

which was adopted, we have an important means of treatment which may, if necessary, be maintained during long periods, while rest is being afforded to part of the digestive apparatus, without danger to the general strength and nutrition of the patient.

It may of course be assumed that in some at least of the cases which I have recorded, there were defects in the method of feeding in the ordinary way, or that sufficient efforts were not made to induce the patients to take food voluntarily. To this I can only reply that I should not have ventured to take up space in these pages unless I had, at all events, satisfied myself that no alternative existed in any of the cases between suffering the patients to die from inanition, and adopting the measures which are here set forth.

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*On the Influence of Age, Sex and Marriage on the Liability to Insanity: being an Analysis of some Statistical Tables in the Thirty-Second Report of the Commissioners in Lunacy (England).* By T. ALGERNON CHAPMAN, M.D.

I have been disappointed rather than surprised that no one has given us a full and useful analysis of the Statistics of the Causes of Insanity and of the Occupations of the Patients admitted into Asylums during the year 1876, in the Thirty-First Report of the Commissioners in Lunacy; at present they are a mere *rudis indigestaque moles*, and I must say that the effort to extract much valuable meaning from them appears to be an arduous one. Thinking that the Tables given in continuation of the same series in the Thirty-Second Report may meet a similar fate of neglect, I somewhat rashly propose to endeavour, if not to extract their full meaning, at least to state what are the facts they most clearly enounce, and, if possible, to suggest a meaning for them. I do this the more readily that they are not an extensive series, and are, therefore, somewhat manageable, and may admit that they have a certain attraction for me, as the most remarkable novelty they demonstrate happens to be a circumstance that on a small scale I have been aware of for some years, and had frequently thought it desirable to have tested on larger numbers, and yet is one to which I do not recollect ever to have seen attention directed. This circumstance is the frequency with which, in comparison with other lunatics, the general paralytic is married.

These Tables show "the ages of all patients admitted into asylums, their condition as to marriage, together with the ratios deduced from a comparison of the statistics of age and marriage condition for the entire population of England. The number and proportion will also appear of admissions where the unsoundness of mind was attributable to congenital defect, and where insanity arose later in life, distinguishing between the 'first,' and 'not the first attack.' Special information on most of these points has also, as far as possible, been tabulated as regards the patients affected with general paralysis of the insane, and admitted during 1876; together with a summary of the causes or influences which were deemed to have mainly contributed in producing insanity in the cases of those suffering from that particular form of mental and physical disorder" (Commissioners' Report, p. 4).

I believe I am correct in setting a very high value on these statistics, on the ground that we have not hitherto had from any source a tabulation of so many cases in which age and marriage conditions are tabulated together.

In analysing such Tables, it is important to endeavour to bear in mind what the Tables really mean, and not to run away with some apparently *prima facie* meaning. There are several errors of this kind that one is apt to make as regards all these Tables (except 19, which does not, however, enable me to correct the others); one of these errors consists in forgetting that these Tables refer to the ages, &c., of the patients on their admission in the year 1876, and do not inform us of the similar yet different (and all different in one direction) figures which would show their ages, &c., at the date of their first becoming insane, which is the really important figure. Since, however, we have not this latter figure, we must treat those given us as if they were such, but remember that our conclusions are vitiated throughout by this fallacy.

An equally important fact to bear in mind is that these are admissions, not patients, and to the extent to which they are re-admissions are in excess of the actual number of individuals. In so far as they are transfers they do not truly represent the occurring insanity of the year. And above all, it is necessary to remember that these are not all the cases of insanity that occur for the year, but only those that are sent to asylums. As such they have very considerable value; but since their greatest interest lies in their approximation to the total cases of insanity occurring for the

year, and though all the above and some other corrections must be remembered, it may sometimes save circumlocution to speak of them as if they were the whole cases occurring for the year. In one sense, indeed, they are so—that is, they are all the cases that reach so pronounced a form as to require removal to an asylum. What the total number of really occurring cases, apart from an asylum standard, may be, I am quite unable to guess—instead of 14,154, the figures before us, it may, for aught I know, be 20,000 or 30,000.

