

HEREDITY AND CRIME IN EPILEPTIC CRIMINALS.

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I PURPOSE in the following tables to put together certain details relative to the hereditary history of those prisoners admitted into the Wakefield Gaol during the past three or four years, who were epileptics. The question is one of such interest in connection with the probable existence of a distinct criminal neurosis, that little apology, I think, is needed in bringing it to the attention of those specially interested in the study of mental disease. That there is some connection between crime and insanity few, doubtless, who have had any experience of either a prison or asylum would be prepared to deny, even if they were disinclined to go to the length of admitting that in many cases the two are distinctly correlated.

In making any inquiry into the history of prisoners there are three main difficulties to contend with. First: the well-known mendacity of the criminal classes generally. Secondly: the meagre and imperfect knowledge they usually possess of their relatives; and, Thirdly: the common occurrence of illegitimacy. In such an inquiry as the present the first difficulty is naturally one of the greatest moment.

It would occupy a needless amount of space to detail the precautions that have been taken in making these investigations, but it seemed right to put this great difficulty prominently forward, with the assurance that, so far as was practicable, every possible care has been taken to test the truth of the statements contained in the following pages.

Members of the class from which our criminals are mostly drawn commonly get separated from the parent stock very

early in life, and, in the subsequent struggle for existence, having to fight their way apart, rapidly lose all sight, and frequently all recollection, of even their immediate ancestors. In at least 5 per cent. of the cases examined the prisoners had no knowledge whatever of any member of their families. This difficulty applies especially to the Irish, who leave their country when comparatively young, and frequently never see or hear of any of their relatives again. As the Irish form about one-sixth of the whole number of prisoners admitted, it will be seen that this drawback is one of some moment. Perhaps the only compensating advantage is that the average results will be understated rather than exaggerated. The third difficulty is one that undoubtedly comes into frequent play, but is of such minor importance in comparison with the other two that it may be dismissed with the remark that inquiry has been made, and care taken to make such allowances for it as were necessary.

Out of a total of 119 cases examined, 89 were males and 30 females. It is usually taught that among the general population epilepsy attacks the two sexes in about equal proportion.¹ There is reason to think that with criminals the same rule holds good. During the year 1877 there were committed a total of 9672 males and 2832 females, or 1 female to every 3·3 males, a proportion, it will be seen, very similar to that between the two sexes among the epileptics.

The cases have been divided broadly into two classes—idiopathic and traumatic. This division is somewhat arbitrary; but the two classes exhibit a marked difference, both in hereditary and personal history. Any attempt to ascertain the exciting cause for epilepsy is generally a matter of difficulty even in intelligent patients; under the term traumatic, therefore, are classed only those cases in which the attack commenced for the first time within a month at least of some sudden psychical or physical accident. Under the head of idiopathic are placed all those where the fits had existed from birth, or commenced later on in life without the intervention of such rapidly acting external agents. As idiopathic cases, therefore, I have included all those assumed

¹ Reynolds's 'System of Medicine,' vol. ii. p. 295.

to be due to long-continued habits of intemperance on the part of the patients themselves; and this the more readily because certain forms of alcoholism with resultant epilepsy are undoubtedly due to such hereditary predisposing causes as, under other circumstances, or in individuals differently constituted, would have directly produced the convulsive attacks. Dr. Savage has seen cases that convinced him that drink-craving has been the result of nervous disease in one or other parent.¹ This division applies only to males. The ascribed traumatic causes among females were so few and slight that, for the sake of simplicity, they have all been counted as idiopathic.

Among the traumatic cases, 26 in number, 15 were said to be due to injury to the head, 5 to fright, 4 to sunstroke, and 2 to injuries of an undefined nature. These two last occurred early in life. In neither was there any distinct history of head-injury, but, in both, the fits followed immediately after the accident.

The ages of the epileptic prisoners are given in Table I., and in Table II. the ages of the 3341 prisoners of all classes committed during the quarter ending March 31st, 1878.

TABLE I.
TABLE showing the AGES of 119 EPILEPTIC PRISONERS.

Age.	IDIOPATHIC.						TRAUMATIC.		Net Total.	
	Males.		Females.		Total.		Males.			
	No.	Percent.	No.	Percent.	No.	Percent.	No.	Percent.	No.	Percent.
16 and under 21	4	6·4	1	3·8	5	5·3	2	7·7	7	5·8
21 " " 30	13	20·6	10	33·4	23	24·8	6	23·1	29	24·4
30 " " 40	20	41·3	11	36·7	37	39·8	6	23·1	43	36·2
40 " " 50	11	17·4	4	13·3	15	16·1	8	30·7	23	19·3
50 " " 60	5	7·9	4	13·3	9	9·7	4	15·4	13	10·9
60 and upwards	4	6·4	..	..	4	4·3	..	..	4	3·4
Total. .	63	100·0	30	100·0	93	100·0	26	100·0	119	100·0

¹ 'Guy's Hospital Reports,' 1877, p. 68.

TABLE II.

TABLE showing the AGES of 9341 PRISONERS committed during the QUARTER ending MARCH 31st, 1878.

AGE.	Males.		Females.		Total.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.
Under 12 years of age . . .	6	0·2	1	0·1	7	0·2
12 and under 16	41	1·5	18	2·7	59	1·8
16 " " 21	301	11·2	110	16·5	411	12·3
21 " " 30	974	36·4	204	30·7	1178	35·3
30 " " 40	674	15·2	175	26·3	849	25·4
40 " " 50	361	13·5	115	17·4	476	14·2
50 " " 60	221	8·3	85	5·8	256	7·7
60 and upwards	98	3·7	7	1·0	105	3·1

A comparison of these two tables will show that the decennial period between 21 and 30 includes the larger number of ordinary prisoners, while that between 30 and 40 takes the greatest percentage of epileptics. The average age for epileptic males is 37·0; and for females 34·8. This greater average age for epileptic prisoners may be partly due, as will be seen further on, to their more prolonged and persistent criminal career, as indicated by the greater number of recidivists among them. The large percentage in the decennial period between 40 and 50 among the traumatic males is probably accidental, the number of cases being too small to furnish any decisive information.

Table III. shows the ages at which the fits commenced. Table IV. is taken, for the purposes of comparison, from Dr. Bennett's Clinical Lectures, and Dr. Reynolds's article in 'The System of Medicine.'¹

¹ Vol. ii. p. 296.

TABLE III.

TABLE showing the AGES at which the Fits commenced in CRIMINAL EPILEPTICS.

AGE.	IDIOPATHIC.						TRAUMATIC.	
	Males.		Females.		Total.		Males.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Under 10 years . .	20	31.7	9	30.0	29	31.2	2	7.7
From 11 to 20 . .	18	28.5	5	16.7	23	24.7	8	30.8
„ 21 „ 30 . .	14	22.2	8	26.6	22	23.6	7	26.9
„ 31 „ 40 . .	8	12.7	3	10.0	11	11.8	4	15.4
„ 41 „ 50 . .	2	3.1	5	16.7	7	7.5	4	15.4
Over 50	1	1.6	..	..	1	1.1	1	3.8

TABLE IV.

TABLE showing the AGES at which the Fits commenced in Ordinary EPILEPTICS.

