Some Statistics about Sterilisation of the Insane. By A. W. DANIEL, M.D.Camb., Senior Assistant Medical Officer, London County Asylum, Hanwell.

THE prevention of the propagation of degenerates, more especially of the insane, is a matter of almost daily discussion among those interested in insanity, and it is also discussed and as a rule advocated in medical journals, asylum medical superintendents' reports, and even in the daily press.

This being so no apology is needed for the somewhat barbarous suggestion of the title of this short paper.

A word is needed as to the lines on which these statistics have been collected. It is clear that had it been the practice in the past to sterilise the insane before they were allowed to leave an asylum, whether recovered or not, then a certain number of those cases of insanity which exist at the present time would have been prevented for the reason that the sterilisation of the parents would have prevented the birth of the children who eventually became insane.

The object I have in view, then, is to show to what extent insanity could be prevented by such means as segregation or sterilisation.

I have collected all the cases showing a hereditary taint admitted to Hanwell Asylum during the years 1909 and 1910; of these all the cases of parental heredity have been carefully inquired into to decide whether the original admission, and hence the hypothetical sterilisation of the parent, would have prevented the birth of the child.

To determine this point it is necessary to know the date of the parent's first admission to, or rather discharge from, an asylum, and also the date of the child's birth.

In the statistical tables these dates are compared in columns 4 and 5, and the result is entered in the last two columns.

Such cases as the following cry for preventive legislation, but it must not be forgotten that the quotation of a few instances is not sufficient argument to bring forward for any drastic law; the instances must be of frequent occurrence to justify such a measure as sterilisation.

A patient was admitted to Hanwell last year suffering from epileptic insanity with marked deficiency in emotional control, doubtless due to congenital defect. The slightest indulgence

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in alcohol caused epileptic seizures and complete loss of emotional control.

Removed from home surroundings she rapidly resumed her normal mental state. It is farcical to say that she had recovered, for the congental defect was so apparent. Her husband pressed for her discharge, because he had no one to look after his seven children. Finally his urgent appeals were successful, and she was allowed out on a month's trial with a view to her ultimate discharge; she relapsed, however, at the end of five days owing to some slight indulgence in alcohol. It was too late, she was pregnant, and this in spite of warnings to and promises by both herself and her husband. The baby was born in this asylum, and to what prospects? Epilepsy, imbecility, insanity, either or all. And there are seven other children.

The second instance is really worse. C. G—, a male patient, was admitted to Hanwell some years ago; the form of his insanity was congenital imbecility; he was in addition a drunkard and suffering from phthisis. J. S—, a female patient, was re-admitted to Hanwell about the same time suffering from manic-depressive insanity.

Both male and female soon shook off their mental symptoms, met at the asylum dances, finally were discharged recovered, and married. The man did not return; the wife, however, returned twice after the births of her two children; luckily, at this point the man died of phthisis, but what about the two children. They are stated to be healthy by the mother, who writes to me from time to time, but their futures should be studied. Other instances could be quoted, but our data are not complete without the history of the children's lives, and these can only be studied by means of registration for the use of future generations. Unfortunately there is no such scheme in existence.

Returning now to the statistics, during the years 1909 and 1910 there were 394 direct male admissions and 416 direct female admissions, omitting aliens and only making one entry when a case has been admitted more than once during these years. The cases, then, under review total 810, but of these 810 there were 225 instances in which either there was no history or the history was so defective as to be valueless. Clearly a proportionate allowance must be made for these cases about whom no history could be obtained, for it can be

taken for granted that heredity will be as important a causative factor in these cases even though no history has been obtained. This correction will be made later.

The grand total of 810 is reduced by these 225 cases without satisfactory history to 585; of these 585 cases actual heredity of insanity was present in 250 cases, which is equivalent to 42·7 *per cent.* This can be shown in tabular form thus:

	Total cases under review.	No history obtained.	Cases with a complete history after deduction of last column.	History of heredity obtained.	Percentage of heredity in cases with full history.
Males . .	394	112	282	121	42·9
Females .	416	113	303	129	42·5
Total .	810	225	585	250	42·7

Parental heredity was found 86 times, the father being the offending party 36 times, the mother 50.

