### By D. HACK TUKE, The Alleged Increase of Insanity.\* F.R.C.P.

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The proposition will no doubt be accepted by all whom I address (although the public is so slow to recognise it) that the only sound test of the increase of insanity is to ascertain the number of occurring cases of Mental Disorder in proportion to the population during the periods of time we desire to compare. + Most of the mistakes made upon this subject have arisen from taking existing cases of insanity at different epochs, thus totally overlooking the effect of accumulation arising from the fact that although the annual admissions may be stationary, the discharges from recoveries and deaths will fall far short of them. This in any case. But when we compare successive periods, still assuming that the admissions remain the same, the ratio of discharges and deaths may vary so greatly at different epochs that the degree of accumulation will be largely affected, being more or less according to the proportion of recoveries and the rate of mortality.

A striking proof of this may be given as regards the percentage of deaths on the number resident in asylums in England and Wales at different periods. Few realize, I think, how great is the difference which a reduced mortality makes in the number of patients. I find that the mortality during the six years from 1874 to 1879 (inclusive) was 10.26 per cent. resident in the asylums of England and Wales, while during the six years 1880-85 (inclusive) the death-rate was only 9.3 per cent. The actual number of deaths in the latter period was 29,783. Had the mortality continued at the same rate as during the previous six years, the number of deaths would have been 3,054 more than actually occurred. Again, in 151 institutions for the insane in England and Wales during a period extending

\* Read at the Brighton Meeting of the British Medical Association, August

12, 1886. † The correct test of the prevalence of insanity was insisted upon by Samuel Tuke in his "Introduction" to the work of Jacobi "On the Construction of Asylums," 1841, and previously in a paper read at York before the "Yorkshire Philosophical Society." Dr. Thurnam, the Superintendent of the York Retreat, in his "Statistics of Insanity," 1844, emphasized the necessity of this teaching. Dr. Lockhart Robertson made a most valuable contribution to the question in 1869 and 1871 ("Journal of Mental Science"), in which he showed by figures that up to that period there was no statistical proof of the alleged increase of insanity. Yet, every day, writers on the subject fall into the fallacy thus clearly pointed out, and therefore those who suggested the subjects for debate in the "Psychology" section of the British Medical Association were justified in including "The Alleged Increase of Insanity."

from 1766 to 1844 \* the death-rate was no less than  $12 \cdot 12$  per cent. of the average number resident. Now if the same deathrate had been maintained from the year 1859 to 1885 (dates to which I shall have frequent occasion to refer), the number of deaths would have been 128,796 during these years, instead of 105,813 (the number who actually died), making a difference of 22,983 † during the 27 years, and causing, of course, a vast accumulation, which without this explanation looks like an increase of lunacy; or to put the matter in as practical a form as possible, more than 20,000 patients have required asylum accommodation who but for the diminished death-rate would have gone to where maniacs cease from troubling, and where the weary melancholiacs be at rest.

The erroneous conclusions arising from this source of fallacy are, it is obvious, very serious if we are comparing the existing number of lunatics at different periods, but are avoided when we confine ourselves to the occurring cases as stated at the commencement of the paper.

Then, again, with regard to discharges on recovery, there might be at different periods a higher or lower percentage of recoveries to the admissions. In England and Wales, however, during the period covered by any figures we are able to obtain as at all reliable, it does not appear that this would be a disturbing element. Had the recovery rate been raised, as everybody naturally expected it would be, by the progress of medical science, we should have had to take this into account in its bearing upon the numbers of the insane at different times. It is difficult to say what the real truth is, because it is only since 1870 that lunacy statistics allow of our calculating recoveries on the admissions exclusive of transfers. If the calculation is made upon the total number of admissions (i.e., inclusive of transfers and readmissions), we find that during the last five years the recovery rate is only slightly in excess of that during the five years 1859-1863.