*Ages of the patients admitted during the year 1876.* Tables 13, 14 and 15 (A),\* show the ages (and condition as to marriage) of the population of England 1871, and of the admissions for 1876, and the ratios of these figures per 10,000. Tables 20, 21 and 22 show the same facts as to the admissions, divided into three sections, viz. : 1, the County and Borough Asylums ; 2, the five largest licensed houses ; and 3, all the other asylums. These latter Tables show that the distribution of patients on admissions as to ages is almost precisely the same in the five large licensed houses as in the County Asylums, the only exception being a proportionate deficiency of patients under 15 years of age, the actual deficiency being, however, only 8 in quite within the limits of accidental periodical variations. The figures for the registered hospitals and other asylums, however, show a very remarkable deviation ; the patients under 15 are nine times as numerous as in the other asylums, 185 instead of 21, and those from 20 to 30 are 485 instead of 420 ; the other figures are within the limits of accidental variation. The result is that the average age is much lower than in the other asylums. This is associated with a much larger proportion of cases of congenital insanity in this section, 10·4 per cent. instead of 4·0 per cent., and no doubt is largely, if not entirely due to this section, containing several idiot asylums, the Albert and Earlswood Asylums accounting for 153 admissions. The remarkable agreement between Tables 20 and 21 (County Asylums and five licensed houses), the figures in the one being about ten times as large as those in the other, is a valuable indication that Table 14 (ages and conditions as to marriage of all admissions) may be regarded as an average one which would come out nearly the same in any other year, the year 1876 being, further, one that we know not to have been much affected by an unusual proportion of transfers and other disturbing causes.

Of the 14,154 admissions of 1876, whose ages are given in

\* The figures refer to the numbering of the Tables in the Report of the Commissioners.

Table 14, the precise distribution amongst the several ages gives us no information until it is compared with numbers at the same age existing in the general population, and this comparison is calculated out for us in Table 15 (A), which contains, therefore, the essence of the two preceding Tables. The figures given are per 10,000. The proportion under 15 years, .3, is evanescent, when we remember that the figures of the Idiot Asylum are here included. From 15 to 20 the figure is 3.0; from 20 to 30 it is 7.6. From 30 onwards the figures are very nearly uniform, viz., for each decade 11.9, 12.5, 11.9, 11.8, and 10.6. It appears, therefore, very probable that if the correction could be made for the fact that these ages are not on first attack but on admission, which would increase the earlier at the expense of the later ages, the maximum ratio would be placed not at 40-50, but at 30 to 40, and that the slight but gradual decline in the ratio would commence from thence onwards.

We shall see reason further on to believe that the admission of idiots and imbeciles, and others presenting slighter but distinct defects, dating from birth or youth, follows, only to a more marked degree, the same gradient, *i.e.*, as age increases, these quasi congenital cases are gradually less abundant, not only actually but relatively to the population living at these ages, so that were the above figures corrected in accordance with this circumstance, it would appear that the liability to insanity strictly belonging to each age is extremely uniform throughout the whole of life.

This fact has never before, I believe, been shown statistically, and various different views may be found on it in different authorities.

The difference in the liability of the sexes to insanity at different ages is slight, except between 30 and 40, when males are more liable to insanity than females in the ratio of 13.1 to 10.9; they are also somewhat more liable in the preceding decade. This probably points to the wear and tear of this active period of life, telling more severely on the male sex than puerperal and other concomitants of childbearing do on the female.

From 40 to 60 there is a slightly greater liability in the female than the male sex; if this is more than accidental (due to insufficiently extensive data) it points to the more trying effect of the climacteric period on the female organism. The slight excess of male proclivity from 60 upwards probably depends on the greater liability to atheromatous changes in the male.

TABLE A. (XV of Commissioners' Report).

Showing the Ratio per 10,000 of the Patients Admitted into County and Borough Asylums, Registered Hospitals, Naval and Military Hospitals, State Asylums, and Licensed Houses, in England and Wales during the year 1876, to the whole Population at the time of the Census of 1871, arranged according to their Ages and Condition as to Marriage.

