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Part I.—Original Articles.

The Fifth Maudsley Lecture: Some Sociological Considerations bearing upon the Occurrence, Prevention and Treatment of Mental Disorders. Delivered by JOHN CARSWELL, F.R.F.P.&S.Glasg., at the Quarterly Meeting of the Medico-Psychological Association of Great Britain and Ireland, held at the House of the Royal Society of Medicine on Thursday, May 22, 1924.

To be sure of one thing, when you are perplexed about the main issue, sometimes leads one to the right solution.

Of this I am sure, that what may be expected of my contribution as Maudsley Lecturer I am unable to attain. Falling back, as I propose to do, upon work done in Glasgow, I fortify myself at once with a quotation from Maudsley:

"Tiresome," he said, "as the minute man of observation may sometimes seem as he exults over his scattered facts, as if they were final, and magnifies his molecules into mountains, as if they were eternal, it is well that he should thus enthusiastically esteem his work; and no one but will give a patient attention as he reflects how indispensable the humblest unit is in the social organism, and how excellent a spur vanity is to industry." Maudsley might have reserved the last humorous thrust, but it is too characteristic of the man to be omitted, and therefore I give it as it was written. If vanity, to any extent, sustained me during arduous years of plodding industry, I can assure you that my available stock of that vice is now quite unequal to provide a shelter from the feelings of gratitude and the sense of inadequacy that surged upon me when out of your kindness you called me to be Maudsley Lecturer.

Scotland, the recognition of whose workers in the field of psychology was, I am well aware, the chief motive in your choice of Maudsley Lecturer this year, has some claim to have the history of its lunacy administration surveyed at a time when public attention is directed to the problem of lunacy reform.

Maudsley had a moral test for scientific workers: to paraphrase his words, "Work," he would say to them, "in the full conviction that the day must come when the results of your labours shall no longer be necessary, for on that day some genius will arise who will

make use of your results to proclaim a great generalization, and prepare the way for a fresh advance." The history of the workers in our field of labour stands that test well, and the little vanities that doubtless, as Maudsley suggested, attached to each of them, do not mar the effect of their solid achievements. Dr. W. A. F. Browne early drew attention to the need for reform in a series of lectures on " asylums as they are and as they ought to be," couched in terms hardly less eloquent than those we are still happily privileged to hear from the lips of his son, the first Maudsley Lecturer, Sir James Crichton Browne. The work of Skae, Laycock, Clouston, and now of our popular and ubiquitous friend, Prof. Robertson, whose urbanity disarms all criticism of his manifold activities, constitute a record unexampled elsewhere, so far as I know, of the great intellectual qualities and the public spirit that have been at the service of Edinburgh University and Morningside Asylum for more than three generations. The freedom from restraint, and provision for open-air life of patients in modern asylums, is in no small measure due to the courage and the initiative of James Rutherford. Indeed, it may be said that courage was the quality that more than any other characterized these men. The sound principles which they elaborated and applied needed courage, for in this branch of medicine convention cannot be lightly regarded because the public are, not without some degree of reason, disposed to regard any departure from it as a menace to security. In this spirit Arthur Mitchell secured the establishment of the boarding-out system for chronic harmless patients; and the General Board of Control have generated in Scottish lunacy administration a spirit of open-mindedness towards new methods and fresh ideas that has justified in the public interest a certain attitude of ease, if not sometimes of sheer indifference to a rigidly legal view of their functions.

Encouraged by the existence of this spirit in official circles I put forward certain proposals for setting up machinery in the Barony Parish of Glasgow for placing the certification of alleged insane persons in the charge of one responsible medical officer, and securing provision for the treatment of suitable cases, without certification, in observation wards. The scheme was approved by the General Board of Lunacy and the Local Government Board, and was duly put into operation. It was not, however, until after the amalgamation of the Barony and the City Parishes of Glasgow that the scheme came into full operation. The year 1901 marks the first full year of the reconstituted parochial area, and the year 1904 saw the opening of the Eastern District Hospital, to which was attached a pavilion containing fifty beds for the treatment of mental cases, not under lunacy certificate.

It is necessary to add, by way of explanation, that the Parish of Glasgow, with a population of about 600,000, is also the Lunacy District, and that the Parish Council as such administers the Poor Law, and as District Board of Control, it provides and controls asylum accommodation and treatment. There is therefore no conflict of interest and no official overlapping.