DR. BENNETT'S CASES.				DR. REYNOLDS'S CASES.			
AGE.	Males.	Females.	Total.	AGE.	Males.	Females.	Total.
From 1 to 10 .	9	14	23	Under 10 . .	10	9	19
„ 10 „ 20 .	11	23	34	From 10 to 20.	66	40	106
„ 20 „ 30 .	14	9	23	„ 20 „ 45.	25	20	45
„ 30 „ 40 .	10	6	16	Over 45 . . .	1	1	2
„ 40 „ 50 .	1	..	1				
„ 50 „ 60 .	2	1	3				
Totals . .	47	53	100	Totals . .	102	70	172

From the latter table it appears that in ordinary epilepsy the majority of cases commence between the tenth and twen-

tieth years of life, the numbers in the decennial period on either side of this being about equal. Trousseau also gives the first place to the second ten years of life, but states that a larger number of cases occur in the period before than in the period after.

The particulars in the column for traumatic cases in Table III. are of little interest. Being directly due to outside causes, the fits, as one would naturally expect, occur for the first time during those years of life when the body is most exposed to external injury. Those under ten years of age were the two boys already mentioned, and having a doubtful traumatic origin. Among the idiopathic cases the most noticeable point is the larger percentage commencing under ten years of age, which, in my own cases at all events, practically means that the fits had existed from childhood. M. Lancereaux found with regard to fits as the result of hereditary alcoholism that, in children who had survived the dangers of convulsions in infancy, epilepsy not unfrequently broke out at the period of puberty.¹ Three or four of my own cases go in support of this statement, an interval of several years elapsing between the cessation of the convulsions and the development of epilepsy proper.

In suggesting any explanation of this earlier age for the commencement of epilepsy among criminals, it should be borne in mind that the disease occurring early in life must be a great hindrance to the sufferers being brought up to any useful trade or mechanical employment, or to their competing with others who are not so afflicted; so that with the ordinary means of subsistence lessened, frequently with a tendency to weak-mindedness, and with no relatives capable of supporting them, it is little to be wondered at that they should gradually gravitate into a state of vagrancy and beggary. In a mining district like the West Riding this probably holds good to a greater extent than it would in an agricultural county. Many of these criminal epileptics are well-known characters, and spend the greater part of their life fluctuating between the workhouse and the prison.

Case No. 4. Male, æt. 33. Has had fits since he was 14 years

¹ 'Gazette des Hôpitaux,' April 26, p. 377.

old. They are of such frequency and severity that he has had to spend the greater part of his subsequent life in the work-house, as no one would keep him employed for any length of time. He bites his tongue severely, and his face and head are profusely scarred from injuries he has received. They always commence with a prickling sensation in the right hand. Whenever he thinks a fit is coming on, he gets drunk, if possible, with the view of warding it off, but he does not think it has the desired effect. Father died suddenly thirteen years ago; was not a heavy drinker. Mother is living; neither drinks nor has fits. Brother was a heavy drinker. Youngest sister had a running from the ears and was "troubled in her head"—probably imbecile. Eldest sister had eleven children, all of whom died when three or four days old, mostly in convulsions. He himself is a drunkard, and has been committed to prison four times as a disorderly pauper, twice for larceny and twice for assault.

Case No. 90. Male, æt. 47. Had convulsions in childhood, which were said to be due to "water on the head." He has since been "affected in his nerves throughout his body." He gets his living now by singing hymns about the street. Before that he was kept at home, never having been taught any trade. About nine or ten years ago he had a stroke and was paralysed "all over his body," so that he was unable to hold a pen or do anything for himself. Prisoner is of weak intellect and has right hemiplegia. He has no settled residence and remembers little or nothing about his family. He has not seen any of them now for many years; but has heard that his father was a moderate man and died of old age, and that his mother died when he was a child. He is committed to this prison as a disorderly pauper. Has been in other prisons, but does not remember how many times.

It will be seen, on referring to Table XI., that the convictions under the heads of rogues and vagabonds, vagrancy and disorderly paupers are more numerous among epileptics than non-epileptics. Again, it will be shown in the next paragraph that a very frequent probable predisposing cause of epilepsy among criminals is drunkenness on the part of the parents. It is now a well-established fact that the children of drunkards are

especially liable to convulsions in infancy. M. Martin has lately investigated this question at the Salpêtrière. In his first group of 60 epileptic patients, one-fifth of the children had convulsions, and more than one-half died early. His "83 families, in which one or more members suffered from epilepsy of alcoholic origin, had 410 children; and of this number, 108 (more than one-fourth) have had convulsions; and in 1874, 169 were dead, 241 lived, but 83 (more than a third of the survivors) were epileptics."¹ It has been remarked by Dr. Reynolds that "where there is a marked hereditary taint as a predisposing cause of epilepsy, the disease is found to develop itself somewhat earlier than under other circumstances."² The difference for ordinary epileptics is represented in the following table:—

Commencing under æt. 15 . . .	83·38 hereditary	46·15 non-hereditary.
" above æt. 15 . . .	16·66 "	53·82 "

The same rule is found to hold good with respect to criminals, but the difference is somewhat less marked. The distinction with regard to sex, on the other hand, is rather in accordance with the results arrived at by Messrs. Leech and Fox; hereditary epilepsy in criminals shows itself on an average four years earlier among men than among women.

Unfortunately, one of the most prominent features in the hereditary history of these prisoners is one concerning which there is the greatest difficulty in arriving at the truth with any degree of exactitude. The amount of intemperance thought sufficient to constitute a "drunkard" is found to vary very materially in the minds of different individuals. The "heavy drinker" of one son, is the father who "only gets drunk every Saturday night" of another, a practice thought to be so little out of the common, that the man is called "sober." As this seemed to be one of the most interesting points in connection with the subject, precautions have been taken to include under the head of "drunkards" none but those in whom the habit was marked and confirmed. Two classes of people have been specially noted, namely those described as "scarcely ever sober," and those subject to paroxysmal attacks

¹ 'BRAIN,' July 1879, p. 293.

² *Op. cit.* p. 296.

of an uncontrollable character, with intervals of sobriety or even total abstinence; cases, in short, where the habit has become distinctly morbid. In ordinary phraseology, nearly all those marked as doubtful would come under the head of "drunkards." The difficulty in estimating the amount of drunkenness in individuals is so great, that some authors think it right to reject such evidence altogether. By so doing they appear to me to exclude one of the most valuable points in the inquiry. As it is more conceivable that patients should conceal drunken habits in other members of their family, rather than exaggerate or invent them, the tables will have at least the negative merit of understating the probable truth. As a matter of fact, in most cases the father was found to be the great drunkard of the family. A history of drink on the part of the mother was but rarely met with. This is probably simply an indication of the greater sobriety of the female half of the population, though the greater reticence of the prisoners with regard to their mothers' failings may have something to do with it.

TABLE V.
HABITS of the FATHERS of EPILEPTIC CRIMINALS.

	IDIOPATHIC.						TRAUMATIC.		Net Total.	
	Males.		Females.		Total.		Males.			
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Fathers drunkards	35	55·6	11	36·7	46	49·5	7	26·9	53	44·6
Fathers sober . .	21	33·3	9	30·0	30	32·3	11	42·3	41	34·4
Unascertained or doubtful	7	11·1	10	33·3	17	18·2	8	30·8	25	21·0
Total . .	63	100·0	30	100·0	93	100·0	26	100·0	119	100·0

In addition to the details given in the above table, 15 idiopathic males—23·8 per cent.—gave a history of drunkenness in 24 other members of their family, distributed thus:—Grandfather, 1; mothers, 3; uncle, 1; aunt, 1; brothers, 18.

Three idiopathic females—10 per cent.—gave a history of drink in three other members of their family; in one case a mother, and in the other two brothers. One traumatic male said his mother had been accustomed to drink heavily, and had committed suicide while under its influence. One of the females' fathers also committed suicide.