A complete analysis of these cases is now given; the full statistical table for reference can be seen at the end of the text.

In statistics of insane heredity it will be found that not every case of insanity has undergone asylum treatment even though undoubtedly insane; nevertheless these uncertified cases go to swell the numbers of instances of heredity; the same remark applies to suicides. This is an important matter from the point of view of sterilisation of the insane, for in neither case would the person reported as insane have been subjected to sterilisation; there were 23 such cases among the 86, six of them being instances of suicide. This leaves only 63 cases to be further considered.

Of these 63 it was impossible to trace the parent's first admission in 26 instances, leaving 37 for statistical purposes. It is clear, however, that a proportionate allowance must be made for these 26 untraceable instances, seeing that both parent and child had been in every case inmates of asylums, although unfortunately and for various reasons their whole asylum history could not be traced with absolute certainty.

The 37 instances referred to are best shown in tabular form thus:

	Son.	Daughter.	Total.
Father transmits insanity to . . .	7	9	16
Sterilisation would have prevented birth of	1	1	2
Mother transmits insanity to . . .	8	13	21
Sterilisation would have prevented birth of	0	3	3
Parent transmits insanity to . . .	15	22	37
Sterilisation would have prevented birth of	1	4	5

This statistical table shows, then, that only five cases of insanity would certainly have been prevented by sterilisation during the years 1909 and 1910 at Hanwell Asylum.

Certain proportionate allowances have, however, to be made, as already explained, to render these figures approximately accurate for the total number of 810 admissions.

Firstly, there is an allowance to be made for all instances in which the parent had certainly been in an asylum, though for various reasons the date of the original admission could not be obtained. This proportionate allowance by referring back will be found to be as 26 is to 37.

Among 37 instances sterilisation would have prevented . 5

„ 63 „ „ „ „ . $\frac{5 \times 63}{37} = 8{\cdot}5$

These 8·5 cases are the total preventable ones among 585 cases in whom a full history was obtained; the grand total of admissions, however, was 810.

Therefore we can roughly calculate that as—

Among 585 cases sterilisation prevented . . 8·5

„ 810 „ „ „ . . $\frac{8{\cdot}5 \times 810}{585} = 11{\cdot}7$;

or to take the nearest whole number, approximately 12 cases of insanity would have been prevented by parental sterilisation during the years 1909–1910 at Hanwell Asylum—12 out of 810 cases admitted.

To complete the picture we must know the number of patients capable of parentage discharged each year. I have only reckoned those discharged recovered and not those taken home by their friends. The average number of men under 50 years of age discharged recovered from Hanwell is 55; a similar computation for women under 45 gives the number at 65, or 120 for the two sexes.

I do not suggest that every one of these 120 cases per annum

would of necessity be subjected to sterilisation in any hypothetical eugenic scheme. Doubtless with enlarged experience some forms of insanity would be recognised as less likely to be hereditary than others, insanities, for instance, dependent on toxic agencies, such as post-typhoid insanity, being less hereditary than recurrent insanities.

This, then, is the state of affairs: some 6 cases a year would be prevented out of an admission total of 405, a mere 1·5 *per cent.* of the admissions.

One can consider this question from rather a different point of view; among some 2540 patients resident at Hanwell there are some 81 instances in which both parent and child are or have been recently resident at Hanwell or one of the other London County Asylums. I should state here that an inquiry on insane heredity, initiated by Dr. Mott, has rendered it an easy matter for me to give these figures. These cases have been dealt with in a similar manner to the last, *i.e.*, the date of the parent's first attack of insanity and discharge from an asylum has been compared with the date of birth of the child.

