

Intercurrent disease of every kind, and especially bronchitis, which taxes the heart dreadfully, is attended with more than ordinary danger, and special attention must be paid to the heart, and measures taken to sustain it, or the patient will surely die. Finally, every case is a subtle problem to be solved; whether it is in that stage that recovery or repair is possible, or in that more advanced condition where treatment can only be regarded as a means of procuring more perfect euthanasia. When, however, the tricuspid becomes obviously affected, whether early on in the case or after a long period, the case passes quickly into the last category. Here no means of acting on the heart itself can do much, and that little only so long as the veins will or can sustain the pressure thus increased. Relief of the venous congestion, by acting on the various emunctories, is all that we can fairly hope for here; and whatever measures be adopted, it is not for long. Whatever hopes of prolonged life had previously existed must be given up, when the tricuspid lesion becomes marked; and from the last division of treatment alone can anything almost be expected.

ARTICLE III.—*On the Relative Weight of the Brain in the Sane and Insane.* By WILLIAM G. BALFOUR, L.R.C.S.E., Assistant Medical Officer, Montrose Royal Asylum.

In the *Edinburgh Medical Journal* for April 1843 and September 1846, Drs Reid and Peacock published a series of observations on the weight of the brain in the sane; in 1854 Dr Skae, in an appendix to his annual report, gives tables showing the weight of the brain in 199 persons who died insane in the Edinburgh Asylum—98 of the weighings being of male and 101 being of female brains; but by far the most elaborate paper on the subject is that by Dr Thurnam, in the *Journal of Mental Science* for April 1866. Dr Thurnam has, in the paper written by him, collected all the information which up to that time had been published on the weight of the brain in the sane and insane. The following observations and tables are, by permission of Dr Howden, constructed from the weighings of the brain of 200 persons who died insane in the Montrose Asylum, and include, in some instances, the tables of Drs Reid, Peacock, Skae, and Thurnam.

Of the 200 brains weighed in the Montrose Asylum, 100 are men and 100 women. Many of them have been made under my own observation, and I believe them to be as far as possible accurate. In all of them the ventricles were opened, the cerebellum separated from the cerebrum, and the brain sliced previous to its being weighed, so that most of the serous effusion was allowed to drain away. The encephalon was first weighed, then the cerebellum, pons, and medulla, and the weight of the cerebrum calculated as the dif-

ference between them. The weights used are avoirdupois. When mention is made of the cerebellum, it is to be understood as including the pons varolii and medulla oblongata.

Different averages have been given by different observers as the weight of the sane brain—it having been variously stated as 47 oz. 8 dr., 49 oz., 49 oz. 14 dr., 50 oz. $3\frac{1}{2}$ dr., for males; and 43 oz. 1 dr., 44 oz. 5 dr., 44 oz. $8\frac{1}{2}$ dr., for females. In the last edition of Quain's "Anatomy" the average weight of the male encephalon is stated as being 50 oz. $3\frac{1}{2}$ dr., and that of the female as 44 oz. $8\frac{1}{2}$ dr. This is the average that is used in the following tables.

In Table I. the average weight of the sane encephalon is shown, and also the weight of the encephalon in the insane, as observed in the asylums at Somerset, Wilts, York, Edinburgh, and Montrose. The difference between the weight of the male and female brain in both classes is also stated.

TABLE I.—Average Brain-Weights of Sane and Insane compared, and difference between Males and Females.

	MALES.		FEMALES.		Difference.	
	oz.	dr.	oz.	dr.	oz.	dr.
Encephalon.—Sane,	50	$3\frac{1}{2}$	44	$8\frac{1}{2}$	5	11
" Insane—Somerset, .	46	6	43	2	3	4
" " Wilts, . . .	46	3	41	1	5	2
" " York, . . .	48	7	43	1	5	6
" " Edinburgh, .	50	2	44	0	6	2
" " Montrose, .	48	4	43	8	4	12