There was thus one certifying physician who visited all the reported cases of insanity, and who was in the position to do the best possible for the patients by the offer, in suitable cases, of probationary treatment on a purely voluntary and completely unrestricted basis, alike as regards any stipulation as to a fixed period of voluntary residence, or money payment. There was no power of compulsory detention. The patient was as free as patients in a general hospital, but we were not free to treat a patient for longer than six weeks without the sanction of the Local Government Board.

It may be useful that I should state in passing that the wards were administered as an integral part of a general hospital. The Matron of the whole hospital was responsible for the nursing staff, and it is worthy of note that the matron, the assistant matron, the night superintendent, the female charge nurse, and each member of the male staff of nurses held the certificate for mental nursing of the Medico-Psychological Association. All the probationer nurses of the hospital had at least three months' training in the mental wards.

Primarily, as has been indicated, the scheme was designed to secure that no one should be placed under lunacy certificate who could be treated successfully otherwise.

But there was another purpose also in view. No provision existed, nor indeed to this day exists anywhere else, to ascertain by systematic official investigation the origin and sources of registered lunacy, particularly in relation to local economic and social conditions. Lunacy differs from all other diseases in this respect—that it does not figure in the Registrar-General's returns as a cause of death, except in the most casual and fragmentary way. When however a person becomes a registered lunatic for the first time, the fact is noted in the returns of the General Board of Control. To that extent, therefore, the *occurrence* of insanity can be traced.

It needs no argument in support of the view that the local occurrence of insanity, systematically recorded and related to the occurrence of other diseases, would form a useful addition to our knowledge of insanity and stimulate provision for its earlier treatment. It does seem strange that until a patient appears at the door of an asylum, the prolonged pathological process, that has at

that stage reached the point when legal certification has become necessary, is ignored so far as public provision goes for the prevention of this calamity or the treatment of the all-important early stages of this malady.

The figures now presented refer only to first attacks (as far as could be ascertained), all cases previously under certificate having been eliminated. Also let us note that the figures relate entirely to rate-aided patients.

The first table presents the number of *persons* placed under lunacy certificate during each year from 1901–13, and the proportion per 10,000 of the population.

TABLE I.—*First Attacks of Insanity during each year* 1901–1913 *and Proportion per* 10,000 *of Population.*

Year.	Number of persons placed under lunacy certificates for first time (occurring insanity).	Proportion of occurring insanity per 10,000 of population.
1901	371	6·5
1902	406	7·0
1903	387	6·6
1904	380	6·3
1905	422	6·9
1906	364	5·9
1907	424	6·7
1908	440	6·9
1909	441	6·8
1910	392	5·6
1911	443	7·7
1912	422	7·3
1913	376	6·5

Put briefly it amounts to this: that while the year 1906 shows a minimum of 364 persons who became insane, and 1911 shows a maximum of 443, yet the variation from year to year is small, and this small degree of variation is emphasized when we look at the proportion per 10,000 of population, which fluctuates but little around an annual average rate of 6·5 per 10,000.

As subsequent figures do not deal with cases under 15 years, this element now disappears.

It is clear, however, that these figures fail to reveal many facts related to the occurrence of insanity.

The method adopted towards their elucidation was to divide the cases into, first, those occurring at ages 15–45, and second, those occurring at ages over 45. No attempt was made to investigate the occurrence of idiocy and imbecility among children, because it

was known that many such children were not reported to the public authorities during school age, and a considerable number were dealt with by the education authority in special schools.

TABLE II.—*Proportion per* 10,000 *of Population of First Attacks in Males and Females at ages* 15–45, *and at ages over* 45.

Years.	Ages 15–45.		Ages over 45.	
	Males.	Females.	Males.	Females.
1901–1905	8·5	7·9	15·9	13·2
1906–1910	8·5	7·0	20·0	15·5
1911	9·6	7·6	17·7	16·1
1912	8·1	8·8	14·0	14·8
1913	7·0	7·2	12·6	14·3

The average population at those ages was approximately:

	Males.	Females.
At ages 15–45 . .	146,000	144,000
Over 45 . . .	44,000	50,000

This table shows that the occurrence of insanity during the active period of life 15–45, the population living at those ages being half the total population, was stable in both sexes throughout the whole period 1901–13, and that there was little or no difference between the two sexes.