Our comparison, therefore, of existing insanity at different periods would not be seriously affected by what might have

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<sup>\*</sup> This period is a convenient one to take, as the materials for the calculation are found in Dr. Thurnam's "Statistics of Insanity" published in that year. † It is not overlooked that this number must be corrected by the subtraction

<sup>+</sup> It is not overlooked that this number must be corrected by the subtraction of the number of deaths on the increased number resident consequent on the lower mortality. When, however, this correction is made there would be in round numbers at least 20,000.

<sup>‡</sup> On the other hand, if the calculation be made upon the average number resident, the recovery rate was higher during the five years 1859-63 than during 1881-85.

been an important disturbing factor in the inquiry. Of course this possible source of fallacy does not come into force when we restrict our statistics to the occurring cases of insanity.

Before dismissing the consideration of the bearing of the recovery rate and the mortality rate upon the present investigation, it should be observed that the comparative duration of residence of patients in asylums during the different periods to be compared, which would be a test of the effect of mere accumulation upon the apparent increase of insanity, cannot be calculated from the Lunacy Blue Books. It is obvious that if the death-rate is reduced and the discharges remain the same, the duration of residence in asylums must be increased. As a matter of fact, in 1873 this was 198 days, while in 1883 it was 213, an increase of 15 days, being at the rate of 7.6 per cent.

Were I addressing a public audience and desirous to convey a popular and indisputable illustration of the necessary effect of accumulation and the part played by a decline in the mortality of the insane in asylums, I should take an example from the income and expenditure of a private individual. None probably would fail to see that if a man with a stationary or even a somewhat lessening income has fewer taxes to pay during the last ten years than he had during the previous decennium, and does not spend more on other items, he will have more sovereigns on hand than he had at the beginning of the term, although he has not made a penny more than formerly. The tax collector, who may serve to represent "the pale messenger," has not claimed so many pounds as before, while in our asylums he has not claimed so many victims as in former years. The illustration is certainly very homely, but we may perhaps use it for the public benefit when our dry statistical tables fail to reach their understanding.

Here it is not necessary to do more than point out that the admissions into asylums in different years have frequently varied with the accommodation provided. An asylum has been erected in consequence of the pressure brought to bear upon the county justices, and paupers previously in workhouses and boarded out are placed in it. They figure as certified admissions; they are not, strictly speaking, "transfers." But a new asylum does not operate only in changing the location of patients; it leads to the recognition and care of a great many who are at large, and thus the total number of lunatics returned becomes augmented. An apparent increase in lunacy in 1883 is in this way accounted for, as pointed out in the annual report of the Commissioners, by the additional provision for

pauper lunatics in Lancashire, and not by any real increase of insanity.

Before attempting to apply what, as I have said, is the only satisfactory mode of arriving at the truth as to the alleged increase of insanity, I will give the statistical results of other and more usual methods, premising that official returns do not allow us to go back farther than the year 1859, and that very unfortunately for our object we cannot go further back than 1869 for the returns of admissions exclusive of transfers, and not further back than 1878 for figures required to apply the only test of any practical value.

1st.-Let us take the total number of lunatics and idiots in England and Wales on the 1st of January, 1859, and compare them with the corresponding figures of January 1st, 1885 (Table A.) In these numbers are included the insane inmates of workhouses. At the former date there were 36,762 patients, and at the latter 79,704, being an increase of 42,942. It seems an alarming statement, yet one which is strictly true, that for every 100 lunatics and idiots in 1859, there are now 218 when absolute numbers are taken. And even when we take into account the increase in the population, we find the rise to be from 18.674 per 10,000 to 28.984, or 54 per cent.; in other words, from 100 lunatics and idiots in 1859 to 154 in 1885. It is not surprising that the public mind is much exercised when the newspapers in their comments upon the last Report of the Commissioners assert that lunacy has increased, after due allowance for population, more than 50 per cent. Again, if we take a block of the early years, namely, 1861-65, and the last five years 1881-85 inclusive (in order to avoid the misleading effect of comparing merely a single year with another), and compare these two quinquennia, we find the rise to be from 20.809 to 28.605 per 10,000, showing an increase in the later over the earlier period of 37.5 per cent. For the purpose of a subsequent comparison, I must add that if we take the block of years covering 1871-75, and the last five years 1881-85, we find the rise to be 11.06 per cent.; that is to say, for every 100 lunatics or idiots in detention during 1871-75, there was an average of 111 under detention during 1881-85. Thus since 1859 the increase in patients has been steadily maintained, although at a declining rate. This is also true of the period between 1878 and 1885, a term of years to which I shall have occasion to make special reference shortly. That this may be due to nothing more serious than the natural effect of accumulation and a lower death-rate will appear from what I have