The averages given have been calculated from all ages, but necessarily contain but few weighings previous to the twentieth year, as the number of people who die in asylums before they have reached the twentieth year is small. From a subsequent table it will, however, be seen that the general averages are but little affected by the weights in the very young and the very old as far as the insane are concerned. On examining Table I. it will be noticed that the averages amongst the males from Somerset and Wilts Asylums approach one another very closely; those from York and Montrose Asylums are also almost the same; and those from Edinburgh are only 1 dr. less than the sane. The female averages are closest to one another, as follow:—The sane and those from the Edinburgh Asylum, the insane from Somerset and York Asylums, and the insane from Wilts and Montrose Asylums. The high average furnished by the males of the Edinburgh Asylum may possibly be accounted for by the fact that the general average has been calculated from the averages in the decennial periods instead of from the whole weighings; and when the table published by Dr Skae is examined, it will be seen that the average given for the decennial period between 70 and 80 is 57 oz. 8 dr., an average exceeding by 7 oz. the highest average in the other periods. It will also be noticed that only one brain was weighed by Dr Skae in the decen-

nial period between 70 and 80 years. If this high average is excluded from Dr Skae's table, and that for the same period in the Montrose Asylum substituted, the general average for males who have died in the Edinburgh Asylum will be 48 oz. 11 dr., instead of 50 oz. 2 dr., and it will thus be nearly the same as the averages from York and Montrose Asylums. The smallness of the averages from Wilts and Somerset as contrasted with those from York, Edinburgh and Montrose Asylums, I am unable to account for, having no means of examining the data on which they are founded.

From Table I. the following conclusions are drawn:—

- 1st, That, as among the sane so amongst the insane, the brain of the male is heavier than that of the female.
2d, That the brains of the sane are, in both the sexes, heavier than the brains of the insane.

In Table II. the ratio that the female brain-weight bears to the male when taken as 100, is given for the sane and insane.

TABLE II.—*Ratio that the Female Brain-Weight has to the Male in the Sane and Insane.*

	FEMALES.	MALES.
Sane,	88	100
Insane—Somerset, . .	92	100
„ Wilts,	88	100
„ York,	88	100
„ Edinburgh,	87	100
„ Montrose,	90	100

Average ratio from the insane female in all the asylums, as compared with the male—89·4 to 100.

In Table III. the ratio that the weights of insane brains have to sane, is given for both the sexes; 100 being taken to represent the sane in both sexes.

TABLE III.—*Ratio of the Brain-Weight of the Insane to the Sane in both Sexes.*

	MALES.		FEMALES.	
	Insane.	Sane.	Insane.	Sane.
Somerset,	92·1	100	96·8	100
Wilts,	91·97	100	92·2	100
York,	96·45	100	96·7	100
Edinburgh,	96·9	100	98·8	100
Montrose,	96·0	100	97·6	100
Averages of the Insane } from all the Asylums, }	94·6	100	96·3	100

The average weight of the male brain is reckoned as being 10 per cent. greater than that of the female amongst the sane, this difference being accounted for by the smaller stature of the female by some; by others the female is considered to be of less physical

and intellectual powers than the male; the former reason appearing to have more truth than the latter. The same ratio is observed amongst the insane, and nearly in a like proportion.

Table III. shows that when the average weight of the brain of persons dying insane is compared with that of persons dying sane, there is a distinct diminution in that of the insane. This agrees with the observations of Dr Thurnam, but is opposed to a statement of Dr Skae's, who, from his observations, concludes that "the average weight of the encephalon is increased in persons dying insane."

It is possible that Dr Skae may have come to the above conclusion from his having calculated his general average in the manner previously stated, and also from his having started with a low average for the weight of the sane encephalon; for, when the corrections for these two errors are made, there is found to be only 1 per cent. of difference between the weights of the brains of the insane—whether dying in York, Edinburgh, or Montrose Asylums. Dr Thurnam, in trying to explain the anomaly of the increased weight of the insane male brains in the Edinburgh Asylum, considers that more of them are from a higher and better educated class than the insane in the other asylums.

In the next table the average weight of the male cerebrum and cerebellum in the sane and insane is given, along with the increase, in favour of the sane.

TABLE IV.—Average Weight of the Cerebrum and Cerebellum in the Sane and Insane, with the difference between them.

	MALES.		Difference.	
	Cerebrum. oz.	Cerebellum. oz.	Cerebrum. oz.	Cerebellum. oz.
Sane,	43·98	6·23		
Insane—Somerset, .	40·21	6·39	3·77	·16 of insane over sane.
„ Wilts,	39·55	6·75	4·43	·52 „
„ Edinburgh, . .	42·50	6·18	1·48	·5 of sane over insane.
„ Montrose, . . .	42·1	6·15	1·88	·8 „
Average of all the } Insane,	41·9	6·36	2·08	·13 of insane over sane.

