*Insanity is Decreasing: A Statistical Item Suggesting that.* By T. A. CHAPMAN, M.D., County Asylum, Hereford.

It has always appeared to me that the various figures that are supposed to indicate an increase of insanity are not only inconclusive, but do not really show anything of the sort, and that there are even some vague and indefinite indications that there is really a decrease in the annual production of insanity. Some years ago I tried to find some figures amongst the various statistics we possess that would throw some light on this point, but practically without success. It seemed that such increase in the annual admissions to asylums as was beyond that due to increase of population was more than accounted for by slighter (*i.e.*, less demonstrative) cases of acute insanity and various forms of chronic, senile, and degenerative disorders being yearly sent to asylums more freely, but I could get no figures proving this. A somewhat suggestive fact in this direction is the often-made remark that acute mania is less abundant, melancholia more so than formerly; acute mania of an active (*i.e.*, demonstrative) type was always sent to asylums pretty well up to its actual amount. Melancholia used to be very largely left at home or treated in workhouses. But where shall we find such facts embodied in figures. Acute mania of our statistics includes the milder as well as the more demonstrative cases, and so shows an increase just as the total figures do. There are, then, so far as I know, no figures showing the real annual occurrence of insanity that are comparable year by year. There are, indeed, no figures that give the actual annual production of insanity apart from chronic and recurrent cases. There are no figures of any definite form and intensity of acute insanity. True the Commissioners' Reports give us statistics of general paralysis, but this is precisely the one form of acute insanity that is not an insanity; that is, it belongs to a different natural order of diseases from the other diseases we mean by insanity. I have elsewhere stated that this always appears clearly on a comparison of the statistics of general paralysis with those of insanity proper, and the same opinion has been expressed by authorities who have approached the matter from a pathological and therapeutical standpoint. Its remarkable geographical distribution and its specially urban character

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equally show it to be different from the other insanities, which have no similar features. That this disease is increasing owing to the more and more urban character of our population affords no ground for assuming a similar progress in the true insanities. The annual recoveries must, however, be largely dependent on, and proportional to, the annually occurring cases, but will, of course, so regarded, be vitiated by the increase of population and by the increased admissions of milder forms of insanity and by the recoveries of recurrent cases.

Still, the former will be, roughly, an increment of fairly uniform proportion year by year, and the latter will also be an addition increasing year by year, not dissimilarly to the underlying figure we want to know.

We should have, then, in the annual recoveries a figure that would contain the one we want, but would contain it so overlaid by other additions that its actual amount would be altogether unascertainable. But supposing our figure to fluctuate year by year, then it seems tolerably certain that the annual number of recoveries will similarly fluctuate, though these fluctuations may be somewhat obscured by fluctuation of the added figures due to other causes, *i.e.*, in some years there may have been a greater or lesser tendency to increase the proportion of milder forms of insanity that are added to and obscure our figures. The annual admissions would certainly (and do) fluctuate in a similar manner, but would be more overlaid by fluctuations in chronic cases. The admissions in Class I. of the seventh Table of the Tables of the Association would probably be an even better figure than the recoveries, but they are not available. They are not given by all asylums, and were less frequently given some years back; so that the question of the labour of collating them does not arise.

We come back, then, to the annual recoveries as a not very accurate, but still probably useful series of figures, showing not the actual figures of annually occurring insanity, but some of its fluctuations. Can we make any use of them in the direction of showing a possible increase or decrease of the main figure itself?

It has always seemed to me that though we are provided with lists of causes of insanity, divided into predisposing, exciting, and so forth, that these are all (if we except heredity), and especially those that are the most effective, precisely the causes of most other forms of disease, from



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which it would follow that the sanitary progress of the last quarter of a century ought to have diminished the production of insanity, as of many other diseases, and that therefore fluctuation in the annual production of insanity, the only available figure, as we have just seen, ought to be parallel to the fluctuation in the general health of the community. The annual death-rate as returned by the Registrar-General is acknowledged to be a good measure of this.

I compare, then, the annual recoveries in all asylums, etc., in England and Wales for the past thirty years, and the annual death-rate for England and Wales during the same period.

The former is a gradually increasing figure, the latter a gradually diminishing one. To compare them I have made them parallel in the annexed diagram by laying off the abscissæ on opposed diagonal lines. On making this comparison parallel fluctuations are very apparent—sometimes remarkably and strikingly evident, at other points less so—but the parallelism fails less frequently and to a smaller degree than the imperfection inherent in the figures would have led us to expect.

It is especially remarkable that since I first put these figures together some years ago, the epidemics of influenza of recent years have produced a rise in both the recoveries from insanity and the general death-rate that is, perhaps, the most pronounced of the series.

Any cause influencing the general health of the community will produce its effects on both series of figures, after a definite interval, and probably in all cases the death-rate will be increased at an earlier date than the number of recoveries from insanity.

This will certainly, at any rate, be the case when influenza is the cause in question. It produces a very immediate effect on the death-rate, but the insanity follows at some interval, and the recovery at a still longer one.

This probably explains why the extraordinary fall in the death-rate in 1894 is not accompanied by a corresponding fall in the recoveries, but I venture to predict that this fall will be reflected in the recovery curve, in the figures for 1895, for which the actual number of recoveries will probably be as low as 6,700—a prediction that may be falsified should 1895 itself have any unusual influence on the figures.