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already said, and will be confirmed when we come to the statistics of occurring insanity, and thus get rid of the fallacy of regarding the rise in existing lunacy only.

2nd.-The next grouping of figures (Table B) shows the total number of certified lunatics and idiots (omitting, therefore, workhouses) on the 1st January, 1859, to have been 23,001, while on January 1st, 1885, there were 56,525, being an increase of 33,524, or 141 per cent. When allowance is made for the increase in population, the proportion to 10,000 living in 1859 was 11.684, while in 1885 it was 20.555, a rise of 76 per cent. Taking again blocks of years as before, namely, 1861-65 and 1881-85, we find the average proportion of insane per 10,000 of the population in the former period to be 13.287, and in the latter 19.921, an increase of 6.634. This shows the rise in certified insane to have been 50 per cent. within a fraction. If we take the quinquennium 1871-75, and the last five years 1881-85, the rise is only 19.30 per cent. The increase is steadily maintained throughout, as in the previous table. To this, of course, the same explanation applies as that I have referred to in the previous table. The higher percentages, as compared with the previous table, are due to the relative increase of certified over uncertified lunatics (*i.e.*, asylums over workhouses).

3rd.-Next we take the more important returns of admissions of patients during the same term of years (Table C). These are restricted to the admissions of patients into asylums, because unfortunately no statistics are available in regard to admissions of lunatics into workhouses. In 1859 these admissions of certified patients amounted to 9,310, while in 1885 they had risen to 14,774. Corrected for population, these figures show a proportion of admissions per 10,000 of 4.729 in 1859, and 5.373 in 1885—being an increased proportion of 14.4 per cent. If we take 1869 and 1885, the rise is 6.6 per cent. The rise is greater if we take the same blocks of years as before (1861-65 and 1881-85). We then have 4.578 admissions per 10,000 population in the early, and 5.884 per 10,000 in the later block, being a ratio of increase of 28.5 per cent. If, lastly, we take the quinquennium 1871-75, and that of 1881-85, the rise is not more than 5.86 per cent. The increase is a fairly steady one up to 1878, after which the rate was almost stationary; indeed, for the last quinquennium, 1881-85, it was lower than for the preceding one.

4th.—We next eliminate the transfers in order to approach more nearly to actually occurring cases of insanity (Table D). This, however, we can do only since the year 1869, as prior to that year the "Lunacy Blue Book" failed to discriminate between transfer and non-transfer admissions. Now in 1869 there were 10,617 admissions of patients into asylums, excluding transfers, and in 1885 there were 13,557, the proportion per 10,000 of the estimated population being 4.777 in 1869, while in 1885 it was 4.930, an increase of only 3.2 per cent. The corresponding increase, before eliminating transfers, was, as we have seen in the last table (C), 6.6 per cent. Taking blocks of years, the proportion per 10,000 of the population during the five years 1871-75 was 4.941, and during the last quinquennium it rose to 5.249, or 6.23 per cent., rather higher than when transfers were included in the calculation.\*