The figures obtained can be briefly put down in table form thus:

	Son.	Daughter.	Total.
Father transmits insanity to	10	19	29
Sterilisation would have prevented birth of . .	1	1	2
Mother transmits insanity to	17	35	52
Sterilisation would have prevented birth of . .	0	3	3
Parent transmits insanity to	27	54	81
Sterilisation would have prevented birth of . .	1	4	5

Once again it will be noted that the figures are most disappointing to anyone who would advocate legislation to prevent insanity by such means as sterilisation. The reason is this: insane heredity is only one of the many factors in heredity that have to be taken into consideration; the deduction is that any legislation to be effective must be aimed, not at the insane alone, but at all degenerates, whether so in mind or body. There is one interesting fact about these 81 cases, and that is that in 49 (*i.e.*, in over 60 *per cent.*) the parental insanity occurred about or after the climacteric; this naturally refers

more especially to women, the age of whose climacteric I have taken to be 45; in men the age of this period has been reckoned at 55.

Paternal heredity 29 cases, over 55 in 10 instances.
Maternal ,, 52 ,, over 45 in 39 ,,

At first sight it might be thought from this study of parental heredity that insane heredity is not of such vital importance in the production of insanity as is usually supposed, but this would be a fallacy due to considering the question from too narrow a point of view. A family may be absolutely free from the taint of insanity (*i.e.*, no member of the family has ever been certified as insane), and yet teem with instances of mental and physical degeneracy, hysteria, epilepsy, criminal imbecility, etc.; it should be recognised that these are of equal importance with insanity when arising among the forebears.

It is usual to point out that statistics as regards insane inheritance are bound to understate the importance of heredity for such reasons as shame at the disclosure, faulty histories, etc. Personally, I have no doubt that practically in every case heredity could be traced, not necessarily an actual insane inheritance, but the appearance of insanity's sisters, epilepsy, criminality, marked eccentricity, imbecility, and other forms of degeneracy, which pass unnoticed by the immediate relatives because the whole family is on much the same mental level.

Anyone who sees large numbers of the relatives of the insane must have been struck by the fact that the relatives are below the average both physically and mentally; one occasionally sees a person of fine physique among an insane patient's blood relations, in the same way that one occasionally sees a lunatic of fine physique, but in either case it is the exception to do so.

On the other hand (and this is not usually pointed out by writers on insanity), fallacies are apt to creep into statistics, and lead to an over-statement of the importance of the heredity of insanity, as the following case will exemplify:

A child was admitted to Hanwell suffering from epileptic imbecility due to some gross brain lesion sustained at birth; the mother was also admitted within a few months broken down in health and depressed owing to the worry of nursing and the death of her husband. Obviously the child's imbecility cannot justifiably be referred to maternal insanity, but must be referred to the injuries at birth. Again, many cases of arterial

degeneracy in the parent are followed by insanity in the child; a father, for instance, enters an asylum suffering from dementia post apoplectica, and one of his children becomes insane, or more often has become insane many years before the parent's apoplectic seizure. Is this, then, true insane inheritance? Surely not. The child has inherited a tendency to degeneracy, and is actually a member of a degenerate or decaying family; but this stigma of arterial degeneracy is of exactly the same historical importance in such a case as any other sign of physical degeneracy such as phthisis.

The point I wish to make is that insanity may be only one of numerous signs of degeneracy in a degenerating family; the inheritance is, in fact, not so much the inheritance of insanity as the inheritance of degeneracy.

This degeneracy may show itself in various forms, such as arterial or renal disease, epilepsy, insanity, intolerance of alcohol, liability to tuberculosis, etc.

The deduction as regards sterilisation is this: even if epileptics, lunatics, imbeciles, and criminals were all prevented from reproducing the species, yet insanity and other forms of degeneracy would still occur in degenerating families.

The degeneration of the family is as natural as the death of the individual.

The question to answer is, Should Nature's methods of dealing with degenerate families be hastened by sterilisation?

To answer this question satisfactorily much fuller knowledge must be obtained about degeneration in families, and it is impossible to obtain this without taking the family history in the form of a pedigree with full particulars of each member of the family.

It is true that each pedigree takes a full hour and more to obtain, and necessitates a very lengthy cross-examination of the informant, but the particulars so obtained are frequently most instructive.

I should like to register an appeal that these pedigrees should be collected in large numbers and from time to time be subjected to analysis and published.

This inquiry, and also an inquiry into the future life-history of children born of insane parents, might well be undertaken by a special department for registration under the control of the Commissioners in Lunacy.