These are notable facts, and should be kept in mind as we proceed.

The rate at these ages represents an annual average of 8 per 10,000.

At ages over 45, the rate varies among males between 12·6 and 20, and among females between 13·2 and 16·1.

Let us follow out those figures further, and ask—How do they adjust themselves to the associated physical conditions with which they are usually associated as ascertained causes?

I have taken the total number of cases which occurred during the three years 1911–13. The total was 1,168 cases: and of these 259 have to be set aside as the cause was not ascertained, leaving 909 cases available. These I have placed in five groups of approximate causes.

GROUP I.—*Constitutional instability*, which includes adolescence, congenital defect, heredity, epilepsy, and the climacteric period.

GROUP II.—*Toxic*, which includes syphilis, general paralysis of the insane, alcoholism, exhaustion states, and the effects of acute bodily diseases, such as pneumonia, septicæmia, etc.

GROUP III.—*Gross brain diseases*, which include hæmorrhages, tumours, etc.

GROUP IV.—*Senile changes*, including a few cases of pre-senility.

GROUP V.—*All other causes*, which include mental stress, child-birth, etc.

This table shows the distribution of the cases under these five groups:

TALBE III.—*Five Groups of Ascertained Causes of Insanity in First Attacks during the Period* 1911–1913.

—	Ages 15–45.	Ages over 45.	Total.
GROUP I.—*Constitutional instability* . .	358	35	393
GROUP II.—*Toxic*	152	96	248
GROUP III.—*Gross organic brain disease* .	10	51	61
GROUP IV.—*Senile changes*	—	189	189
GROUP V.—*All other causes*	15	3	18
Total	535	374	909
Per cent. of total ascertained causes .	58·8	41·2	—

The two tables just presented show—

(1) That 67 *per cent.* of the cases occurring at ages 15–45 are based upon some constitutional morbid process, and that this is also the most constant element in the annual production of insanity at those ages. Variations in the annual production rate at those ages are probably always due to variation in the incidence of other than constitutional causes.

(2) That 43 *per cent.* of all the cases at all ages have a constitutional basis.

(3) That 27 *per cent.* of cases at all ages are caused by syphilis, alcohol, and exhaustion states.

(4) That in 50 *per cent.* of the cases at ages over 45, senility was the most prominent causative element.

(5) That all other factors in the production of insanity are practically negligible as contributory elements in the total mass of insane persons.

We are now prepared to consider how the production of insanity stands related to its occurrence in good and in bad districts, as such qualities may be supposed to attach to districts with a low death-rate and those with a high death-rate.

TABLE IV.—*Occurrence of Insanity in Two Groups of Areas:* (1) *with death-rate above rate for whole city,* (2) *with death-rate below rate for whole city.*

Group.	Population.	First attacks of insanity (1911–1913).		
		Ages 15–45.	Ages over 45.	Total.
I	199,000	186	149	335
II	198,000	165	91	256

The figures in this table give the total number of cases which occurred in the three-year period 1911–13.

Each group of areas consists of five municipal wards, with aggregate populations of 199,000 (Group 1) and 198,000 (Group 2). Each ward in Group 1 had a death-rate at or *above* the mean for the whole city, and similarly in Group 2 the death-rate of each ward was at or *below* the mean for the whole city. The death-rate for the whole city in each of the years was 16, 16, and 16·7. The highest death-rate in any of the wards in Group 1 was 22, and the lowest death-rate in Group 2 was 10.

The difference in favour of Group 2 of cases occurring at ages 15–45 (when, as we have seen, the constitutional element constitutes 67 *per cent.* of all the causes at that period of life) is only 21 cases, Group 1 having produced 186 cases and Group 2, 165 cases.

This is not a definite enough difference upon which to base any argument likely to affect the general conclusion already reached, that constitutional instability is the predominating factor in the origin of insane states during the adolescent and active period of life.

On the other hand the large number of cases which occurred at ages over 45 in Group 1 plainly points to economic and other social factors as influences which operate more powerfully in poor and unhealthy districts than in districts more favourably circumstanced.