Table IV. shows an increase in the weight of the sane cerebrum in the male sex over the insane of 2·08 oz., and an increase in the weight of the cerebellum of the insane over that of the sane of 13 oz., resulting in the greater weight it seems to have in the English weighings, as the Scotch show rather below the average.

Table V. shows the average weight of the cerebrum and cerebellum in the female, including both sane and insane, with the difference between them.

TABLE V.—Average Weight of the Cerebrum and Cerebellum in the Sane and Insane, with the difference between the Sane and Insane.

	FEMALES.			Difference. Cerebellum. oz.
	Cerebrum. oz.	Cerebellum. oz.	Cerebrum. oz.	
Sane,	38·75	5·8		
Insane.—Edinburgh, .	38·31	5·33	·44	·47
„ Montrose, .	38·13	5·37	·62	·43
Average of Insane, .	38·22	5·35	·53	·45

From the preceding table it will be seen that the difference of weight between the cerebrum and cerebellum of sane females and that of insane females is 0·53 for the cerebrum and 0·45 for the cerebellum. When the insane from Edinburgh and Montrose Asylums are classed together this will only bear the one conclusion, that there is but little decrease of weight in the cerebrum and cerebellum amongst insane females generally from the average standard in the sane, although when the insane are taken from individual asylums the difference is more striking.

The proportion that the cerebellum bears to the cerebrum in the sane and insane is as follows:—

	MALES.		FEMALES.	
	Cerebellum.	Cerebrum.	Cerebellum.	Cerebrum.
Sane,	1	to 7	1	to 6·7
Insane,	1	to 6·6	1	to 6·4

It appears thus that the difference of average weight between the sane and insane in both sexes, when calculated from all ages, is dependent upon an increase in the average weight of the cerebrum, and that the weight of the cerebellum is little affected by insanity.

The extreme weights of the human brain for the sane, as observed by Dr Peacock, and also those for the insane who have died in the Montrose Asylum, are given in the next table:—

SANE.				INSANE.			
Heaviest.		Lightest.		Heaviest.		Lightest.	
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
oz. dr.	oz. dr.						
62 12	54 0	34 0	36 12	60 0	53 12	34 0	31 0
Above mean.		Below mean.		Above mean.		Below mean.	
12 8	9 7½	16 3½	7 12½	9 12½	9 3½	16 3½	13 8½

The question of the increase in the weight of the brain in proportion to the intellectual power seems difficult to settle.¹ It is true that the brains of such men as Cuvier, Spurzheim, Chalmers, Aber-

¹ Two males have died in the asylum recently, the one an imbecile, æt. 75, and the other an epileptic idiot, æt. 18. The brain of the imbecile weighed 63 oz. 4 dr., and that of the idiot 48 oz. The brain-substance in both was apparently normal.

crombie, and Goodsir, have as much exceeded the average weight of the human brain as their intellectual power exceeded the average; but, excluding such men as the above named, it must be concluded that, as far as has yet been proven, no definite statement can be made as to the relation that the brain-weight has to the intelligence. Sub-joined are the cases of the persons who have died in the Montrose Asylum possessing the extreme brain-weights, and in a tabular form is given the weights of all their organs, together with the average weight of the organs in the sane.

CASE 1. (Male, brain weighing 60 oz.)—W. B., æt. 69, a shoemaker, of ordinary education and regular habits, became very much depressed on the death of his wife, the depression being followed by a maniacal attack, for the treatment of which he was sent to the asylum. Seven years after admission into the asylum he became partially demented, and died of suffocation from choking. At the post-mortem the brain-substance was noticed to be dense, otherwise apparently normal.

CASE 2. (Female, brain weighing 53 oz. 12 dr.)—Mrs C., æt. 43, a married woman, formerly a domestic servant, was admitted into the asylum labouring under mania. She died four months after admission of heart disease. At the post-mortem considerable venous congestion of the brain was observed, otherwise it was apparently normal.