5th.—Having now eliminated the transfers from the admissions, there remain the readmissions. I think that it is interesting to retain these at first, for this reason. There may be, it must be remembered, causes of insanity present in a community during a given period which were absent during another, and these, it is obvious, will operate upon persons who have once been insane as well as those who have never been so. If the question, therefore, were: Are certain causes of mental disease in greater force at one period than another? I think we ought to retain the readmissions, for were we to exclude relapses thus occasioned, we should receive an imperfect impression of the force of the exciting causes of insanity in operation. But as, on the other hand, the relapsed cases do not add to the number of persons who become insane, and as this is our present object of inquiry, I confine myself to the first admissions. As a result of deducting the readmissions as well as the transfers, we find the ratio of admissions to 10,000 of the population was 4.134 in 1869, and 4.210 in 1885, a difference of 1.84 per cent. Or taking three blocks of five years each, since 1870, we find that during the first, namely, 1871-75 inclusive, the ratio of admissions, minus transfers and readmissions, to 10,000 of the population, was 4.294; during the second quinquennium, 4.613; and during the third, 4.525. So that the rise of first admissions between 1880-85 over those between 1870-75 (inclusive) was not as much as 1

\* The proportion of transfers to total numbers admitted was 11.1 per cent. in the quinquennium 1871-75; it rose to 11.9 per cent. in 1876-80; but in 1881-85 it fell to 10.8 per cent.; lower than in either of the two preceding quinquennia. The chief reason for deducting transfers is to get rid of a variable quantity, which is liable to affect the result, sometimes in one direction, sometimes in another, as actually occurs in the illustrations above given.

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patient in the 10,000 (only one in 50,000), while, as compared with the second quinquennium, there was an actual decrease.

6th.-Having thus cleared the ground, I now arrive at the last and the only satisfactory test of the alleged increase of insanity, namely, the proportion of first attacks to the population during different periods. I need hardly say that first admissions, which we have already given, are not identical with first attacks, for obviously a patient may be admitted for the first time into an asylum and yet not be labouring under his first attack. Turning now to the Annual Reports of the Lunacy Commissioners, we notice that the earliest year for which returns of first attacks were obtained was 1876, but as there appears to have been something exceptional in that year, and as there is no similar return for 1877, I commence with 1878. These returns have been made regularly since then, so that we have the information we require for eight years. Congenital idiots are, it should be stated, excluded. It is, of course, deeply to be regretted that these returns do not go further back, so that we might include the same area as that over which we have travelled in the previous tables. But short as the time is, these returns are really the most important that can be procured in the attempt to solve the question upon which we are engaged, and as each year passes the value of such returns will increase. The table now given (F) is, I am glad to say, the most complete which has been published. Now the absolute number of first attacks in 1878 was 8,854 in England and Wales, while in 1885 it was 8,527. The rise was not quite uniform, and in 1880 it was actually less than in 1878, being during that year only 8,294, while in 1884 it was 9,054. When we allow for increase of population, we find that in 1878 the number of first attacks per 10,000 living was 3.337; in 1879 it was somewhat higher (3.345); in 1880 it was distinctly lower (3.225); in 1881 it slightly rose, namely, to 3.252, but did not reach the number for 1878; in 1882 it was almost identical (3.257); in 1883 there was a considerable rise (though still only a fraction), namely, to 3.435 (one-tenth of a patient in 10,000 living); while in 1884 the figure fell again to precisely what it was in 1878; and, lastly, during 1885 it fell below this, namely to 3.101. (See Chart of First Attacks.)\*

Hence, so far as statistics teach us anything, they fail to

\* It will be understood that the lowest line in the Chart is not at zero, but commences with what happens to be the lowest ratio per 10,000 in the term of years 1878-85. Had the Chart been graduated down to zero, the height of the top of the curve above the base-line would be nearly three feet.



TO ILLUSTRATE DE TUKE'S PAPER.

show the slightest increase in occurring insanity in this country since January 1st, 1878, when we apply the only reliable test to the investigation of the problem under discussion.

I should add that the proportion of first attacks to not-first attacks has, during these eight years, been remarkably uniform, so that I think we may regard the returns now given as substantially correct.