CONDITION AS TO MARRIAGE.	AGES.												TOTAL.														
	Under 15.			15—			20—			30—			40—			50—			60—			70 & Upwards.					
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.			
Single .....	4	2	3	2.7	3.3	3.0	11.8	9.2	10.3	27.6	21.9	24.6	30.9	30.3	30.5	22.1	25.8	24.2	22.4	24.6	23.7	13.9	18.6	16.8	4.4	4.4	
Married .....	...	...	...	...	4.0	3.4	8.0	5.1	4.2	9.0	7.7	8.4	9.7	9.0	9.4	9.9	9.1	9.5	10.4	8.8	9.7	10.4	10.7	10.3	8.4	7.7	8.0
Widowed .....	...	...	...	...	...	...	9.8	6.3	7.4	18.8	13.1	14.8	13.9	14.7	14.5	15.1	13.8	14.2	13.0	11.3	11.8	9.8	9.3	9.5	13.0	11.9	12.2
Unknown .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total .....	4	2	3	2.7	3.3	3.0	8.0	7.3	7.6	13.1	10.9	11.9	12.4	12.6	12.5	11.7	12.2	11.9	12.1	11.6	11.8	10.5	10.6	10.6	6.3	6.1	6.2

NOTE.—It will be observed that in nearly all the above periods the proportions of the "single" considerably exceed those of the married and "widowed," while in the total of all ages these ratios are reversed. This is due to the facts that nearly all the persons in the population under 20 years of age were "single," that three-quarters of the "single" population were composed of persons under 20 years of age; and that the numbers of patients under that age who were admitted into asylums, &c., during 1876, were relatively few.

TABLE B.

Showing for each age the number of admissions that 1,000 living at that age will afford during the remainder of their lives.

AGES.

Under 15.		15—	20—	30—	40—	50—	60—	70—
M.	F.	M.	F.	M.	F.	M.	F.	M.
25.5	26.3	25.9	32.2	32.2	32.2	36.6	33.6	35.1
			M.	F.	T.	M.	F.	T.
			36.6	33.6	35.1	36.6	34.6	35.4
				M.	F.	T.	M.	F.
				29.3	30.2	29.8	23.1	24.1
							23.5	23.5
							M.	F.
							18.0	18.2
							18.2	18.2
							M.	F.
							10.5	10.6
							10.6	10.6

If general paralytics be eliminated before calculating these ratios, then the relative liability of the two sexes is almost identical from 30 to 40 and from 60 upwards, but the female is much more liable from 40-60.

I have prepared from these data the annexed Table B to show what is the actual proportion of the population that are at one period or another of their lives sent to an asylum. It shows for each period of life, how many per 1000 then living would, according to the practice obtaining in 1876, be sent to asylums during the remainder of their lives. The numbers are not, however, persons, but admissions.

These figures are only approximately true, the data not supplying material for absolute accuracy. They show that those who die before 20 years of age do not afford their fair proportion of admissions, and this is especially marked in males under 15; that of those who reach the age of 20, 3·5 per cent. ultimately become inmates of asylums. This figure will bear a slight deduction on account of re-admissions, and transfers (from 3·5 to about 3·2 per cent.). Among the remaining corrections required by these figures the only one of any size is due, on the one hand, to the population on which it is calculated, being that of 1871 instead of 1876, and on the other to the fact that the population at the greater ages in 1876 are derived from smaller populations of previous decades, *e.g.*, the 3¼ millions of 1871 aged 20-30, will fifty years hence yield a larger number from 70 upwards than 633,505, which are the residuum of that age now living from the smaller population of 50 years ago. I have assumed that these 3¼ millions will yield at 70 upwards the same number of admissions that 633,505 yield; really, as there will be a larger residuum at that age they will yield a larger number of lunatics. Nor have we any detailed account of how the population at each age is diminished by emigration. I have not the data for accurately making these corrections, and if I had, the labour would be very considerable; but I have made an approximation for the age 20-30, which comes out 39·0 per mille instead of 35·1, or with the corrections for re-admissions and transfers almost exactly 3¼ per cent.; indeed the correction for re-admissions so closely balances that for increase of population, that the above Table may be taken as very nearly correct. That in the course of their lives 1 in 30 of the adult population are (according to present practice) sent to asylums is a fact that will be startling to some, what the proportion is of those who become in-



sane I cannot say, but it must be larger than this, probably nearly double.

Similar calculations cannot be made for the married and single separately, since the married are constantly being recruited at the expense of the single, and therefore each cannot be treated as a constant quantity from age to age as the totals can.