The difference between the idiopathic cases and the traumatic is most marked; the former giving a total of 49·5 per cent. of fathers as drunkards, the latter only 26·9 per cent. One other point worthy of note in this table is that the percentage of drunken fathers among the males is greatly in excess of that among the females. Probably many of the doubtful cases among the latter should by right be included; but, making allowance for this and for the possible greater amount of drunkenness among the mothers, an hereditary history of alcoholism is certainly more frequent among epileptic men than women. This may be partly compensated for by the increased number of epileptics among the ancestors of the females. (See Table X.)

It is difficult to estimate the importance of this table without having some notion of the frequency of drunkenness in the parents of criminals who are non-epileptic. The only figures I have, selected with the same stringency, are those of 30 females, taken consecutively for this purpose; they give the following results:—

Fathers drunkards	7 = 23·3 per cent.
Fathers sober	15 = 50·0 "
Unascertained, or doubtful .	8 = 26·7 "
Mothers drunkards	2 = 6·6 "
Mothers sober	23 = 76·7 "
Unascertained, or doubtful .	5 = 16·7 "

Among these women, then, with a less number of doubtful cases, there is a decrease of 13·4 per cent. of drunken fathers, and an increase of 20 per cent. of those who were said to be sober. A comparison of the two columns, idiopathic and traumatic in Table V., shows among males a still greater difference in the percentage of drunken fathers.

My colleague, the Rev. R. Bullock, Chaplain to the Prison, has kindly compiled for me a table of the presumed habits of

the fathers of 225 male prisoners committed for 6 months and over. This table gives:—

Fathers drunkards . . .	97 = 43·5 per cent.
Fathers sober . . .	126 = 56·5 "

The comparison perhaps is hardly just, as men committed for this length of time belong, as a rule, to a different class from those committed for short periods; but the difference is 12·1 per cent. in favour of the non-epileptics, a difference, it will be observed, remarkably similar to that found to exist between epileptic and non-epileptic criminal females. If equal stringency had been exercised in apportioning the habits of the fathers in these cases, the difference would in all probability be found to have been still greater on the side of the men.

Mr. Bullock has also furnished me with the statistics of all the boys committed to reformatories during the years 1872 to 1876 inclusive. The total number of boys was 730; those said to have had drunken fathers being 194, and drunken mothers 29. This will give a percentage of 26·5 for the former, and 3·9 for the latter. The percentage of drunkards among the mothers is, it will be observed, only slightly lower than it was shown to be among the idiopathic epileptics. I was prepared to find a considerably greater difference in the number of drunken ancestors between epileptic and non-epileptic criminals than was really proved to exist. There is reason, however, to believe that a hereditary history of alcoholism is more common, not only in epileptic but in ordinary prisoners than it is in non-criminal epileptics. Of 95 ordinary epileptics examined by M. A. Voisin, 12 had scrofulous or true tuberculous antecedents, and 12 had antecedents who died from alcoholic excesses, or were subject during their honeymoon to excessive abuse of alcohol.¹ This puts the proportion of drunken parents at only 12·6 per cent. Reasoning from the above facts, it is difficult to avoid the conclusion that both crime and epilepsy may owe their origin to alcoholism in the parents as a predisposing cause; in other words, that criminal instincts and epileptic convulsions are not unfrequently distinctly correlated. Nor do I see any reason to confine the term "criminal

¹ 'London Medical Record,' January 15th, 1878, p. 9.

instincts" in these cases to a tendency to alcoholic excess. Among the idiopathic males, there are 26 cases where the habits of the fathers were ascertained without there being any epilepsy or mental disease in the family. The average number of convictions for those with drunken fathers, as compared with those whose fathers were sober, is as 3·5 to 2·3, showing an increased amount of crime associated with hereditary alcoholism.

The statement that epilepsy in children is due to conception occurring while the parents are under the influence of drink, is one that must be naturally difficult of proof. I failed to get any evidence of the fact, nor do the conditions at all seem to require it. It is not suggested that the hereditary transmission of epilepsy is due to conception taking place during a paroxysm; the hereditary transmission of alcoholism then, which in some of its forms is surely an allied neurosis, would be guided by the same laws and occur under like conditions.

I pass on now to consider other forms of hereditary neurosis, the most important of which is naturally epilepsy itself.

Direct heredity in the case of criminals can seldom be traced beyond the father or mother. No general value therefore is to be attached to the few particulars given of grandparents.

Collateral heredity is confined mostly to brothers, sisters, uncles, aunts, and first cousins.

The idiopathic epileptic males give, including both direct and collateral relatives, a family history of fits in 29 cases, or 46 per cent. This includes one case in which the prisoner's children only were affected. The females give a like history in 21 cases, or 70 per cent., including two in which children only were affected; and the traumatic males in 4 cases, or 15·3 per cent. The total number of idiopathic cases giving a history of fits in one or more members of their family is then 50, or 53·7 per cent.; and the net total for all cases 54, or 45·3 per cent. Counting only direct relatives, we get a percentage of 25·8, 32·4, and 12·5 in the three classes respectively. The details are given in Table VI.

TABLE VI.
DETAILS of HEREDITARY HISTORY of FITS (omitting CHILDREN).
IDIOPATHIC CASES.—MALES.

Relative.	No.	Per cent.	Degree of Relationship when ascertained.	Remarks.
Grandfather	1	1·6	Mother's father.	
Grandmother	1	1·6	Father's mother.	
Fathers	4	6·4		
Mothers	10	16·2	.. ..	1 "died of fits."
Brothers	14	22·6	.. ..	8 "
Sisters	13	20·9	.. ..	5 "
Uncles	4	6·4	{ 3 were Mother's brothers.	1 "
Aunt	1	1·6	Mother's sister.	
Cousins	3	4·9	{ 1 on Mother's side. 1 Father's brother's daughter.	
Nephews and Nieces .	11	17·8	Sister's children.	{ All died in Infancy.
Total No. of Relatives with Fits	62	100·0		

FEMALES.

Relative.	No.	Per cent.	Degree of Relationship when ascertained.	Remarks.
Fathers	4	11·7	.. ..	1 "died of fits."
Mothers	7	20·7	.. ..	1 " "
Brothers	7	20·7	.. ..	2 " "
Sisters	6	17·7	.. ..	1 " "
Uncles	4	11·7	{ 2 were Mother's brothers. 1 was Father's brother.	
Aunts	4	11·7	{ 2 were Mother's sisters.	
Cousin	1	2·9	Female.	
Nephew	1	2·9	Brother's child.	"Died of fits."
Total No. of Relatives with Fits	34	100·0		

TRAUMATIC CASES.

MALES.

Relative.	No.	Per cent.	Degree of Relationship when ascertained.	Remarks.
Grandfather	1	12·5	Mother's father.	2 "died of fits."
Brothers	4	50·0	.. ..
Sister	1	12·5		
Total No. of Relatives with Fits }	8	100·0		

PROPORTION OF SEXES AMONG RELATIVES AFFECTED.

IDIOPATHIC.		TRAUMATIC.
Males.	Females.	Males.
Per cent.	Per cent.	Per cent.
Males . . . 23 = 87·1	Males . . . 16 = 47·1	Males . . . 5 = 83·8
Females . . . 28 = 42·0	Females . . . 18 = 52·9	Females . . . 1 = 16·7
Unknown . . . 13 = 20·9		

Of the 29 cases among the idiopathic males in which epilepsy was present in the family, it existed in the father in 1; mother in 3; grandfather in 1; grandmother, mother, sister, brother, uncle, and child in 1; father and sister in 1; father and two sisters in 1; mother and sister in 1; mother and brother in 2; mother and five or six brothers and sisters in 1; mother, sister, and brother in 1; mother and aunt in 1; brother in 4; sister in 2; brother and cousin in 1; brother, uncle and two great-uncles in 1; sister and uncle in 1; uncle in 1; cousin in 2; ten or eleven nephews and nieces in 1; four children in 1.