These figures must be regarded as very satisfactory as contrasted with the prevalent opinion \* that mental disorders have greatly increased during recent years. It would have been still more satisfactory had there been a marked decrease at a time when we boast of our added means of lessening the forces of evil, whether moral or physical; when education is expected to do so much for the race, and when we are told that to teach physiology to boys and girls will induce them to obey the laws of health. But, alas, too many of their teachers, and especially University examiners, do all in their power to tempt students to break these laws, and to impair the power of their brains.<sup>†</sup>

The question, therefore, presents itself, whether the present age may not be blowing hot and cold; whether it may not wage successful war against the causes of insanity in one direction, but at the same time favour their growth in another ? May not one phase of excitement springing up take the place of another phase which has diminished? May not one form of insanity be less frequent, and another form be more rife? Take, for instance, general paralysis. I do not think it admits of reasonable doubt that it has increased of late years, after abundant allowance is made for its better recognition; but if the frequency of insanity as a whole has undergone little change, it would look as if some form of insanity other than general paralysis has declined. To help to determine this and some other questions arising out of the present inquiry, the Tables of the Medico-Psychological Association will be of great use, provided only that they are accurately prepared in our asylums (a serious proviso) and for a sufficiently long period of time.

There is another question I should wish to raise: Is it not

\* The late President of the Medico-Psychological Association, guided by the number of existing, instead of the occurring cases of lunacy, maintained in his Presidential Address that there was an alarming inorease of insanity. Such a fact would alone be a sufficient justification for reviewing the evidence in favour of this opinion.

† See article in this Journal for April, 1886.

possible that without any actual increase of the insanity which is actually certified, there may be considerably more "borderland" insanity and more of that instability of brain which scarcely reaches even this level? When one considers the number of cases unknown which exhibit more or less psychical trouble, although never included in official records, and therefore altogether outside the statistics I have brought forward, one feels how possible it is that this outer mass may fluctuate from one period to another according to various exciting and changing causes without being recognised in our returns. But how is it possible to estimate this floating unregistered element, and how can one do more than follow general impressions which are so proverbially misleading? Were I guided by my own impressions, I should be disposed to believe in a decided increase of the unstable cerebral commodity of which I have spoken, and I should incline to the belief that more, considerably more, young people of both sexes break down mentally than there did formerly, but I cannot prove it. I should be surprised if the tables of "Age on Admission" into our asylums do not show, when they extend over a sufficiently long period, that more patients are admitted under 20 now than formerly. Dr. Savage and myself have examined the Bethlem Tables with this point in view, but the reliable statistics are too restricted as to the number of years to warrant a decided inference. Dr. Savage's impression is, however, similar to my own.

It is not without significance that the number of suicides in England and Wales has increased in recent years. Comparing the period 1861-65 with 1881-84 (the return for 1885 is not accessible) there is a rise of about 12 per cent. Of those who commit suicide it may be said that, with few exceptions, they are persons with the mind more or less affected, but they are not recognised in the statistics of lunacy we have had before us.

It would, I am satisfied, be a great mistake to conclude from these figures that there is no occasion for disquiet in regard to the conditions of modern life in relation to insanity. It is, I repeat, quite consistent with these statistics to hold that there are influences at work prejudicial to mental health which at a previous period operated with less intensity than they do now. The prevention of insanity loses none of its importance, and all the cautions which the mental hygienist is wont to give to the community ought to be enforced as

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To sum up :---

1st (Table A). Taking the earliest year to which the returns in the Annual Reports of the Lunacy Commissioners extend, namely, 1859, and comparing them with 1885, we find that the total number of lunatics and idiots in England and Wales in 1885 was 118 per cent. in excess of the former, or allowing for increase of population, 54 per cent.

Taking the early block of years, the quinquennium 1861-65, and the last five years, 1881-85, we find an increase of  $37\cdot5$  per cent.

If we take the quinquennium 1871-75 and compare it with 1881-85 we see a rise of 11.06 per cent. during the latter period.

This increase in the number of lunatics and idiots, which is steadily maintained, though at a declining rate, may be explained, mainly, if not altogether, by the effect of accumulation and a lower death-rate.