*Condition as to marriage of the admissions of 1876, simply, and at different ages.* Again, Table 15 (A) is the one that gives the facts in a form ready for discussion. In the first place, as the Commissioners point out in a note, the proportions for all ages taken together are wholly misleading, since nearly half the population is under 20 years of age, and nearly all this half is single; yet it affords hardly any admissions. The remainder of the table is trustworthy, and gives greater definiteness than has hitherto been attainable to the well-known but somewhat vexed fact that the single afford a much larger percentage of lunatics than the married. From 20-70 the single population is about three times as liable to insanity as the married, whilst the widowed occupy an intermediate position, their liability as compared with that of the married being as 3-2 nearly. Over 70 the figures approximate; the tendency to approximation, indeed, begins to show itself at 40, but makes but little way up till 70. Under 20, curiously, the married (a very small proportion of the population, however) are more prone to insanity than the single.

It is curious that the actual number of single and married among the admissions should be so nearly alike as 6,120 and 6,340—a circumstance which has probably led to the real disparity in the proportion of these to the population at different ages, though known, not being known to be so great as it really is, since it led to a *primâ facie* idea that the proportions were identical, and those who had compared them with the population numbers had not had them tabulated according to ages to assist them in coming to a just conclusion. It therefore happens that whilst between the ages of 30 and 60 the single are more liable to insanity than the married in the proportion of 2·83 to 1, the largest estimate that I can find in published statistics puts the proportion at 2·3 to 1.

What significance are we to attach to these facts? Is widowhood a cause of insanity? Is celibacy a still more



effective one? As regards the single, it is unquestionable that many persons who become insane have always presented grave defects or peculiarities which would have prevented their marrying, so that the celibacy is a result of the insanity instead of the cause. When we observe that from 30-40 the single are only a fifth of the population, and from 40-60 only a seventh, it is clear that a small numerical addition will tell largely on the percentages. The liability to insanity among the single culminates at the 40-50 decade; possibly if age on first attack were given, instead of age on admission, in the 30-40 decade, and thereafter steadily declines, this certainly looks very much as if during the marrying age—20-40—the more healthy were being selected, leaving a cranky residuum.

There is one statistical item to help us here, if only roughly. In Table 18 of the 31st Report we find that 1,816 patients are entered of no occupation and unknown. Deducting from this the 306 patients under 15, we have a rough figure of 1,510, as showing the number who were of no occupation, chiefly because too defective mentally to have any, and *à fortiori* too defective to have been married. When this deduction is made from the number of the single insane, we find the ratio of liability in single to married is reduced from 2·83-1 to 1·98 to 1, rendering it very probable that if those whose mental deficiency, though not so great as to prevent their having a nominal occupation, was still sufficient to be an impediment to marriage, could be allowed for, the ratio would be reduced very nearly to an equality. On taking Table 14—31st Report—772 are stated to have suffered insanity from congenital causes, and in 2,223 heredity was ascertained. We may fairly assume that congenital deficiency was an absolute bar to marriage in the 772 cases, but it is difficult to say how far known hereditary tendency would be so in the 2,223 cases. If we assume half to have been so hindered from marriage, and take a fair proportion of the 3,008 in which the causation was unknown, the figures will be more favourable to the single than those just given—thus  $772 + 1,111 + (3,008 \div 6) - 306 = 2,076$  as the number of persons ascertainably hindered from marriage by obvious mental taint, and reducing the ratio from 2·83 to 1·68 to 1.

If we assume that the excess of insanity among the single is due to mental defect preventing marriage, the amount of that assumption may be shown in the following form :—

TABLE E.

Number of persons admitted at each age who had suffered previous mental defects preventing their marriage, and the percentages which such persons formed of the whole admissions at that age:—

	20—	30—	40—	50—	60—	70—
Number of persons .....	560	722	515	210	124	39
Percentage .....	19.3	20.7	17.9	10.5	9.9	5.8

That is taking the ages 20-50 as giving the most pronounced figures, and taking these roundly, one-fifth of the admissions was of persons who had previously been sufficiently defective mentally to prevent their marrying.

As a test how far this assumption agrees with the facts, I have gone carefully over five years' admissions of the Hereford Asylum, tabulating them from this point of view.

The total admissions were 152 males, 165 females; total, 317. Of these, 73 males and 66 females were single, and of these 33 of each sex had always been unmarriageable by reason of mental defect; whilst 5 males and 16 females were doubtful chiefly because their histories were imperfect, several of them recurrent cases beginning early in life, and though probably not rendering marriage impossible, vastly diminishing its chances.