Among the 21 idiopathic females, epilepsy existed in the father in 1; mother in 4; father, sister, cousin and child in 1; father, brother and child in 1; father and sister in 1; mother and child in 1; mother, brother and uncle in 1; mother and

brother in 1; brother in 1; brother, sister and child in 1; brother and aunt in 1; brother, sister, nephew and two aunts in 1; two sisters and uncle in 1; aunt in 1; uncle and six children in 1; two children in 1; three children in 1.

Among the 4 traumatic males, epilepsy existed in the grandfather, brother, and two children in 1; brother in 1; two brothers in 1; sister in 1.

With respect to numbers only, the 124 relatives were divided among the 54 epileptics as follows:—

IDIOPATHIC MALES.

1	had	11	relatives	affected.
2	"	5	"	"
1	"	4	"	"
2	"	3	"	"
8	"	2	"	"
15	"	1	relative	affected.

IDIOPATHIC FEMALES.

1	had	4	relatives	affected.
3	"	3	"	"
5	"	2	"	"
11	"	1	relative	affected.

TRAUMATIC MALES.

2	had	2	relatives	affected.
2	"	1	relative	affected.

An examination of the above tables, having regard to the idiopathic cases only, suggests the following conclusions: First; both among males and females epilepsy is more frequent in the mother than in the father: and secondly; the percentage for both parents is higher with the women than it is with the men. On comparing the above figures with those in Table V., it will be seen that this result is exactly the converse of what holds good with respect to drunkenness. There the male parent was found to be affected to a much greater extent than the female, and the percentage for both parents was higher among men than women. According to Trousseau, in ordinary cases hereditary predisposition is particularly apparent in persons descended from epileptic mothers.¹ The percentage of epileptics among brothers and sisters is slightly higher for

¹ Trousseau, Syd. Soc. Translation, 1879. Vol. iv. p. 357.

men than women, notwithstanding the fact that the number of direct hereditary epileptics is much greater among the latter. This seems to favour the suggestion previously made that certain forms of alcoholism in the parents are almost as efficient a predisposing cause for convulsions in the children as epilepsy itself; the number of drunken parents being so much greater among males than females. In connection with this point, and also as showing the great tendency of alcoholism to produce early convulsions in the offspring, it may be mentioned that the average age for the commencement of the fits, for those epileptics who have a direct hereditary history of drink, is less by $4\frac{1}{2}$ years than for those whose parents are returned as sober.

Epilepsy in the father was usually found in connection with drunken habits. Out of 9 cases, where all the particulars were ascertained, epilepsy in the mother was associated with drunkenness in the father in 6, and the result was invariably intemperance on the part of the prisoner himself.

The large proportion of epileptics among the brothers and sisters in the traumatic cases would show that, apart from the exciting cause, there is often a marked hereditary predisposition. M. Lancereaux holds, with regard to alcoholic epilepsy, that the hereditary tendency of drunkenness manifests itself in the offspring in the form of excessive reflex excitability. He cites the case of a young boy who had severe epileptiform fits, lasting, with intermissions, for several hours, as the result of intestinal worms, the unusual severity of the attack being due to parental alcoholism.¹

Case No. 3. Male, æt. 24. Was healthy until two years ago, when he got his head crushed by some machinery. Was removed to the County Infirmary, and five days afterwards he had his first fit. The fits have since occurred on an average about once a fortnight. They come on both day and night, and he has cut his face and bitten his lips several times. About two months ago he woke up one morning and found himself paralysed on the right side. His father was a heavy drinker. Two brothers died, æt. 7 and 18, both of whom had fits. Has an uncle who was in an asylum, and a cousin who is

¹ 'Gazette des Hôpitaux,' April 26.

there now. Acknowledges to having been a heavy drinker himself. Is in prison for the first time for larceny.

Case No. 17. Male, æt. 19. Twelve months ago he fell 7 feet on to his head, and was insensible for some time afterwards. Two days after the fall he had his first fit. They come on now at intervals of three or four weeks, and last but a few minutes. He bites his tongue freely, and has fallen down and cut his head more than once. Father is a heavy drinker. Mother living; does not have fits. One brother, aged 30, has had fits all his life. Prisoner himself is a heavy drinker. Has been committed to prison for damage, larceny, and drunkenness.

Case No. 18. Male, æt. 58. Was in the Indian Mutiny in 1858, and received a wound on the head; five or six years ago he fell and cut his head again in the same place. While the surgeon was examining this wound he had his first fit. The wound was followed by erysipelas. The fits have occurred since at very variable intervals, sometimes two or three a day, at others only one in four or five weeks. They last but a minute or so, and come on mostly in the night time. He bites his tongue and lips freely, and has cut his head severely. At the time of, or shortly after the fit, he is very violent, striking and biting any one near him. In consequence of these attacks of excitement he has been confined in an asylum on four different occasions. Father was lost at sea; was not a heavy drinker. Mother was a drunkard and drowned herself. She used to have fits, which, from prisoner's description, were probably attacks of *petit mal*. Has three brothers and one sister, the latter is subject to fits. His maternal grandmother was in an asylum. Is committed to prison for drunkenness. Has been in twice before, once for disorderly behaviour and once for assault.

Case No. 19. Male, æt. 45. When 19 years of age he had a fall from the rigging of a vessel; broke four ribs and his collar-bone, and injured his back and head. Was in his first fit when taken out of the water. Had a rapid succession of fits for four weeks, and was scarcely in his senses for three months afterwards. The fits have gradually lessened in frequency since the accident, and they now only occur once or twice in the month. He never bites his tongue, but has scars all over his

face and hands from injuries received in falling. Has had his face paralysed for some days after a fit. There is partial paralysis existing on the left side now. Mother dead 18 years from rheumatism. Father living; is a heavy drinker, and has been so for many years. His maternal grandfather had fits. A younger brother also had fits, and died from "disease of the brain and falling sickness." Sister has been in prison. Prisoner himself had two children who died in convulsions. He is a heavy drinker. Has been in this prison five times; once for larceny, once for hawking without a certificate, and three times for drunkenness. Has also been in Leeds Gaol for drunkenness.

Dr. Bennett in his analysis of 100 cases gives a family history of epilepsy in 26 per cent.; the father and mother being most frequently affected, and the brothers and sisters next in about equal proportion. It seems probable, therefore, that both hereditary and acquired epilepsy is far more common among criminals than it is among the general population. Cause and effect alternate in successive generations. As the parental taint of epilepsy may develop itself as criminal instincts in the offspring, so there is every reason to suppose epilepsy in the children may have its hereditary predisposition in some forms of habitual crime on the part of the parent. "The hereditary predisposition of an epileptic," says Trousseau, "may be traced merely to strange, nervous phenomena, perfectly different from epilepsy itself, whilst similar disorders may alone be manifested by his posterity, direct or indirect."¹

The very large amount of hereditary neurosis that is frequently met with in these cases is somewhat remarkable.