2nd (Table B). When we take certified patients only, and by that means exclude all workhouse lunatics, we find the rise in the number in detention in 1885 was 141 per cent. as compared with the number in 1859, but allowing for increase of population, it was 76 per cent. Again, taking the blocks of years 1861-65 and 1881-85, the rise was close upon 50 per cent. (49.9).

If we compare the quinquennium 1871-75 with that of 1881-85 the rise is shown to be 19.30.

The increase was thus steadily maintained throughout as in Table A.

3rd (Table C). The rise in admissions of certified patients (allowing for population) has been 28.5 per cent. for the five years 1881-85 over the five years 1861-65, and 5.86 per cent. over the block of years covering 1871-75. This percentage (5.86) is much lower than that obtained for the corresponding periods when the numbers *in detention* and not the admissions are taken.

The increase during the period 1859-85 is fairly steady up to 1878, after which the rate was almost stationary, indeed, the last quinquennium, 1881-85, was lower than that for the preceding one (1876-80).

preceding one (1876-80). 4th (Table D). When transfers are deducted from the admissions, deductions which can only be made since 1869, we find on comparing the quinquennium 1871-75 with that of 1881-85 that the rise is rather higher than in the previous table for the corresponding period, namely, 6.23 (as against 5.86).

As in the previous table, there was a steady increase till the year 1878, after which the rate declined, and the rate in the last quinquennium was somewhat lower than in the preceding one.

5th (Table E). When not only transfers but readmissions are deducted from the admissions, we find the rise between the quinquennia 1871-75 and 1881-85 to be 5.38, which is 14 per cent. less than when only transfers were deducted.

6th (Table F). Taking, lastly, the admissions of patients labouring under first attacks (exclusive of transfers and cases of congenital idiocy) we find that during the last eight years (the only continuous term for which they are procurable) there has been very slight variation indeed, the tendency being on the whole in a downward direction. These figures are very satisfactory so far, as they exhibit no increase in the amount of occurring insanity since the year 1878.

7th. It is, however, necessary to enter a caution against supposing that there may not be an increase of insanity from some causes, although a diminution from other influences. Vigilance is still, therefore, required to check the unfavourable agencies which are at work, it may be, in greater force now than formerly.

There is also a large class of persons unstable of brain, and on the borderland of insanity, about which statistics are altogether silent, and this class may have increased without our being able to actually demonstrate it.\*

<sup>\*</sup> For valuable help in the preparation of this paper I am indebted to Dr. Banks, late assistant medical officer to the York Retreat. The calculations in the tables which I have prepared can be relied on as absolutely correct, having been made by Mr. J. H. Shoveller, General Register Office, Somerset House. Some of these carry on to the present time the statistics the writer gave in his "Insanity in Ancient and Modern Life, with Chapters on its Prevention," Macmillan and Co., 1878. I have also to acknowledge the courtesy of Mr. C. Deans, at the office of the Lanacy Board, Whitehall Place, in supplying me with advance sheets of the recent Report, &c., &c.

Year.	Total Number of Lunatics on 1st Jan.	Proportion to 10,000 of the Estimated Population.	Prop the	portion per 10,000 of Population in various groups of years.	Ra tł	tes of increase in the several periods (per cent.).	Percentage of rise or decline in the rate of increase in the several periods.
1859	36,762	18.674	-				
1860	38,058	19.122			1		
1861	39,647	19.706	רו				
1862	41,129	20.190	11				
1863	43,118	20.905	}	20.809	6		
1864	44,795	21.450					
1865	45,950	21.731	U I		I L	11.019	· ·
1866	47,648	$22 \cdot 255$	)		l ſ	11.910	
1867	49,086	22.644					<b>1</b>
1868	51,000	23.236	}	<b>23·289</b>	K –		}
1869	53,177	<b>23</b> ·928					li
1870	54,713	24.315	J		H.	10.509	J
1871	56,755	24 911	٦.		11	10 999	)
1872	58,640	25.421	11				
1873	60,296	25.815	}	25.756	ĸ		}45•171
1874	62,027	26.229					
1875	63,793	26·642	J		IL.	5.909	U U
1876	64,916	26·776	n i		11	0 000	h
1877	66,636	<b>26</b> ·979	11				
1878	68,538	27.379	1	27.252	ĸ		> 14.084
1879	69,885	27.545					
1880	71,191	27.685	IJ		IL.	4.065	J
1881	73,113	28.054	٦ (		ſ	<b>T 200</b>	
1882	74,842	28.334	11				
1883	76,765	28675	12	28.605	ر	•	
1884	78,528	28.942					
1885	79,704	28.984	J			1	
1886	80,156	<b>28</b> 760	-				