The distribution of the 66 cases among the several ages was as under:—

Under 20		20—	30—	40—	50—	60—	70—
M.	F.	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
9	8	11 12	5 6	4 5	1 1	2 1	1 0

Deducting the 17 under 20, both from the admissions and those who were unmarriageable, and adding to the latter half the doubtful, and comparing them with the figures deduced by assumption from the Commissioners' tables, the result is as below:—

	Com. Table.	Hereford Asylum.
Total admissions (over 20 years) -	13186	300
Of whom single -	5168	122
Of whom unmarriageable -	2170*	59†

\* By assumption.

† By observation.

Throwing these into percentages, they read thus:—

	Com. Table.	Hereford Asylum.
Total admissions (aged over 20 years)-	100·0	100·0
Of whom single	39·2	40·6
Of whom unmarriageable	p. c. on single 41·9	48·5
	p. c. on total admissions- 15·7	19·9

So that the figures of the Hereford Asylum more than bear out the assumption with which we started, that the excess of proportion of the admissions of single over married persons is entirely due, not to celibacy causing insanity, but precisely to the contrary, that insanity and a tendency to it causes celibacy. The excess in the Hereford figures over the assumed figures may be due to either of several causes—1st, Hereford figures too small to give more than a generally accurate result; 2nd, Hereford probably has a rather larger proportion of idiots among the admissions than the average; 3rd, to the contrary of the *prima facie* aspect of the figures, the married are really most prone to insanity; 4th, I may have unconsciously strained the figures in tabulating. I can only say that seeing how the figures were going, and conscious of such a possibility, I decided all doubts in the contrary direction.

One-sixth (15·7 per cent.) of the admissions does not appear, after all, a large proportion to have been always sufficiently defective in mental constitution to have prevented their marrying. The figures look even less pronounced when stated as below.

TABLE F.

Table showing the number of single persons at each age in the general population, and the number of such persons who were single in consequence of mental defect, ultimately leading to their being sent to an asylum, and the percentage which the latter bear to the former:—

	20—	30—	40—	50—	60—	70—
Single persons ...	2080918	568055	280088	171680	104439	56286
Defective persons	21700	16100	8880	3780	1630	390
Percentage .....	1·04	2·83	3·17	2·17	1·57	0·69

It will not, perhaps, be profitable to follow this further, since its foundation is to some extent hypothetical; other-

wise it might have been of interest to compare the two sexes in these particulars.

The comparative tendency in the two sexes amongst the single is the same as in the whole admissions, greatest in males from 20-40 when the male celibate is supposed to give way to drink and dissipation; greatest in females from 50-73 when the vagaries of old-maidism may be expected. Whether this distribution affords any ground to enter celibacy as predisposing to insanity must be left an open question.

Among the married the tendency to insanity rises rapidly until 40, when it reaches 9·4 per 10,000, and continues to increase, but hardly appreciably. Married females are much more liable than males; as 51 to 30 from 20-30; afterwards the male tendency is distinctly the more marked.

With regard to the widowed, it is very difficult to guess (I see no way of actually ascertaining) why they should be so much more liable than the married, unless widowhood be an efficient cause of insanity, directly as a moral cause, indirectly as adding to the intensity of the struggle for existence on the part of the survivor. I can only make two suggestions in modification of this conclusion:—1st, that not a few of those entered as widowed are so entered in error, being really merely deserted by their spouses, and so deserted on account of mental peculiarity or disorder. The other is that the cause of the death of one of a married pair may often have been the cause of ill-health leading to insanity in the other—such causes, for example, as poverty, privation, unhealthy residence, contagious fevers, intemperance, &c.

It may be noted that the excess of widowed above the ratio obtaining among the married, are only 3·5 per cent. of the total admissions, and that an analysis of second marriages might show similar causes for the higher ratio among widowed to be at work as among the single.

*The Tables concerning the General Paralytics* show, first (Table 16), the total numbers distributed as to ages, and conditions as to marriage. Second (Table 17) C, the percentages which these numbers bear to the total admissions, similarly distributed. I have calculated another Table, D, similar to Table A, giving the admissions of general paralytics per 100,000 of population, for each age, and condition as to marriage.

Table C shows the prevalence of general paralysis in comparison with lunacy on a whole. The latter shows its actual distribution.

These Tables abundantly confirm the sufficiently known fact that general paralysis is most common between 30 and 50 years of age, and is much more common in the male;



TABLE D.