Case No. 20. Female, æt. 22. Had convulsions in childhood, from which she recovered. Since her pregnancy has been subject to fits. Was under observation in the hospital for some time, and there is no question as to their epileptic character. Father was a drunkard. Mother living; neither has fits nor drinks heavily. Prisoner's maternal grandmother was insane. One brother had fits, and died in one when aged 22. One sister has had fits since childhood. Two sisters have

¹ Trousseau, *New Syd. Soc. Translation*. Vol. i. p. 87.

been in prison for drunkenness. Has two aunts now living who have fits. A cousin—mother's sister's child—is now in Hull Asylum. One of brother's children died in convulsions at 5 years of age. Prisoner herself is an intemperate woman and has been in prison 13 times, including 3 for drunkenness. From her own statement most of the other offences were committed under the influence of drink.

The proportion of sexes among the epileptic relatives is shown in the latter part of Table VI. The 13 returned as unknown, in the first column, include 11 sisters' children in one case, all of whom died in infancy from convulsions. It will be observed that under the head of idiopathic, the number of females affected is slightly higher for both sexes. This also is the converse of what holds good with regard to drunkenness.

As I am mainly concerned with the hereditary causes of epilepsy among these criminals themselves, any neurosis in their children has only been incidentally alluded to. The following cases, however, may serve, in passing, to show the manner in which they, in their turn, are not uncommonly found to be affected. That the children of epileptic criminals are more liable to convulsions and other nervous affections than the children of ordinary epileptics, naturally follows from the increased amount of heredity that is found to exist among the epileptics themselves.

Case No. 10. Female, *æ*t. 40. Has had fits for 6 years. No cause suggested, except fretting from prolonged imprisonment. They come on at very variable intervals, and nearly always in the night time. Never bites her tongue, but has cut her head severely in falling. Father dead 21 years; was not a heavy drinker. Neither of her parents, nor any other member of her family had fits. Prisoner herself is a drunkard. Has been in prison 14 times, including 7 for drunkenness, and two sentences of penal servitude of 5 and 7 years respectively. Her eldest daughter is a bad character, and has been in prison several times. Three other children died young from convulsions.

Case No. 4. Female, *æ*t. 46. Has had fits 5 or 6 years. Does not remember either her father or mother. Has been in

prison 18 times, including 12 for drunkenness. Has only two children, and both are epileptic.

Case No. 108. Female, æt. 34. Has had fits since childhood. They have gradually lessened in severity, and are now only attacks of *petit mal*. She was early attacked with hemiplegia, and is still partially paralysed on the left side. Her uncle and father's brother were subject to fits; the latter is now in an asylum. Has had 8 children, 6 of whom died in convulsions when young. Prisoner was tried at the Assizes for attempting to murder her child, and acquitted on the ground of insanity. She had acute melancholia, with delusions, and on several occasions attempted to commit suicide.

Case No. 31. Male, æt. 52. Has had fits since he was 10 years old. They only come on about three or four times a year; he has cut his head in falling, but does not bite his tongue. Father was a heavy drinker in his younger days. Mother has been dead 30 years from paralysis. Had 3 sisters and 1 brother, but has not heard or seen anything of them since he was a child. Has been in prison 5 times; 4 for drunkenness and once for assault. Had 5 children; 4 died in childhood from fits, and the fifth, a son æt. 25, is now in an asylum. (See Table VII.)

Of the 16 cases among the idiopathic males in which insanity was present in the family, it involved the mother's cousin and mother's brother's child in 1; the mother's mother, and mother's sister in 1. Of the 9 cases among the females, it existed in the father's brother and mother's sister in 1; in the mother's mother and mother's sister's child in 1. Among the 3 traumatic males, a first and second cousin were affected in 1, and an uncle and cousin in 1. All the rest had each but a single member of the family reported as insane.

Having found the proportion of epileptic relatives to be so much greater with criminal than with ordinary epileptics, it was only to be expected that inquiry into their hereditary history with regard to insanity should give us a similar result. Dr. Bennett's investigations show only 5 per cent. of ordinary epileptics with insane relatives, as against 24 per cent. of my own cases. The figures in the above table are too few to furnish any satisfactory general conclusions, but it may be

TABLE VII.

TABLE showing the details of INSANITY in the families of EPILEPTIC CRIMINALS.

RELATIVES INSANE.	IDOPATHIC.				TRAUMATIC.	
	Males.		Females.		Males.	
	No.	Degree of Relationship.	No.	Degree of Relationship.	No.	Degree of Relationship.
Grandfather	1	{Mother's father (committed suicide).}				
Grandmother	1	Mother's mother.	1	Mother's mother.		
Fathers . .	2	.. ..	1			
Mother . .	1	{(Died insane and paralysed.)}				
Uncles . .	4	{2 were Father's brothers.}	3	{2 were Father's brothers. 1 Mother's brother.}	2	{1 was Mother's brother.}
Aunts . .	3	{2 were Mother's sisters.}	3	{2 were Mother's sisters.}		
Brother . .	1					
Sister . .	1	{(? Congenital im- becile.)}				
Child . .	1	Son.				
Cousins . .	3	{1 Mother's bro- ther's child. 1 Mother's cousin.}	3	{1 Mother's sister's child. 1 Father's cousin.}	3	(1 an imbecile.)
Total No. of Relatives Insane . .	18		11		5	
Proportion of Sexes among Insane Rela- tives . .	Males . .	9 = 50.0	Males . .	4 = 36.4	Males . .	2 = 40.0
	Females . .	0 = 33.4	Females . .	4 = 36.4		
	Unknown . .	3 = 16.6	Unknown . .	3 = 27.2	Unknown . .	3 = 60.0

remarked that, both with males and females, the uncle, aunt, and cousin are most frequently affected; that among the men the hereditary history of insanity is greater on their own side, while among the women it is equal for the two sexes.

There are a few examples of other forms of nervous disease in the family, which remain to be mentioned to complete this part of the family history. Five mothers among the men and one among the women were paralysed, and one died from disease of the brain. Two fathers died from apoplexy and one from paralysis. One maternal grandfather among the idiopathic males committed suicide while insane. Two cases of suicide as the result of drink have been mentioned in an earlier part of the paper. One woman was committed three times for attempted suicide, and made numerous other attempts while undergoing her imprisonment.

Table VIII. gives such details as I have been able to collect concerning crime on the part of other members of prisoners' families.

TABLE VIII.

TABLE showing the number of CRIMINAL RELATIVES of EPILEPTIC PRISONERS.

Relative.	IDIOPATHIC.			TRAUMATIC.	Net Total.	Remarks.
	Males.	Females.	Total.	Males.		
Father . . .	1	..	1	..	1	For drunkenness.
Mother . . .	1	..	1	..	1	"
Uncles . . .	3	..	3	..	3	{ 2 were Father's brothers.
Brothers . .	4	3	7	1	8	2 for drunkenness.
Sisters . . .	..	3	3	1	4	2 " "
Cousins . . .	2	..	2	..	2	{ Father's brothers' children.
Child . . . .	..	1	1	..	1	Female.
Total No. of Relatives convicted of Crime	11	7	18	2	20	

There are specially evident reasons for prisoners concealing any information they may possess on this subject. The knowledge of previous convictions so materially influences the result of any future criminal investigation, that they are naturally extremely reticent on the subject, both with regard to themselves and their relatives also. The difficulty is almost

as great in getting information from outside sources. There is, therefore, every reason for believing that the above table exhibits results considerably below the actual truth. The table of reformatory statistics before referred to gives on this point results greatly in excess of those for these older and epileptic criminals. Part of this may be due to children having a better knowledge of their relatives than adults who have been separated from home for many years; and part from their not appreciating the advisability of concealing the information.

TABLE IX.

TABLE showing the stated amount of CRIME amongst the RELATIVES of CHILDREN who have been committed to REFORMATORY SCHOOLS during the YEARS 1872 to 1876, inclusive.