These, then, are the general results of a careful investigation of cases of insanity during the period under review.

But an important question remains: How far did the possession of observation wards enable us to keep down the number of persons placed under lunacy certificate?

To submit, without comment, the number of cases treated in hospital without subsequent recourse to certification, and leave the suggestion that, without this valuable aid, these people would

all have become certified lunatics, would not be a fair way of putting the position, for we very soon found, what all experience teaches, that when public provision is made for any purpose, the demand increases with the supply.

The answer therefore is that many people who required treatment, but would not have reached a mental hospital as certified patients, accepted this provision for their care, and that a considerable number of persons were expedited on their way to asylum care by the provision of probationary care, which, having been given, satisfied their relatives that further care was necessary. Undoubtedly, however, large numbers of patients were treated to recovery, who, without this provision, would have had to be placed under certificate.

TABLE V.—*Admissions, Discharges and Deaths* 1904–1914 (*May* 15).

—			Males.	Females.	Total.
Total number of cases admitted . . .			3,487	2,923	6,410
Discharged cases:	Males.	Females.	Total.		
Recovered . .	1,496	1,097	2,593		
Improved . .	593	520	1,113		
Certified insane .	1,163	1,128	2,291		
Died . . .	216	163	379		
Total cases discharged and died . . .			3,468	2,908	6,376
Remaining on May 15, 1914 . . .			19	15	34

I give this table without further comment, because it would not be relevant to our present theme to discuss the classes of cases treated, without certification, and as all cases of first attacks subsequently certified and transferred to asylums are included in the figures already submitted, it is unnecessary at present to enter upon further detail.

Two elements of fundamental importance in our problem must now be noted. First, the diseases comprised under the general term "insanity" fall mainly into two categories, *viz.*, (1) those in which the biological element is all-important, and (2) those in which it is of little or no significance. Second, social and economic conditions, as they exist in this country, appear to have little effect upon the biological foundations upon which mental stability depends. A slum is not a biological product; it is the creation entirely of adverse social and economic conditions, and it is not so surprising as at first sight it seems to be that the constitutional element in occurring

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insanity shows so slight a difference in its relative prevalence in the two areas compared.

Mott's demonstration of the regressive atrophic changes in certain organs which occur in the biogenetic psychoses has probably prepared our minds to accept these fundamental conditions of our problem; and, particularly his demonstration of the absence of such changes, except as secondary to local inflammatory changes, in an acquired disease like general paralysis.

For members of the Medico-Psychological Association the figures I have presented provide no novelty. At best all I can hope is that they may be accepted as confirmatory of conclusions reached by Mott and others in the field of pathological research. I have stressed the importance of taking the whole of the age-period 15–45 rather than limiting our view to the adolescent period. This has been done with the intention of presenting the full effect of the element of constitutional instability in the production of insanity. It is difficult to resist the conclusion that the adolescent group of insanities, insanity with epilepsy, states of paranoidal dementia, paranoia, and even the so-called climacteric insanities, to which may be added some forms of so-called puerperal insanity, are in substance biogenetic psychoses. All I put forward at present is to claim, upon many pathological and clinical grounds, that the term "adolescent" should not be allowed to obscure the fact that the morbid biogenetic element extends its effective influence beyond the adolescent period, and probably accounts for all forms of insanity not due to toxic agency, gross brain lesions, and senile changes.

If this view is correct, no room is left for theories of a psychogenetic origin of insanity; at most, the psychological contribution to the study of our cases should be limited to explanations of the mechanism which the insane mind constructs as explanations of the morbid affective state.

I would not have ventured into these aspects of the subject, upon which I have, indeed, little claim to speak, did they not lie in my way as I proceed to another aspect more relevant to my purpose.

Let me remind you that over a period of thirteen years the annual rate of production of insanity at ages 15–45 gave a practically constant figure of about 8 per 10,000 of the population living at those ages, of which two-thirds were regarded as cases of biogenetic psychoses. Practically no fluctuation occurred; certainly no increase was noted. These figures give no support to the belief that the nation is carrying an increasing burden of a C3 population by reason of an increased propagation of the unfit.