TABLE VI.—*Weight of the different Organs in the Cases of the Male and Female who died in the Montrose Asylum possessing the Heaviest Brain-Weights, and contrasted with the Averages for the Sane.*

	MALES.				FEMALES.			
	Insane.		Sane Average.		Insane.		Sane Average.	
	oz.	dr.	oz.	dr.	oz.	dr.	oz.	dr.
Encephalon, .	60	0	50	3½	53	12	44	8½
Cerebrum, .	52	8	43	15¾	48	0	38	12
Cerebellum, .	7	8	6	6¾	5	12	5	12
Heart, .	13	8	11	0	19	8	9	0
Right Lung, .	25	8	24	0	24	0	17	0
Left Lung, .	24	0	21	0	31	8	15	0
Liver, .	45	0	48 to 58	0	69	12	40 to 50	0
Spleen, .	5	0	5	7	8	12	4	6
Right Kidney, .	4	4	5	8	5	8	4	12
Left Kidney, .	4	8			5	8		

CASE 3. (Male, brain weighing 34 oz.)—A. M., æt. 43, a carpenter, who laboured under general paralysis. He is stated to have had a hereditary tendency to insanity. He had hallucinations of sight. Fifteen months after admission, he was demented, ground his teeth, and could not articulate or walk correctly. It was observed that in bed he always lay with his head flexed forward and not resting on the pillow; during all the time he was in the asylum he was never found asleep. He died twenty months after admission of a congestive attack. At the post-mortem upwards of ʒviii. of fluid was

collected from the arachnoid sac; the membranes were adherent to the cortical substance; the ventricles were much distended with fluid; and their floors covered with granulations.

CASE 4. (Female, brain weighing 31 oz.)—M. F., æt. 72, laboured under senile dementia. She died of old age. At the post-mortem the brain-substance was found to be extremely œdematous, and the arachnoid contained a large quantity of fluid, as did also the ventricles.

TABLE VII.—*Weight of the different Organs in the Cases of the Male and Female who died in the Montrose Asylum possessing the Lightest Brain-Weights, and contrasted with the Average for the Sane.*

	MALES.				FEMALES.			
	Insane.		Sane Average.		Insane.		Sane Average.	
	oz.	dr.	oz.	dr.	oz.	dr.	oz.	dr.
Encephalon, . . .	34	0	50	3 $\frac{1}{2}$	31	0	44	8 $\frac{1}{2}$
Cerebrum, . . .	27	8	43	15 $\frac{3}{4}$	25	8	38	12
Cerebellum, . . .	6	8	6	3 $\frac{3}{4}$	5	8	5	12 $\frac{1}{2}$
Heart, . . .	11	12	11	0	8	0	9	0
Right Lung, . . .	28	12	24	0	12	0	17	0
Left Lung, . . .	24	12	21	0	7	0	15	0
Liver, . . .	46	4	48 to 58	0	27	8	40 to 50	0
Spleen, . . .	6	12	5 to 7	0	4	0	4 to 6	0
Right Kidney, . . .	5	8	5	8	2	0	4	12
Left Kidney, . . .	4	12			2	0		
Height, . . .	5 ft. 7 in.		5 ft. 6 $\frac{1}{2}$ in.		5 ft.		5 ft. 2 in.	

In the instances of the heaviest male and female brains, neither their cases nor the autopsy reveal anything to account for their great weight; but, in the instances of the lightest brains, the cases show dementia previous to death, and the autopsy shows in both the male and female very large effusions of serum into the arachnoid sac and ventricles, and in them water seems to take the place of brain-substance. The age at which the brain is considered to reach its maximum weight is variously stated by different writers, both as regards it, when taken as a whole, and also in its individual parts. Generally speaking, the period when man is in his highest state of development may be reckoned as between the twenty-fifth and fifty-fifth years, and it is consequently to be inferred that, during that time, the brain would have its greatest average weight. The following table gives the averages of the brain-weight in the period above mentioned, both amongst the sane and insane.

TABLE VIII.—*Average Weight of the Encephalon in the two Sexes between Years 25 and 55.*

	SANE.				Difference.	
	Males.		Females.			
	oz.	dr.	oz.	dr.	oz.	dr.
Encephalon, . . .	50	3 $\frac{1}{2}$	44	8 $\frac{1}{2}$	5	11
Cerebrum, . . .	43	15 $\frac{3}{4}$	38	12	5	3 $\frac{3}{4}$
Cerebellum, . . .	6	3 $\frac{3}{4}$	5	12 $\frac{1}{2}$	0	7 $\frac{1}{4}$

INSANE.