Before answering the question as to whether sterilisation is justifiable or not, one must briefly consider the various factors at work tending to the degeneracy of the race, and hence to the increase of insanity, crime, imbecility, etc.

I need not enumerate these, as the knowledge that such factors as overcrowding, insanitary dwelling places, poor wages, and therefore under-fed children, tend to degeneracy, forms the very ABC of this subject; legislation, too, is constantly being applied by every government to improve the status of the masses, and more especially does legislation deal with the health and education of the children.

Philanthropic man, however, occasionally interferes with Nature, with possibly dire results. Infant mortality, for example, is always heavy, but has been of late years much reduced.

Nature is generous always in the propagation of the race, whether of man, bird, fish, or plant, and in every case there is a struggle for existence, in which the fittest survive and the weakly die. A heavy mortality in early life represents one of Nature's methods of removing the unfit, for though some robust infants may die, yet the heaviest mortality will fall on the weaklier children. Man does his utmost to frustrate Nature, and saves countless lives which Nature would have removed, and removed for man's ultimate benefit.

The philanthropic intention is good, but these degenerate children are given rights of citizenship equal to those of the robust, equal rights, in other words, to reproduce in their children their weakly characteristics, whether physical or mental.

We must recognise, then, that many degenerates will thus escape Nature's harsh rule, *i.e.*, that the fittest survive in the struggle for existence, and take steps accordingly to prevent such of these as are degenerate from reproducing their faults in their offspring. They have been given life; let them not give life.

Man improves all plants and domestic animals by careful crossing and breeding, he brings out useful qualities, such as egg-laying in fowls, and carefully excludes such defects as epilepsy in animals; but the knowledge so obtained, man, the highest of all, fails absolutely to apply to himself; epileptic mates with epileptic, criminal with criminal. The aim of

eugenics is a general improvement of the human stock, and incidentally the prevention of insanity, and in fact of all forms of degeneracy by careful selection of the parents most suited to reproduce their species. Theoretically nothing could be more perfect, and public opinion has done much among the middle classes to prevent epileptics, imbeciles, and even those tainted with insanity from intermarrying; but this has not yet reached the lower classes. Among them the epileptic finds no mate among the physically fit, and is driven to mate with one as degenerate as himself; the criminal, too, finds no mate among the honest. Thus in practice, to satisfy the natural instinct of reproduction epileptic mates with epileptic, imbecile with imbecile, criminal with criminal, and they perpetuate their defects, both physical and mental, indefinitely.

Here, however, Nature not infrequently steps in and ensures the termination of this bad stock either by diseases such as phthisis or by such a degree of idiocy in the children as to lead to impotence. Nature's methods, however, are slow, and masses

TABLE I.—PARENTAL HEREDITY FOR YEARS 1909 AND 1910 AT HANWELL ASYLUM.

Summary.

	Total cases under review.	Number of these in which a full history was obtained.	Number of these in which a history of insane heredity was obtained.	Percentage of insane heredity in cases with a full history only.
Males . .	394	282	121	42·9
Females .	416	303	129	42·5
Total .	810	585	250	42·7

Parental Heredity.

	Son.	Daughter.	Total.
Father transmits insanity to . .	21	15	36
Mother transmits insanity to . .	22	28	50
Total	43	43	86

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of degenerates are produced before the ultimate disappearance of the degenerate stock. In a sense, too, it never disappears, as by intermarriage it will taint previously healthy stocks.

The question naturally arises whether we are justified in assisting Nature by preventing the birth of degenerates. Surely we are, provided that some practicable method can be proposed

Father Transmits Insanity to Son.