I have often wondered why the advocates of what is called the eugenic movement consider it essential to their case to belittle

the achievements of sanitary science, in so far as they insist that the removal of insanitary conditions has brought a certain element of danger into present social conditions by preserving the unfit, who proceed to multiply a C3 population. I think this attitude is based upon a profound misunderstanding of the situation.

Dean Inge is reported to have said the other day, "The quality of the population depended partly on heredity and partly on environment. The importance of environment had been stressed while the influence of heredity had been neglected." The first statement is, of course, accepted by everybody, but the latter statement is inaccurate in its suggestion that the reduction of deaths from preventable disease is now recognized to have been associated with a neglect of the study of the influence of heredity upon the quality of the population. This line of comment is not new; it was introduced by Buckle, Lecky and Froude, and their apprehensions were duly answered.

It sounds strange in our ears to hear it said that men with the great scientific grasp and the philosophic outlook of William Tennant Gairdner and J. B. Russell, to mention only the two men whose work bears upon the material for this address, neglected to consider the effect of heredity upon the quality of the population. The fears of the past are re-dressed as the bogeys of to-day.

I speak with feeling. I have seen three visitations of typhus fever to the home of my boyhood, in the first of which I first looked upon death in the person of my father, stricken in early manhood, and in the last I myself was the victim. I have witnessed the daily procession of funerals through the streets of Glasgow with the same indifference with which, it is said, the inhabitants of Paris regarded the passage of the victims of the reign of terror as the tumbrils carried them to their doom. No group of youthful friends but had among them one at least whose life was doomed to premature destruction by tubercle. Gairdner and Russell changed all that.

But we are told to-day that they did not have the inestimable advantage of the results of certain recent investigations, which prove that mentally deficient parents frequently beget mentally deficient children!

I cannot separate the ethical motives from the scientific methods of the great men whose achievements as public health administrators brought unexampled blessings upon a fever- and tubercle-stricken population, and brought sunshine into the streets and homes of the common people. Both motive and method stand justified by their results, without qualification or apology. Moreover there is no other way. Are we to refuse to treat syphilis, or to save the inebriate? Did fever and tubercle kill only the unfit?

The prevention of mental diseases is even now in process of becoming a subject of systematic study. Further researches into the nature of the biogenetic psychoses will yield, we hope, helpful results. Syphilis, as it affects the central nervous system, is in a hopeful stage of study, and we look to public health administration in this matter to control, at least, the spread of this disease. Alcoholism may continue to trouble us so long as human folly is blind to self-interest, but the failures of senility will lessen as conditions of life improve and intelligent dieting and modes of living become more common.

There is no practicable short cut to the attainment of these ends. I believe, with the late Dr. J. B. Russell, "that as the expectation of life is lengthened, the *quality* of the life is improved." Let me give a quotation from Maudsley (*Organic to Human*, pp. 358–359):

"Viewing matters from a strictly biological standpoint, it no doubt looks on the face of it as if a vigorous elimination of the unfit, after the manner of bees, might be as right for a sound human as an apian hive. But there is properly a higher standpoint from which the mistake of such hasty judgment is evident. . . . "

"The sanguine hope is that although acquired characters are not inherited and the son does not benefit constitutionally by the well-doing of his father (which, considering the plasticity and educability of the human brain, is not perhaps the unqualified truth it has been boldly proclaimed to be), the steady operation of good nourishment, sane and elevating surroundings, and a right system of education, intellectual and moral, will raise human offspring everywhere to a proper mental height, and gradually raise the standard of that height."

In a word, the thesis I have been endeavouring to maintain is this:—At the present day insanity as a social phenomenon is regarded in two ways: First, there are those who argue that it is largely a produce of bad social conditions, and that the improvement of social conditions will necessarily lead to a marked improvement of the mental health of the community. On the other hand, there are those who take the diametrically opposite view. Improvement of social conditions means, they say, the preservation of the unfit, and consequently a higher production of insanity, and therefore they are not enamoured of philanthropy.

It may be conceded that the persistent and apparently constant evidence of constitutional instability in good and bad districts alike, with but little variation, creates a difficulty for the advocates of both sides, and suggests that both views may contain some element of error; yet, on ethical grounds, it seems to me, we are bound to go on with the salvage of weak lives, in the sanguine hope, as Maudsley expressed it, of attainment to a higher standard of mental health.