TABLE A.—Showing the Total Number of Lunatics and Idiots in England and Wales on Jan. 1st, 1859, and subsequent years, and the Ratio of Increase, allowing for Population.

x

Year.	Total Number of Cer- tified Lunatics on 1st January.	Proportion to 10,000 of the Estimated Population.	Proportion per 10,000 of the Population in various groups of years.	Rates of increase in the several periods (per cent.).	Percentage of rise or decline in the rate of increase in the several periods.
1859 1860 1861 1862 1863 1864 1865 1866 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885	28,001 23,859 24,989 26,369 27,505 28,544 29,637 31,095 32,141 33,487 35,005 36,269 37,266 37,592 38,883 40,170 41,558 42,880 44,286 46,059 47,650 48,747 50,173 51,753 53,180 55,072 56,525	11.684 $11.988$ $12.420$ $12.944$ $13.335$ $13.668$ $14.016$ $14.524$ $14.827$ $15.257$ $15.751$ $16.119$ $16.357$ $16.296$ $16.296$ $16.220$ $16.986$ $17.355$ $17.687$ $17.980$ $18.399$ $18.781$ $18.957$ $19.252$ $19.593$ $19.865$ $20.297$ $20.555$	<pre>     13·287     15·306     16·698     18·342     19·921</pre>	<pre>     15·195     9·094     9·845     8·609 </pre>	$ \left. \begin{array}{c} -40.152 \\ +8.258 \\ -11.224 \end{array} \right\} $

TABLE B.—Showing the Number of Certified Lunatics and Idiots in Lunatic Asylums or Confined as Single Patients in England and Wales, during the 27 years 1859-85, and the Ratio of Increase, allowing for Population.

Year.	Admissions of Certified Lunatics during each Year.	Proportion to 10,000 of the Estimated Population.	Proportion per 10,000 of the Population in various Groups of Years.	Rates of Increase or Decrease in the several Periods (per cent.).	Percentage of rise or decline in the rate of increase in the several Periods.
1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1877 1877 1877 1877 1877 1878 1879 1880 1881 1882 1883 1884 1885	$\begin{array}{c} 9,310\\ 9,512\\ 9,329\\ 9,078\\ 8,914\\ 9,473\\ 10,424\\ 10,051\\ 10,631\\ 11,213\\ 11,194\\ 11,620\\ 12,573\\ 12,176\\ 12,773\\ 13,229\\ 14,317\\ 14,386\\ 15,963\\ 15,102\\ 14,867\\ 15,240\\ 14,669\\ 15,665\\ 16,000\\ 17,669\\ 14,774\\ \end{array}$	4.729 4.779 4.637 4.456 4.322 4.536 4.930 4.695 4.904 5.109 5.037 5.164 5.519 5.278 5.469 5.594 5.934 6.463 6.033 5.860 5.927 5.629 5.931 5.977 6.512 5.373	4·578 4·984 5·558 6·036 5·884	$ \left. \begin{array}{c} + 8.869 \\ + 11.517 \\ + 8.600 \\ - 2.519 \end{array} \right. $	+ 12·986 25·328

TABLE C.—Showing the Admissions of Certified Lunatics and Idiots into Asylums or Single Houses in<br/>England and Wales during the 27 years 1859-85, allowing for population.