	Males.		Females.		Difference.	
	oz.	dr.	oz.	dr.	oz.	dr.
Encephalon, .	48	4	44	6	3	14
Cerebrum, .	42	3	38	12	3	7
Cerebellum, .	6	5	5	10	0	11

In this table the sane are taken from a table by Dr Reid, in his "Physiological, Anatomical, and Pathological Researches." It will be seen from this table that there is no change in the general average of the insane male encephalon whether it be calculated from all ages or only in the period from 25 to 55, whilst in the insane female the encephalon is brought nearer that of the sane when calculated from the weighings between 25 and 55. Dr Thurnam considers that the sane encephalon has its highest weight in males in the decennial period from 30 to 40, and in females previous to the 30th year.

TABLE IX.—Average Weights of Sane and Insane in Decennial Periods.

Decennial Periods.	Encephalon.				Cerebrum.				Cerebellum.			
	Males.		Females.		Males.		Females.		Males.		Females.	
	Sane.	Insane.	Sane.	Insane.	Sane.	Insane.	Sane.	Insane.	Sane.	Insane.	Sane.	Insane.
To 30 yrs.	47 12	47 9	42 0 $\frac{1}{4}$	46 6	41 11	41 8	36 12 $\frac{1}{6}$	40 7	5 13	6 0	5 1 $\frac{1}{2}$	5
30 to 40 "	51 0 $\frac{2}{4}$	49 9	45 3 $\frac{2}{3}$	43 3	45 1 $\frac{1}{2}$	43 0 $\frac{1}{16}$	39 11 $\frac{3}{8}$	37 8	6 5 $\frac{2}{3}$	6 2	5 9 $\frac{11}{15}$	5 1
40 to 50 "	49 3 $\frac{2}{4}$	46 13	45 2 $\frac{1}{3}$	45 3	43 5 $\frac{6}{12}$	40 6	40 0 $\frac{1}{3}$	39 10	6 4 $\frac{3}{4}$	6 4	5 15 $\frac{3}{8}$	5
50 to 60 "	49 10 $\frac{1}{2}$	47 4	44 13	44 9	33 11 $\frac{1}{16}$	40 14	38 0	38 14	6 2 $\frac{1}{4}$	6 10	5 4 $\frac{1}{2}$	5 1
60 to 70 "	48 8	49 12	43 3 $\frac{5}{14}$	43 11	43 8 $\frac{2}{5}$	43 8	37 10 $\frac{5}{14}$	37 15	5 13	6 4	5 9	5 1
70 and upw.	48 1 $\frac{3}{8}$	46 6	42 11	40 3	42 3 $\frac{3}{8}$	40 4	37 0	34 10	5 13 $\frac{3}{8}$	6 0	5 8	5 1

In Table IX. the insane are seen to correspond very nearly with the statement made by Dr Thurnam regarding the sane; for, although the highest average given for the insane in the decennial periods is between the years 60 and 70 in the males, still that between 30 and 40 is almost equally high, being for the first 49 oz. 12 dr., and for the second 49 oz. 8 dr.; and there may have been some cause for the increase between 60 and 70 amongst the insane that I have failed to discover. In Table IX. the weights of the sane are taken from a table by Dr Peacock; and Tables X. and XI. are constructed from tables given by Dr Skae in his appendix to his report previously mentioned, along with the weighings from the Montrose Asylum. These tables include the numbers weighed, the heaviest and lightest, with the averages in the decennial periods for both sane and insane. On the left of the sane column are the weighings from the Montrose, and on the right those from the Edinburgh Asylum.

TABLE X.—Comparative Weights of Brains in Sane and Insane.

MALES.

Age.	Numbers Weighed.									Heaviest.									
	Encephalon.			Cerebrum.			Cerebellum.			Encephalon.			Cerebrum.			Cerebellum.			
	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	
To 30, .	7	48	19	7	32	19	7	33	19	oz. dr.	oz.dr.	oz.dr.	oz. dr.	oz. dr.	oz. dr.	oz. dr.	o. d.	o. d.	
30 to 40, .	30	41	26	30	28	26	30	28	26	58	4	62	8	56	0	51	4	54	8
40 to 50, .	11	44	25	11	32	25	11	32	25	53	8	62	12	58	0	48	0	49	0
50 to 60, .	21	32	18	21	28	18	21	29	18	53	0	55	15	58	8	46	12	48	14
60 to 70, .	20	18	8	20	10	7	20	12	7	60	0	60	4	52	8	52	8	51	13
70 and upwards, .	11	8	2	11	8	2	11	8	2	54	4	53	5	52	12	43	12	46	16
Total & Aver.	100	191	98	100	138	97	100	142	97	54	5	59	5	55	14	47	14	50	13