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Annual Death-rates for England and Wales, and Total Number of Recoveries recorded in all asylums for England and Wales for the years 1865 to 1894 inclusive.

| Years. | Death-rate. | Lunacy Recoveries. |
|---|---|---|
| 1865 ..... | 23·2 | 3,290 |
| 1866 ..... | 23·4 | 3,439 |
| 1867 ..... | 21·7 | 3,581 |
| 1868 ..... | 21·9 | 3,707 |
| 1869 ..... | 22·3 | 3,801 |
| 1870 ..... | 22·9 | 3,968 |
| 1871 ..... | 22·6 | 4,151 |
| 1872 ..... | 21·3 | 4,246 |
| 1873 ..... | 21·1 | 4,144 |
| 1874 ..... | 22·3 | 4,828 |
| 1875 ..... | 22·8 | 4,909 |
| 1876 ..... | 20·9 | 5,106 |
| 1877 ..... | 20·3 | 4,842 |
| 1878 ..... | 21.6 | 5,332 |
| 1879 ..... | 20·7 | 5,310 |
| 1880 ..... | 20·5 | 5,338 |
| 1881 ..... | 18·9 | 5,366 |
| 1882 ..... | 19·6 | 5,372 |
| 1883 ..... | 19·6 | 5,574 |
| 1884 ..... | 19·7 | 5,775 |
| 1885 ..... | 19·2 | 5,610 |
| 1886 ..... | 19·5 | 5,587 |
| 1887 ..... | 19·1 | 5,513 |
| 1888 ..... | 18·1 | 5,721 |
| 1889 ..... | 18·2 | 5,841 |
| 1890 ..... | 19·5 | 6,250 |
| 1891 ..... | 20·2 | 6,846 |
| 1892 ..... | 19·0 | 6,670 |
| 1893 ..... | 19·2 | 6,853 |
| 1894 ..... | 16·6 | 7,130 |

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On examining this diagram in more detail, we note in the first place, as having the most direct bearing on our present subject, that there are high points on both lines at these dates:—

| | | | | | | |
|---|---|---|---|---|---|---|
| Death-rates ... | 1870-71 ... | 1874-75 ... | 1878 ... | 1884 ... | 1890-91 ... | 1893 |
| Recoveries ... | 1871-72 ... | 1874-75-76 ... | 1878 ... | 1884 ... | 1890-91 ... | 1893 |

Low points on both series in

| | | | | | |
|---|---|---|---|---|---|
| Death-rates ... | 1872-73 ... | 1876-77 ... | 1881 ... | 1887-88-89 ... | 1892 |
| Recoveries ... | 1873 ... | 1877 ... | 1882 ... | 1887-88-89 ... | 1892 |

The only position in which there is any serious deviation from this rule of correspondence is that the fall in the death-rate in 1867 has no corresponding movement in the recoveries; there is also a want of correspondence in the movements between 1884 and 1887, but this is really an evidence of agreement rather than a discrepancy when we note that a decline in the death-rate lags behind when we come to the recoveries, so that the zig-zag here in the death-rate would be apt to produce a smoother line in the recoveries.

There is another large want of correspondence in the two series of figures, which illustrates the difficulties of many statistical inquiries in lunacy matters. This is the large space between the two lines from 1875 to 1886. This does not override the fluctuations, but it prevents a close correspondence in their amplitudes. I think there is little doubt that the 4s. grant is here responsible for the increase in the recoveries, but I do not think the approach of the figures in 1886 means that its effect is exhausted by that time. More probably it means that in making the two series of figures parallel, I have rather unduly depressed this forward end of the recovery curve.

There is thus so great a correspondence between the recovery curve and that of the general death-rate, in general form, as to give a strong confirmation to the hypothesis that led us to search for it, viz., that if we could get it by itself, unalloyed by annually increasing additions of milder and chronic cases, we should find the figure representing the annual production of insanity, when corrected for increase of population, to be a figure not only fluctuating, but also diminishing, *pari passu* with the annual death-rate.

In the period under record, the death-rate has fallen from 23·4 per 1,000 to 16·6, or about 30 per cent.

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I entertain no doubt, though I hardly expect to carry with me those who have not paid more or less continuous attention to various sides of lunacy statistics, that there has been a parallel, if not so great, diminution in the actual production of insanity annually, and I doubt very much whether other causes have in any material degree counterbalanced this; if they have, it remains true that a large diminution has been produced by sanitary progress, without which these other causes, if they exist, would have been still more effective.

I would express my conclusion most definitely, perhaps, if put in this form. The average man is now less liable to insanity than he was 30 years ago to some degree, not exceeding 30 per cent. He is, however, more liable to be sent to an asylum, because he will now be sent for reasons that would not have led to that result 30 years ago.

I do not claim that such decrease of insanity is actually proved by these figures, still less that it has occurred to the extent mentioned, but I believe I have shown that there is a powerful force acting in that direction, and that it is producing its due effect, which sounds very much like the same thing.

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*On Recent Proposals Regarding Habitual Drunkards and other Offenders.* By A. WOOD RENTON, Barrister-at-Law, and D. YELLOWLEES, M.D.

## By MR. WOOD RENTON.

### *Viewed from the Legal Standpoint.*

Within the last two years no less than three Parliamentary Reports, dealing with the problems presented by the familiar phenomena of inebriety and recidivism, have been published,* and a measure † designed, and, to a large extent, calculated to carry the main recommendations embodied in these documents into effect, has been read a second time in the House of Lords, under the pilotage of the then head of English legal administration. These facts show that public opinion has at length been thoroughly

* *Cf.* "Report of Departmental Committee on Habitual Offenders, Inebriates, etc., (Scotland)," 1895, c. 7,753. "Minutes of Evidence," 1895, c. 7,753-1. "Report of Inebriates (Departmental) Committee," 1893, c. 7,008. "Minutes of Evidence," 1893, c. 7,008-1. "Prisons (Departmental) Committee," 1893, c. 7,702.

† Lord Herschell's Inebriates Bill, 1895, P.P. 122.

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