Father.				Son.				Would parental sterilisation have prevented son's insanity?	
	Age.	Form of insanity.	Date when first in asylum.	Date of birth.	Form of insanity.	Age.		Yes.	No.
W. S—	43	General paralysis	1896	1885	Delusional insanity	24	S. J. S—	—	1
J. K—	78	Senile dementia	1907	1869	Melancholia	40	G. K—	—	1
W. H. C—	38	Paranoia	1887	1878	General paralysis	31	H. T. C—	—	1
W. H. A—	45	„	1893	1871	Paranoia	38	W. J. A—	—	1
J. T. G—	33	Melancholia	1865	1865 begotten in 1864	Delusional insanity	44	J. G—	—	1
J. D—	53	Mania	1888	1892	Dementia præcox	17	W. D—	1	—
M. S. C—	55	Melancholia	1909	1896	Epileptic insanity	16	J. S. C—	—	1
								1	6

Total	7
Father was insane, but never in asylum	7
Father's attack of insanity could not be verified	6
Father committed suicide	1
Total	21

for dealing with this degenerate mass. Sterilisation is sure in its action, but I personally consider it to be absolutely impracticable. I can imagine no government strong enough to bring forward a measure which would affect the immediate relatives of a large proportion of the electorate, for degeneracy ramifies through every class from the degenerate nobleman to the epileptic pauper. Sterilisation, too, would be a measure more

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fitted for a Spartan government than for a modern government with its altruistic ideals. Segregation is far more practicable, but to be completely effective it must be applied to such a large proportion of the population that complete segregation must be regarded as impracticable on account of the enormous financial burden involved. It might, however, be applied to the most degenerate of the population, though it would be hard to draw

TABLE I (*continued*).—*Father Transmits Insanity to Daughter.*

Father.				Daughter.				Would parental sterilisation have prevented daughter's birth?	
	Age.	Form of insanity.	Date when first in asylum	Date of birth.	Form of insanity.	Age.		Yes.	No.
W. J. H—	30	Recurrent mania	1839	1862	Recurrent mania	36	E. P—	1	—
R. G—	62	Dementia	1878	1847	Melancholia	62	M. D—	—	1
J. W—	51	Melancholia	1893	1870	,,	41	L. G—	—	1
C. L—	40	General paralysis	1890	1875	Epileptic insanity	35	F. J—	—	1
J. S—	55	Melancholia	1881	1852	Alcoholic confusion	55	K. S—	—	1
C. C—	36	Mania	1890	1880	Lactional melancholia	29	M. T—	—	1
T. J. F—	61	,,	1897	1864	Climacteric melancholia	45	E. F—	—	1
J. T. B—	41	Congenital imbecility	1909	1894	Congenital imbecility	15	F. M. B—	—	1
J. W—	48	Melancholia	1877	1871	Melancholia	38	A. W—	—	1
								1	8
					Total				9
					Father's attack of insanity could not be verified				5
					Father committed suicide				1
					Total				15

a definite line between those to be affected and those not; it might be applied to all epileptics, habitual drunkards and criminals, and also to the recurrent insane.

This partial segregation, combined with the eugenic principles so ably advocated by the late Sir Frederick Galton, would do much to stamp out the worst forms of human degeneracy.

The immediate object of this paper, however, is to discuss the

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advisability of the sterilisation of the insane before their discharge from an asylum.

Are the figures I have already demonstrated sufficient to warrant any action, that is to say, are we as medical men justified in recommending sterilisation to prevent such a small proportion of insanity as 1·5 *per cent.* of the total admissions? Everybody will agree that the answer is in the

TABLE I (*continued*).—*Mother Transmits Insanity to Son.*

Mother.				Son.				Would parental sterilisation have prevented son's insanity.	
	Age.	Form of insanity.	Date when first in asylum.	Date of birth.	Form of insanity.	Age.		Yes.	No.
E. N—	61	Melancholia	1889	1860	Melancholia	50	J. N—	—	1
M. J. B—	64	Recurrent mania	1899	1873	Chronic mania	36	W. H. B—	—	1
M. A. C—	52	Recurrent stupor	1894	1882	Mania	29	W. C—	—	1
M. W—	40	Delusive mania	1901	1887	Melancholia	23	F. J. W—	—	1
E. H—	32	Melancholia	1896	1889	Dementia præcox	22	A. E. C—	—	1
R. A. E—	57	,,	1909	1875	Melancholia	35	L. E—	—	1
A. D—	53	General paralysis	1909	1879	Congenital imbecility	41	J. P. D—	—	1
L. M—	63	Melancholia	1909	1880	Ditto	30	E. M—	—	1
								0	8

Total	8
Mother was insane but never in asylum	4
Mother's attack of insanity could not be verified	9
Mother committed suicide	1
Total	22

negative. So carefully have I collected these figures that I am convinced anybody can obtain corroboratory ones from studying any other asylum records.