Year.	Admissions of	Proportion per 10,000	Proportion per 10,000	Rates of Increase or	Percentage of <i>rise</i> or <i>decline</i>
	Certified Lunatics, less	of the Estimated	the Population in vari	Decrease in the severa	in the Rate of Increase in
	Transfers.	Population,	Groups of Years.	Periods (per cent.).	the several Periods.
1869 1870 1871 1872 1873 1874 1875 1876 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885	$\begin{array}{c} 10,617\\ 10,399\\ 10,758\\ 10,820\\ 11,441\\ 12,146\\ 12,677\\ 13,082\\ 13,163\\ 13,570\\ 13,291\\ 13,451\\ 13,693\\ 13,693\\ 13,693\\ 13,629\\ 14,681\\ 14,512\\ 13,557\\ \end{array}$	$\begin{array}{r} 4.777\\ 4.622\\ 4.721\\ 4.685\\ 4.888\\ 5.120\\ 5.273\\ 5.369\\ 5.329\\ 5.329\\ 5.421\\ 5.239\\ 5.231\\ 5.231\\ 5.254\\ 5.236\\ 5.484\\ 5.349\\ 4.930\end{array}$	} 4·941 5·317 } 5·249	<pre>} + 7.610 } - 1.279</pre>	}

TABLE	D.—Showing	the Admission	s of Certified	Lunatics	and Idiots.	less Transf	ers into As <del>v</del> lums	and
	Single Houses,	, in England and	Wales during	the 17 ve	ars 1869-85.	allowing for	Population	
				,		, 4110 11119 101	r opulation.	

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Year.	Admissions of Certi- fied Lunatics, <i>less</i> Transfers and Re- admissions.	Proportion per 10,000 of the Estimated Population.	Proportion per 10,000 of the Population in various Groups of Years.	Rates of Increase or Decrease in the several Periods (per cent.).	Percentage of <i>rise</i> or <i>de-</i> <i>cline</i> in the Rate of Increase in the several Periods.
1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885	$\begin{array}{c} 9,188\\ 9,027\\ 9,267\\ 9,412\\ 9,942\\ 10,619\\ 11,023\\ 11,404\\ 11,428\\ 11,844\\ 11,480\\ 11,596\\ 11,821\\ 11,871\\ 12,767\\ 12,539\\ 11,578\\ \end{array}$	$\begin{array}{r} 4.134\\ 4.012\\ 4.067\\ 4.075\\ 4.247\\ 4.247\\ 4.476\\ 4.585\\ 4.680\\ 4.627\\ 4.731\\ 4.525\\ 4.570\\ 4.536\\ 4.494\\ 4.769\\ 4.494\\ 4.769\\ 4.621\\ 4.210\end{array}$	<pre>} 4·294 } 4·618 } 4·525</pre>	} + 7·429 } -1·908	}

TABL	E E.—Showing the Admissions of Certified Lunatics and Idiots, less Transfers and Readmissions, in Asylums and Single Houses in England and Wales during the 17 years 1869-85, allowing for Population.	to

TABLE F.—Showing the Admissions of Patients labouring under First Attacks (exclusive of Transfers           Cases of Congenital Idiocy) into Asylums and Single Houses during the eight years 1878-85.	and
allowing for Population.	

I 66.r.		First Attacks per 10,000	Admissions (including Readmissions).		
	First Attacks.	living.	Numbers.	Proportion per 10,000 living	
1878 1879 1880 1881 1882 1883 1884 1885	8,354 8,487 8,294 8,475 8,602 9,185 9,054 8,527	3:337 3:345 3:225 3:252 3:257 3:435 3:337 3:101	12,582 12,467 12,478 12,676 12,901 13,623 13,548 12,497	$5 \cdot 026$ $4 \cdot 914$ $4 \cdot 853$ $4 \cdot 864$ $4 \cdot 864$ $5 \cdot 089$ $4 \cdot 993$ $4 \cdot 993$	