Showing the Ratio per 100,000 of the General Paralytics admitted into Asylums during 1876, to the whole Population at the time of the Census of 1871, arranged according to their Ages and Condition as to Marriage.

	Under 15.	15—	20—	30—	40—	50—	60—	70—	Total.—
S.	...	.1 .1 .1	2.8 7 1.8	28.8 5.0 15.3	41.5 7.2 21.8	25.6 2.0 12.3	6.9 1.6 2.8	... 3.0 1.8	2.14 .55 1.57
M.	...	...	5.2 0.6 2.7	26.4 5.5 15.6	27.5 7.7 17.8	17.4 2.9 10.8	10.9 1.4 6.7	1.3 ... .8	18.83 4.02 11.37
W.	...	...	... 8.0 6.0	60.0 10.0 25.3	30.3 9.9 15.4	27.0 4.2 10.8	7.0 0.9 2.8	2.5 .4 1.2	17.80 3.86 8.06
Total.	...	.1 .1 .1	8.8 .8 2.2	27.6 5.7 16.2	29.3 7.9 18.0	19.8 3.2 11.0	10.0 1.3 5.4	1.7 .6 1.1	8.92 2.00 5.37

but they also give greater clearness and definiteness to these facts than we had before, by the strict comparison with the number of the general population, and of ordinary insane.

The following shows the relative prevalence of general paralysis in the sexes, according to age and condition as to marriage :—

TABLE G.

Number of General Paralytics that would occur at each age and condition as to marriage among the number of males living, that among females yielding one general paralytic.

AGES.

CONDITION AS TO MARRIAGES.	Under 20.	20.	30.	40.	50.	60.	70.
S.	1	4	5·3	5·8	12·8	4·3	...
M.	...	9	4·8	3·6	6·0	7·8	...
W.	...	...	6·0	3·0	6·4	7·9	6·0
Total.	1	4·7	4·9	3·7	6·0	7·8	3·0

This shows that amongst the single the proportionately greater frequency of general paralysis amongst males increases with age, whilst among the married and widowed it is at a minimum between 40 and 50, the age of greatest prevalence of general paralysis in both sexes.

General paralysis is most frequent between 40 and 50, next between 30 and 40, then between 50 and 60. Its occurrence per 100,000 of population at these three decades, taken together, is as under. The actual numbers are seven-eighths of all the general paralytics, only one-eighth occurring over 60 and under 30 :—

TABLE H.

Ratio per 100,000 of the General Paralytics, between 30 and 60 years of age, admitted into Asylums during 1876 to the whole population of those ages, at the time of the census of 1871, arranged according to condition as to marriage :—

	Males.	Females.	Total.
Single - - -	30·4	5·4	16·5
Married - - -	24·6	5·7	15·3
Widowed - - -	29·1	7·0	15·4
Total - - -	26·2	5·8	15·6



The most remarkable point in the distribution of these figures, which this short table exhibits, perhaps even more clearly than the more extended one above (Table D), is the very slight difference in the frequency of the disease, according to the condition as to marriage, whilst among the ordinary insane the single are to the married as 3 to 1. Amongst the males the single are more frequently attacked in the proportion of 5 to 4, the widowed being almost as liable as the single, whilst among females the single are least liable.

What is the cause of this difference between general paralysis and ordinary insanity? We found the explanation of the state of the figures in the ordinary insane to reside largely, if not entirely, in the circumstance that a tendency to insanity was a cause of celibacy. We must, therefore, suppose that a tendency to general paralysis has not this effect, and a consideration of a large proportion of cases of general paralysis will support this conclusion, and so far tend to confirm the explanation of the figures of the ordinary insane. The general paralytic is sometimes hereditarily defective, and I have known a father and son both subjects of general paralysis. But it is notorious that heredity is comparatively rare among general paralytics, that the subject of this disease is very rarely defective mentally, previous to the appearance of the disease, but is much more frequently a most active, pushing, energetic capable man. The general paralytic, instead of, like the ordinary insane, being a weakling, succumbing to the average pressure of existence, is usually a strong man, who has presumed in his strength, and prematurely worn himself out.