The next question we must ask is this: are we justified in recommending sterilisation in isolated instances such as I have described earlier in this paper? Unfortunately we have no certain knowledge of the life-history of the children of such parents; but no one can doubt for a moment that they will be

in large proportion degenerates, and therefore it would appear to be justifiable to prevent such parents from further reproduction of this degenerate offspring.

TABLE I (*continued*).—*Mother Transmits Insanity to Daughter.*

Mother.				Daughter.				Would parental sterilisation have prevented daughter's insanity.	
	Age.	Form of insanity.	Date when first in asylum.	Date of birth.	Form of insanity.	Age.		Yes.	No.
C. M. M—	35	Mania	1887	1890	Dementia præcox	20	C. T—	1	—
M. A. F—	67	Senile dementia	1910	1882	Melancholia	27	A. P. F—	—	1
E. P—	36	Recurrent mania	1898	1890	Dementia præcox	18	M. A—	—	1
G. M. W—	56	Alcoholic confusion	1899	1868	Alcoholic confusion	34	G. F—	—	1
C. M—	44	Climacteric insanity	1860	1844	Melancholia	56	C. M—	—	1
C. G—	45	Mania	1906	1893	Melancholia and congenital defect	17	E. G—	—	1
A. R—	30	Recurrent mania	1856	1863	Climacteric melancholia	46	E. R—	1	—
R. G—	37	Melancholia	1870	1874	Melancholia	35	S. G—	1	—
E. P—	51	,,	1909	1882	Congenital epileptic	27	V. P—	—	1
N. U—	64	Senile dementia	1907	1864	Melancholia	45	L. T—	—	1
M. S—	34	Melancholia	1865	1861	Congenital imbecility	44	B. S—	—	1
K. E. B—	58	,,	1910	1879	Melancholia	30	A. E. B—	—	1
C. D—	46	Climacteric melancholia	1879	1859	Mania	50	E. T—	—	1
								3	10

Total	13
Mother was insane, but never in asylum	6
Mother's attack of insanity could not be verified	6
Mother committed suicide	3
Total	28

Prevention should be by segregation rather than by sterilisation, unless the individual preferred liberty and sterilisation to incarceration without mutilation. In the case of women, segregation naturally need not last beyond the climacterium.

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Summary of Above.

	Son.	Daughter.	Total.
Father transmits insanity to	7	9	16
Sterilisation would have prevented birth	1	1	2
Mother transmits insanity to	8	13	21
Sterilisation would have prevented birth	0	3	3
Parent transmits insanity to	15	22	37
Sterilisation would have prevented birth	1	4	5

Total cases completed as above	37
Parent insane, but never in asylum	17
Parental attack of insanity could not be verified	26
Parent committed suicide	6
Total	86

Lastly, it is irrational to deal with the insane and leave other degenerates undealt with. To deal with the insane and leave habitual criminals, imbeciles, epileptics and other degenerates to perpetuate their failings would be as rational as to amputate a toe when the whole leg is gangrenous. As the toe is a small part of a diseased mass, so the insane are a small part of the degenerate masses; amputation in both cases should be performed above the disease. If, however, amputation is impracticable, then we have to be content with tonic remedies applied to the healthy part of the body; in the case of our nation this tonic method is exemplified by any treatise on eugenics.

Incidentally I would call attention to the mental diseases, as inherited in the five preventable cases I was able to trace. (1) From father to son, mania to dementic præcox; (2) from father to daughter, recurrent mania to recurrent mania; (3) from mother to daughter, mania to dementia præcox; (4) from mother to daughter, recurrent mania to climacteric melancholia; (5) from mother to daughter, melancholia to melancholia.

When one remembers the preponderance of cases of melancholia admitted to an asylum, the fact that four out of the five parental attacks were entered as mania and two as recurrent mania speaks for itself.