Year.	No. of Boys.	Members of the Family who have been in Prison.					
		Father.	Per cent.	Mother.	Per cent.	Other Members.	Per cent.
1872	122	16	13.1	2	1.6	13	10.6
1873	154	15	9.7	4	2.5	23	14.9
1874	149	16	10.7	7	4.7	30	20.1
1875	150	19	12.6	3	2.0	43	28.6
1876	155	10	6.4	..	..	35	22.5

The only points noticeable in Table VIII. are that the collateral relatives are naturally the most numerous, and that drunkenness has been the offence in all the cases in which the nature of the crime has been ascertained.

Table X. (p. 514) shows briefly the general results obtained in the preceding pages with respect to the family history. The first part includes both direct and collateral relatives, the second part the former only.

From the first part of Table X. it will be seen that in the idiopathic cases drunkenness among the males and epilepsy among the females are respectively the forms of family taint most frequently met with, the very large proportion of epileptics among the latter making the net totals practically the same for both. There is also an increase both

TABLE X.

TABLE showing the GENERAL RESULTS of the INQUIRY into the FAMILY HISTORY of EPILEPTIC CRIMINALS.

	IDIOPATHIC.						TRAUMATIC.		Net Total.	
	Males.		Females.		Total.		Males.			
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
With family his- tory of drink }	36	57.1	11	36.6	47	50.5	8	30.7	55	46.2
With family his- tory of fits }	29 ¹	46.0	21 ²	70.0	50	53.7	4	15.3	54	45.3
With family his- tory of insanity }	16	25.4	9	30.0	25	26.8	3	11.5	28	23.5
With family his- tory of crime }	6	9.5	6	20.0	12	12.7	2	7.6	14	11.7
With direct here- ditary history of fits or insanity }	24	38.1	20	66.7	44	47.3	5	19.2	49	41.2
Without direct he- reditary history of fits or insanity }	39	61.9	10	33.3	49	52.7	21	80.8	70	58.8
With direct heredi- tary history of fits, insanity, drink, or crime }	47	74.6	21	70.0	68	73.1	9	34.6	77	64.7
Without direct he- reditary history of fits, insanity, drink, or crime }	16	25.4	9	30.0	25	26.9	17	65.4	42	35.3

¹ One had children only affected.² Two had children only affected.

of crime and insanity among the relatives of the females. This great preponderance of hereditary mental disease among the women as a predisposing cause of epilepsy and crime is seen perhaps better in the latter half of the table. Counting only direct relatives, 66.7 per cent. had one or more members affected with fits or insanity, as against 38.1 per cent. of the males. This result, I believe, accords with the statement usu-

ally made in speaking of hereditary insanity, that the female sex has a specially marked tendency to receive the taint from the parents. Classing together all possible predisposing causes, namely drunkenness, epilepsy, crime, and insanity, there is a difference of only 4 per cent. between the sexes. There is every reason to assume, judging from the conclusions arrived at by writers on mental disease, that if we could carry the family history of these criminals beyond the first generation, this amount of hereditary predisposition would be enormously increased. The amount of hereditary neurosis in these cases as they stand, however, is greatly in excess of that usually stated to exist by most authors. Dr. Reynolds found only 12 per cent. of epileptics giving a distinct history of epilepsy in other members of their family, and in only one-third of the total number of cases was there any nervous disease in either their direct or collateral relatives.

Hughlings-Jackson has "very little faith in the hereditariness of such symptoms as epilepsy or convulsions."¹ He cites a case where fits were known to exist in four members of one family, and remarks "that instances so striking are rare." Among criminals even more marked cases than this would appear to be far from uncommon. Since the above tables were made out, a man has been committed for trial, and is now in the hospital as a confirmed epileptic. The following is his hereditary history: Father had fits all his life, and died in one when prisoner was a child. He had been a very heavy drinker. Mother died 12 years ago from heart disease; was not subject to fits, and did not drink heavily. Has 6 brothers living; one is a heavy drinker, and epileptic, the others all healthy. Has had 4 sisters; 2 died from fits, aged 11 and 37 respectively. The latter was married, and had 6 children, all healthy. The two sisters living are both married, one has 6 and the other 7 children. In the elder sister's family one child has fits, and another died young in convulsions. An uncle—mother's brother—was subject to fits, and died from "fits and dropsy." Two of his own children had fits when young, and both are now dead. One cousin—a girl, æt. 14, daughter of another uncle, also on the maternal side—was in

¹ Reynolds's *Syst. Med.* vol. ii. p. 271.

an asylum, and died there from "decline." Prisoner himself has had fits all his life, and has been a heavy drinker for many years.

The question as to the relative amount of hereditary epilepsy among the different classes of society is doubtless a difficult one to answer. Dr. Reynolds is inclined to think that "hereditary taint is more frequently discoverable among the better conditions of life than among the poorer." I cannot help thinking that at the extreme lower end, at all events, the amount of hereditary nervous disease is much greater than is usually supposed. It may be true that the lower classes have become more habituated to such active determining causes as anxiety, alarm, and want; but it is probable that this would be more than counterbalanced by the increased amount of physical injury to which they are subject, to their long-continued habits of intemperance, and especially to the marked influence of hereditary alcoholism.

Passing now from the family history of these epileptics, it is interesting to inquire if there is any difference between them and ordinary prisoners in the character and amount of their crime, as evidenced by the number and nature of their convictions. I shall endeavour to be as brief as possible, but the question is important as furnishing corroborative evidence of many of the conclusions arrived at in the preceding pages.

Table X. gives, in a few well-defined groups, the number and nature of the offences for which these epileptics were committed to prison. Table XI. shows, under the same headings, the total committals for the year ending September 30th, 1876. I have selected 1876 for comparison, as a larger number of epileptics came under my observation during that year than in any other.

It should be remembered in connection with Table X. that committals to Wakefield Prison are alone referred to. Many epileptics gave a history of previous convictions in other gaols, but—for the better comparison of these cases with ordinary criminals—all such convictions have been omitted.

TABLE XI.

TABLE showing the NUMBER and NATURE of OFFENCES committed by EPILEPTIC PRISONERS.

Offences.	IDIOPATHIC.						TRAUMATIC.		Net Total.	
	Males.		Females.		Total.		Males.			
	No. of Con- victions.	Per cent.	No. of Con- victions.	Per cent.	No. of Con- victions.	Per cent.	No. of Con- victions.	Per cent.		
Felony	45	17·7	28	10·5	73	14·0	14	23·6	87	14·9
Bogues and Vagabonds and Vagrancy	45	17·7	46	17·2	91	17·5	2	3·2	93	15·9
Neglect of Family .	2	0·8	..	..	2	0·4	..	..	2	0·3
Disorderly Paupers .	16	6·3	16	5·9	32	6·1	6	9·7	38	6·5
Common Prostitutes .	..	..	9	3·4	9	1·7	..	..	9	1·7
Assaults	38	14·9	10	3·8	48	9·2	11	17·7	59	10·1
Wilful Damage . .	7	2·8	7	2·6	14	2·7	2	3·2	16	2·7
Drunkenness . . .	80	31·5	124	46·5	204	39·2	20	32·3	224	38·4
Bastardy Laws . .	8	3·2	..	..	8	1·5	..	..	8	1·5
Other Summary Con- victions	13	5·1	27	10·1	40	7·7	7	11·3	47	8·0
Totals . .	254	100·0	267	100·0	521	100·0	62	100·0	583	100·0

Under the head of "Other Summary Convictions," in Tables XI and XII., the epileptics are included one for each among the following offences. Fraud; obtaining living by dishonest means; non-payment of rates; hawking without a certificate; embezzlement; field robbing; keeping unregistered lodging-house; poaching; ill-treating a pony; resisting a constable; warehouse breaking; unlawful pawning; attempt at murder; travelling without a ticket; two for neglect of family; three for attempted suicide; and six for breach of bye-laws.