Ages as above.	Lightest.									Average.									
	Encephalon.			Cerebrum.			Cerebellum.			Encephalon.			Cerebrum.			Cerebellum.			
	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	
38	0	38	0	39	0	37	0	34	0	33	8	4	12	5	4	47	9	50	14
40	8	40	8	44	0	32	8	35	9	37	8	5	4	5	16	0	49	9	51
30	4	34	0	41	12	27	8	37	13	36	0	5	8	6	5	0	46	13	49
39	0	40	9	41	2	32	0	37	11	39	14	4	12	3	14	4	49	10	49
40	0	40	0	44	0	35	12	34	8	38	10	5	0	4	15	5	12	49	13
40	12	42	2	52	12	35	8	39	8	46	6	5	8	9	6	6	48	15	52
39	3	39	3	43	12	33	6	36	8	38	10	5	2	3	5	12	47	14	49

TABLE XI.—Comparative Weights of Sane and Insane Brains.

FEMALES.

Age.	Numbers Weighed.									Heaviest.								
	Encephalon.			Cerebrum.			Cerebellum.			Encephalon.			Cerebrum.			Cerebellum.		
	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.
To 30, .	6	40	15	6	31	15	6	31	15	52 0	50 0	53 0	45 4	43 14	45 8	7 0	6 8	6 8
30 to 40, .	18	33	29	18	25	29	18	25	29	48 0	54 0	61 8	42 12	45 2	54 8	6 8	6 8	6 8
40 to 50, .	14	23	24	14	18	24	14	18	24	53 12	53 0	53 0	48 0	47 0	47 0	6 8	7 0	7 0
50 to 60, .	29	7	20	29	6	20	29	6	20	51 8	46 3	53 8	45 8	40 13	47 8	6 4	5 9	6 6
60 to 70, .	21	14	13	21	14	13	21	14	13	52 8	48 12	50 0	47 0	41 2	44 0	7 0	6 0	6 7
Total & Aver.	88	117	101	88	94	101	88	94	101	51 9	50 6	54 3	45 11	43 9	47 11	6 10	6 5	7 0

Ages as above.	Lightest.									Average.								
	Encephalon.			Cerebrum.			Cerebellum.			Encephalon.			Cerebrum.			Cerebellum.		
	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.	Insane.	Sane.	Insane.
41	4	39 0	37	12 35 12 35	8 31 12	5 8 4 12 4 8	46 6	43 15	43 0	40 7	38 6	36 10	5 15	5 8	5 9	5 9	5 9	5 9
34	8	38 0	39	8 28 8 32	12 33 8	3 0 4 4 5 0 43 3	45 3	46 0	37 8	39 1	40 0	5 11	5 9	6 0	6 0	6 0	6 0	6 0
36	4	36 12	37	0 31 0 32	8 31 4	4 12 4 4 4 12 45 3	45 3	44 9	39 10	40 0	38 11	5 9	5 15	5 14	5 14	5 14	5 14	5 14
37	8	43 9	39	8 32 8 38	1 34 0	5 0 4 15 5 0 44 9	44 13	46 1	38 14	38 0	40 2	5 11	5 4	5 14	5 14	5 14	5 14	5 14
37	4	36 2	34	12 32 0 31	2 30 0	4 12 5 0 4 12 43 11	43 3	44 5	37 5	37 10	38 6	5 12	5 9	5 14	5 14	5 14	5 14	5 14
37	5	38 11	37	11 31 15 33	15 32 1	4 9 4 10 4 12 44 9	44 7	44 12	38 12	38 9	38 12	5 11	5 9	5 14	5 14	5 14	5 14	5 14

Although the preceding observations are made from a series of weighings much too scanty to permit of any absolute conclusion, they seem to support the view that insane brains differ from sane as regards weight in being slightly lighter; that this is dependent on a decrease in the weight of the cerebrum—there being no loss of weight in the cerebellum; and that the cases of chronic insanity and dementia in which serous effusions and œdema of the brain-substance are so often met with, furnish a probable cause for the decrease. There seems no reason to suppose that in cases of recent insanity any difference between the weights of sane and insane brains is to be detected.