1921, suffering from G.P. caused by syphilis. There is also a history of excessive drinking. He is still a patient. He is married and his wife gave birth to eight children. Four of these were still-born, three died in infancy, only one (No. 7561) living to maturity. A typical syphilitic history!

No. 7561 was born in the United States. He has been eight years in Canada and at least three years in British Columbia. He is a labourer and attended school for four years. He was admitted to the institution a year later than his father, where he still is. He is single, 21 years of age at the time of his admission, and is an imbecile.

CASE IX.

Here is a case where insanity can be traced through four generations, but generations I. and II. are not complete. It is the family of No. 5313.

No. 3, the paternal aunt of No. 5313, was in an institution for the insane. Her niece (No. 6) married No. 5. The former died when 81 years of age and the latter at 63 years of angina pectoris. He was very high up in English military circles. His sister (No. 4) was in an institution for the insane.

No. 5 and No. 6 had fourteen children. Eight of them were supposedly normal.

No. 8 died of an abscess on the brain at 38 years. He was stated to have been insane.

No. 9 died at 45 years, cause unknown, but had always been peculiar.

No. 10 was in an English asylum from 1913 to 1918. He held a very high position in the English Army. He committed suicide two weeks after his discharge from the asylum.

No. 17 committed suicide when 30 years of age. She was stated to have been insane.

No. 18 was in an asylum for several years. She died at the age of 64 years, cause unknown.

No. 5313 was born and educated in England. He was a mining engineer with a college education. He had visited practically every country in the world. He had been only one year in British Columbia and in Canada when he was committed to Essondale, suffering from terminal dementia, at the age of 61 years. After a year he was discharged to return to England. He was a widower, having been married twice. By his first wife, who committed suicide, he had two children.

No. 22 was in an asylum for several years, but was discharged as recovered, and is married and has one child.

No. 23 died in an asylum.

CASE X.

Here is a case where there is no known insanity in the parents, but where all the offspring were affected.

No. 1 and No. 2 were English missionaries in China. No. 1 died of a paralytic stroke on board ship on his way to China. No. 2 died of old age at 70 years. They had five children.

No. 4, No. 5, and No. 6 all died in English asylums.

No. 7 is now in an English asylum.

No. 8534 was born in China. He is a clergyman. He has been twelve years in British Columbia and thirty-six years in Canada. He was admitted in 1925 at the age of 54 years, suffering from M.D. He has been four times in sanatoriums, suffering from the same malady. He was discharged in a year's time. He is married and has three children. One child died in infancy. The children are so far apparently normal.

RECOMMENDATIONS.

1. *A separate* and appropriate institution for the care of the feeble-minded. They should not be living amongst those suffering from mental disease, as their problems are very different. The mentally diseased require the best of medical care, the treatment of skilled psychiatrists in an effort to locate and remove the cause and restore the individual to society. Unfortunately, there is no cure for most of the feeble-minded. The best that can be done is to remove them from society and place them in a simple environment where they can be segregated according to sex and mental and chronological ages. The cottage plan is the best. Here, medical treatment is not the prime factor, though everything should be done to remove all physical ailments, but industrial education suited to the capacity of the individual.

2. *Special* classes for high-grade morons. Special classes for high-grade morons and borderline cases should be installed in all school systems. There, cases that can be taken care of outside of institutions should be given proper training suited to their needs and capacities. It should be carried sufficiently far to enable the individual to be fitted into some small niche in the industrial world where he can be self-supporting and be a contented citizen. It is from such that the world obtains most of its "hewers of wood and drawers of water."

3. *Prevention* of the feeble-minded reproducing their kind. There are two methods, segregation and sterilization. The former is preferable. Where that is undesirable, the latter is the only recourse. Feeble-minded women, especially those who have transgressed the social law, should not be allowed to return to society without something being done to protect them from again being the victims of him who will, and to protect society from them.

4. *A Psychopathic Hospital.*—This is a prime necessity and should do much to prevent incipient psychoses from developing to such an extent as to require committal to the Mental Hospital.

5. *Education of the Public.*—An active campaign should be inaugurated in order to enlighten the public as to what mental disease is, its causation as far as known, and how it manifests itself. It should be told what it may do to prevent it. Parents, especially, should be made alive

to its insidious growth. Emphasis should be placed on the part played by syphilis and excessive alcoholism.

6. *Mental Hygiene in the Schools.*—Teachers should have some training in mental hygiene in order to appreciate the maladjusted child in the school-room. Large school systems should employ properly trained psychologists and advisers.

7. *Social Service Workers.*—The Provincial Mental Hospital should have at least one social service worker to go into the homes to interview relatives and to help readjust the discharged patients, etc.

8. *Research-work.*—The psychiatrist at the Provincial Mental Hospital should have facilities for continuous and extensive research-work. Experimentation should be carried on to see if it is not possible to discover some cause, either psychogenic or organic, for those psychoses that have baffled experts for years.

9. *Heredity.*—Efforts should be made to obtain the fullest information with regard to the family history of patients, in order to throw further light on this much-vexed question of heredity. The employment of field workers will facilitate the problem.

10. *Care of Old Folks.*—There should be some place for caring for the old people suffering from senile dementia, other than the Mental Hospital. Their need for medical treatment is not so great as for those suffering from other psychoses, and their segregation into happier surroundings would greatly add to their comfort; and possibly reduce expense.

11. *Isolation of T.B. Patients.*—There should be facilities for isolating patients who are suffering from tuberculosis. A separate building was planned several years ago, but did not materialize through lack of funds. It should be constructed immediately.

12. *Immigration.*—More active co-operation on the part of the immigration officers is needed in order to prevent the incoming of undesirable citizens.

13. *Facilitation in Deportation.*—The strict enforcement of the section of the "Immigration Act" which requires the stamping of the date and place of arrival on the passport would greatly facilitate deportation of undesirable citizens. In the absence of such information a patient sometimes remains months in the institution while the Immigration Department seeks for evidence of his arrival in the country. A similar requirement for those entering from the United States would be a good thing.

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