A comparison of Table 18, showing the assigned causes in the general paralytics, compared with Table 14 of the previous year's report, showing the causes in all the admissions, tends to confirm this conclusion. These must be examined separately for each sex, as the excess of male general paralytics makes the figures of the totals misleading, when the causation in the two sexes differs to any degree. Moral causes are less frequent among general paralytics, yet two of these, adverse circumstances (including business anxieties and pecuniary difficulties) and mental anxiety, "worry," are slightly more so, corresponding to the frequency with which the general paralytic has been an active business man.

Of physical causes, heredity, which is predicated of 15.6 per cent. of ordinary insane, accounts for little more than half that proportion of general paralytics, whilst congenital

causes are evanescent. Heredity fails most among female general paralytics.

Self-abuse is only one-fifth as common as a cause, and bodily disorders, including old age, is one-fifth less common. On the other hand, intemperance in drink is a considerably more frequent cause of general paralysis, especially in females, viz., as 25-23 in males, and as 10-7 in females. Intemperance (sexual) is three times as frequent; in females five times as frequent. Overwork is more frequent as 8-5; sunstroke as 3-2, and injury as 7-6.

Table 19 will be of value for various statistical purposes, but, taken by itself, is suggestive of little interest. The proportion of cases of congenital insanity seems to me very small—4 per cent. The few asylums whose admissions (not statistics) I have examined, have a much larger proportion of congenital cases of various classes than this, and I am inclined to suspect that many of the compilers of these statistics have been content to enter such cases with the duration of the mania (if the unmanageableness of idiots and imbeciles in workhouses and at home amounts to mania), which is often the immediate occasion of their being sent to the Asylum, as is so frequently done by the Relieving Officer in the "statement," instead of statistically recognising the imbecility or idiocy, which usually renders the patient a permanent inmate of the Asylum, and is the keynote of his condition.

#### *Summary.*

1. These Tables deal with sufficiently large numbers to give satisfactory results.

2. The numbers sent to Asylums increase up to 35 years of age, when 12 per 10,000 living are annually sent, thereafter the numbers diminish steadily to 10 per 10,000 in old age; that if the age on first attack were given, instead of age on admission, and those always more or less congenitally defective were tabulated separately, the result would show a remarkably uniform proclivity to insanity throughout life, from 30 upwards, if not from 20.

3. Insanity affects males more largely than females, from 20-40; again slightly more from 60 upwards; from 40-60 females are slightly more prone. If general paralysis be treated separately, then females are much more affected from 40-60; at other ages there is an equality.

4. 3·5 per cent. (1 in 30) of those who attain the age of 20 ultimately become inmates of Asylums.

5. The single are sent to Asylums in proportion greater than the married as 2·83-1; the widowed as 3-2, *i.e.*, in proportion to the numbers of each in the general population above 20 years of age, though the actual numbers of single and married admissions are nearly identical.

6. It is almost certain that in the excess of single above married, the excess is due, not to celibacy causing insanity, but to insanity or a tendency thereto preventing marriage. If this be so, about 1 per cent. of the single among the general population, aged 20-30, and about 3 per cent. of those aged 30-40, are so from mental defect ultimately causing their admission to an asylum.

7. General paralysis is more frequent among males than females, but at the age 40-50, when the disease is most frequent, this relative frequency is least marked.

8. Unlike insanity in the mass, general paralysis is hardly more frequent in the single than in the married, a circumstance probably traceable to the comparative rarity of congenital defect in general paralytics.

9. General paralysis results much more frequently than ordinary insanity from causes implying business energy, and the use (and abuse) of the activities of life; much less frequently from defects inherent in the individual.

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*Notes of a Visit to the Idiot School at the Hague.* By  
FLETCHER BEACH, M.B. Lond., M.R.C.P., Medical  
Superintendent of the Darenth (late Clapton) Asylum.

While on a trip through Holland in the year 1877, I visited the well-known School for Idiots at the Hague, and, thinking that my observations might perhaps prove interesting to others as well as myself, I have put together the following notes:—

The Institution owes its origin to three public-spirited men, who in the autumn of 1854 met at the Hague to endeavour to found a School for Idiots. These were the Minister, C. E. van Koetsveld, the Doctor, J. Brouwer Stark, and the Schoolmaster, H. van den Heuvel, Professor Schroeder van der Kolk assisting them with his advice. Subscriptions were raised, the Queen of Holland alone putting 2,000 florins at their disposal, a house was hired, and on the 15th of May, 1855 a school was opened with eleven out-