On comparing Tables XI. and XII., it will be observed, so far as the idiopathic males are concerned, that the proportionate

TABLE XII.

OFFENCES OF PRISONERS committed during the Year ending
SEPTEMBER 30th, 1876.

Offences.	Males.		Females.		Total.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.
Felony	1401	16·3	487	16·0	1,888	16·2
Rogues and Vagabonds and Vagrancy }	1141	13·3	213	7·9	1,354	11·9
Neglect of Family. .	167	1·9	8	0·1	170	1·5
Disorderly Paupers .	370	4·3	19	0·7	389	3·5
Common Prostitutes .	..	..	363	13·4	363	3·1
Assaults	1059	12·3	119	4·4	1,178	10·4
Wilful Damage . .	247	2·8	56	2·0	303	2·7
Drunkenness . . .	2683	31·3	1074	39·4	3,757	33·2
Bastardy Laws . .	99	1·1	..	..	99	0·9
Other Summary Con- victions }	1439	16·7	441	16·1	1880	16·6
Total	8606	100·0	3725	100·0	11,331	100·0

number of committals is greater among the epileptics for all offences except the following:—Neglect of family; wilful damage; and other summary convictions. For wilful damage the numbers are equal. An explanation for the increase among the vagrants and disorderly paupers has been already suggested. The percentage of committals for drunkenness is not appreciably greater. The year 1876 appears to have borne a higher percentage of committals than usual for this offence among the men. This is unfortunate, as there is reason to think that, as a rule, the proportionate percentage should be greater for epileptics than for non-epileptics. The last return I have by me, namely that for the quarter ending March 31st, 1878, gives the committals for drunkenness among the males at 24·6 per cent., or 7 per cent. below that of the epileptics. At the same time it must be remembered that drunkards are

often convicted of offences other than drunkenness, which have been committed simply under the influence of drink. The increased percentage under the heads of Felony and Assaults may owe its origin partly to this cause.

Turning our attention to the column for females, it will be observed that there is an increased percentage of committals among the epileptics for rogues and vagabonds, vagrancy, disorderly paupers, wilful damage, and drunkenness; and a decreased percentage for felony, common prostitutes, assaults, and other summary convictions. The increase in the first two classes of offences will probably be due to the cause suggested for the same fact in the male cases. With the increased percentage for drunkenness there is a decrease for assaults and felony. The total results for the idiopathic cases of both sexes show an increase for rogues and vagabonds, vagrancy, disorderly paupers, and drunkenness; and a decrease for felony, neglect of family, common prostitutes, and other summary convictions. The figures for wilful damage are the same. We might have expected to have found an increase for neglect of family; the reason for the decrease is, probably, that fewer of these prisoners are married, the existence of epilepsy not appearing to be a prepossessing feature. The number of committals among the traumatic males is too few to furnish any satisfactory conclusions when treated by themselves. The net totals for epileptics of all classes show an increase for rogues and vagabonds and vagrancy, disorderly paupers, drunkenness, and bastardy; and a decrease for felony, neglect of family, common prostitutes, assaults, and other summary convictions. The larger proportionate number of offences, then, for which these epileptics were committed appear to be those connected especially with drunkenness and vagrancy.

It has been asserted by Taquet that "sexual desires show themselves early in children of drunkards, and are associated with an absence of moral sense."¹ It is interesting, in connection with this statement, to observe that the percentage of convictions for bastardy is three times as great among the epileptics as it is among the non-epileptics. The interest of course lies in assuming that the epilepsy owes its origin to the

¹ Mod. Record, Jan. 15, 1876. Page 8.

hereditary alcoholism which existed in all these prisoners. The above remarks, it must be remembered, apply only to the *comparative* number of convictions for the different offences. Inquiry into the *actual* number shows that not only are certain crimes more frequent among epileptics, but that the total number of convictions is considerably greater in all cases, both for males and females.

TABLE XIII.

TABLE showing AVERAGE NUMBER OF CONVICTIONS for EPILEPTIC PRISONERS.

	IDEOPATHIC.			TRAUMATIC.	Net Total.
	Males.	Females.	Total.	Males.	
Number of Prisoners	63	30	93	23	119
Total Number of Convictions	254	237	521	62	583
Average Number of Convictions	4.0	8.9	5.6	2.8	4.9

The difficulty in giving a similar table for ordinary offenders lies in the fact that in prison returns the number of *convictions* for any given time is stated, but not the number of *prisoners* convicted. One man, therefore, may be counted over three or four times, if he has been committed more than once during that period. I have specially examined the returns of about 2500 prisoners, discharged consecutively during the latter part of the year 1877, and eliminated this source of error so far as was practicable. The following are the results, it being premised that the average number of convictions given for each sex should, if anything, be lower than that stated:

	Males.	Females.
Total number of Prisoners	2072	501
„ „ „ Convictions	5957	2941
Average number of Convictions per Prisoner .	2.8	5.8

Prisoners convicted of drunkenness are, as a rule, sentenced

to short terms of imprisonment. The offence among chronic tipplers being frequently repeated, it follows that the number of previous committals for habitual drunkards would necessarily be in excess of that for other classes of prisoners. As there is little doubt about drunkenness being the more frequent offence among epileptics, it seemed advisable to discover, if possible, whether the increased average number of convictions for epileptics was due simply to the increased amount of drunkenness among them. It is impossible to determine the point accurately, on account of drunkards being so frequently committed for other offences. But I went carefully through the above returns for the females, as they are the chief offenders in this respect, with the following result:—Out of the 501 cases, 177 appeared to belong more especially to the drunken class. The total number of convictions for them was 1317, which would give an average per prisoner of 7·4, a considerable increase, it will be observed, on the numbers stated above, but still it does not reach that for the epileptics by about 1½. If the drunken epileptics only were selected, the difference would be increased by at least twice as much again. It is impossible, therefore, to avoid the conclusion that the amount of crime, as indicated by the number of convictions, is greater among epileptics than ordinary criminals. The difference in the present series of cases is really very marked. The number of convictions for the 501 females was 2941; supposing these women to have had each the same average number of convictions as the epileptics, this total would have to be increased by 1517.

The same conclusion may be arrived at by comparing the number of first committals and recommittals. Table XIV. gives the particulars for the epileptics, and Table XV. for prisoners of all classes. It must still be remembered, with respect to the latter table, that if a prisoner has been recommitted during the quarter, he will have been counted more than once.

TABLE XIV.

TABLE showing the number of FIRST COMMITTEALS and RECOMMITTEALS of EPILEPTIC PRISONERS.

Previous Committeals.	IDIOPATHIC.						TRAUMATIC.		Net Total.	
	Males.		Females.		Total.		Males.			
	No.	Percent.	No.	Percent.	No.	Percent.	No.	Percent.	No.	Percent.
Once	12	29.8	5	23.8	17	27.4	5	41.7	22	29.7
Twice	6	14.6	..	..	6	9.7	3	25.1	9	12.2
Thrice	5	12.2	1	4.8	6	9.7	1	8.3	7	9.5
4 times	3	7.3	1	4.8	4	6.4	1	8.3	5	6.7
5 times	3	7.3	..	..	3	4.9	1	8.3	4	5.4
6 and 7 times . .	5	12.2	2	9.5	7	11.3	..	..	7	9.5
8, 9, and 10 times.	3	7.3	2	9.5	5	8.1	..	..	5	6.7
Above 10 times .	4	9.8	10	47.6	14	22.5	1	8.3	15	20.3
Total Recommitteals	41	65.0	21	70.0	62	66.7	12	46.2	74	62.1
First Committeals .	22	35.0	9	30.0	31	33.3	14	53.8	45	37.9

The number of recidivists among the epileptics is greater by 16 per cent. and 13.1 per cent. respectively for the idiopathic and traumatic males, and by 5 per cent. for the females; the totals being an increase of 14.5 per cent. for all idiopathic cases, and of 9.9 per cent. for epileptics generally. In Table XIII. both the idiopathic and the net totals, compared with Table XIV., show a smaller percentage of prisoners with from 1 to 5 previous convictions, and a larger percentage for all numbers over 5. The total number of prisoners with more than 10 previous convictions is greater by 5 per cent. for the epileptics, but the increase, it will be observed, is due entirely to the females, who show an excess of no less than 18 per cent.

TABLE XV.

FIRST COMMITTALS and RECOMMITTALS of PRISONERS received during the QUARTER ending MARCH 31st, 1878.

Previous Commitments.	Males.		Females.		Total.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.
Once	441	38·7	90	20·8	531	30·5
Twice	210	16·0	41	9·5	251	14·4
Thrice	154	11·8	39	9·0	193	11·1
4 times	115	8·8	42	9·7	157	9·0
5 times	73	5·6	24	5·6	97	5·6
6 and 7 times	104	7·9	46	10·6	150	8·6
8, 9, and 10 times	71	5·4	21	4·9	92	5·3
Above 10 times	142	10·8	129	29·9	271	15·5
Total Recommittals	1810	49·0	432	65·0	1742	52·2
First Commitments	1968	51·0	233	35·0	1599	47·8

Of the 10 idiopathic females with more than 10 previous convictions:—

1 was committed 51 times, including 26 for drunkenness.
 1 " 36 " 26 "
 1 " 27 " 5 "
 1 " 18 " 12 "
 1 " 18 " 10 "
 1 " 14 " 7 "
 1 " 13 " 3 "
 1 " 12 " 9 "
 1 " 12 times, all for drunkenness.
 1 " 17 times.

Of the 4 idiopathic males:—

1 was committed 30 times, including 21 for drunkenness.
 1 " 22 " 7 "
 1 " 12 " 3 "
 1 " 11 times.

The 1 traumatic male:—

was committed 14 times, including 8 for drunkenness.

These 15 cases have an average of 24 convictions each, including 9·1 for drunkenness.

In Table XVI. are given the details of the habits of the prisoners and their fathers in the case of epileptic and non-epileptic males. The figures for the latter are part of the table before referred to as having reference to prisoners committed for 6 months and over.

TABLE XVI.

TABLE showing the HABITS of the PRISONERS and their FATHERS in the Case of EPILEPTIC and NON-EPILEPTIC MALES.

	Epileptic.	Non-Epileptic.
	per cent.	per cent.
Number of Prisoners of intemperate habits . . .	75·7	66·0
Fathers drunkards . . .	67·8	51·5
„ sober . . .	32·2	48·5
Number of Prisoners of temperate habits. . . .	24·8	34·0
Fathers drunkards	66·6	30·9
„ sober	33·4	69·1

I do not wish to lay too much stress on these figures, as the records of the epileptics are somewhat imperfect on this point, and also because the two classes of prisoners are not strictly of the same criminal type; but the table seems to lead to the following general conclusions:—

- (1) There are more drunkards among the epileptics than among the non-epileptics, the proportion of temperate to intemperate prisoners among the latter being as 2 to 1, and among the former as 3 to 1.
- (2) Among the non-epileptics, the percentage of drunken fathers is greater for prisoners of intemperate habits, and the percentage of sober fathers greater for prisoners of temperate habits.
- (3) Among the epileptics, the percentage of drunken and sober fathers is practically the same for temperate and intemperate prisoners.
- (4) The percentage of drunken fathers among the epileptics is greater, both for temperate and intemperate prisoners, than it is for the intemperate non-epileptics.

With regard to the epileptic females, the case is a little different; the number of drunkards among them is even still greater than among the men. It is the exception to meet with an epileptic female criminal who is not at the same time intemperate. Among these intemperate epileptic women the percentage of sober fathers is greater than the percentage of drunken fathers. It is probable that a more perfect acquaintance with their family history would show a larger proportion of drunkards among the mothers, but, making allowance for this, there is little doubt that the amount of hereditary alcoholism is considerably less with the women than it is with the men. On the other hand, we find that the amount of nervous and mental disease in the family is greater by at least 20 per cent. Whereas, then, epilepsy in men is associated especially with alcoholism in the parents, in women it is found more frequently in connection with epilepsy and insanity in other members of the family.

TABLE XVII.

TABLE showing the Number of EPILEPTIC PRISONERS suffering from other Forms of NERVOUS or MENTAL DISEASE.

DISEASE.	IDIOPATHIC.				TRAUMATIC.	
	Males.		Females.		Males.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.
Confined in Asylum	3	4·7	4	13·3	2	7·6
Demented or Imbecile	2	8·0	..	..	1	3·8
Hemiplegic	8	12·7	1	3·3	2	7·6
With Facial Paralysis	2	8·1	..	..	..	3·8
Cripple from Birth	1	1·5	..	..	..	..
Deaf and Dumb . . . . .	..	..	1	3·3	..	..
Wasting of limbs from Infantile Paralysis. . . . .	..	..	1	3·3	..	..

It is further noticeable, that the number of convictions for the intemperate epileptics of both sexes is greater than for the

temperate; the excess being due to the increased committals for drunkenness, and, as one would naturally expect from the foregoing, affecting the women to a much greater extent than the men.

In addition to their epileptic convulsions and frequent drunken habits, several of these prisoners were affected with other forms of nervous disease. (See Table XVII, p. 525.)

TABLE XVIII.

	CASES.											Summary.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	
Sex (M. Male, F. Female)	M.	M.	M.	M.	M.	M.	M.	M.	M.	M.	F.	10 M., 1 F.
Age	60	50	53	33	39	25	42	76	24	23	33	
Class (I. Idiopathic, T. Traumatic) }	I.	I.	T.	I.	I.	I.	I.	I.	T.	I.	I.	9 I., 2 T.
Duration of Fits in years	24	22	15	33	8	25	8	76	2	15	4	
Duration of Hemiplegia } in years	24	22	10	(?)	8	25	8	2	$\frac{1}{2}$	5	(?)	
Side affected (R. Right, L. Left) }	L.	L.	R.	L.	L.	R.	L.	L.	R.	R.	L.	7 L., 4 R.
Habits of Prisoner } (D. Drunkard, S. Sober)	D.	S.	S.	S.	..	..	D.	S.	D.	..	..	3 D., 4 S.
Habits of Father . . .	D.	D.	S.	D.	S.	(?)	D.	S.	D.	S.	S.	5 D., 5 S.
Habits of Mother . . .	..	..	D.	..	..	..	..	..	..	..	..	1 D.
Other members of family } Drunkards . . . . .	..	..	..	1	..	..	..	..	..	..	..
Total No. of Convictions	30	6	1	2	5	1	1	8	1	1	1	
No. of Convictions for } Drunkenness }	21	..	..	..	1	..	..	..	..	..	1	
No. of Relatives with } Fits	1	..	..	6	2	..	..	2	2	..	..
No. of Relatives Insane	..	..	..	1	2	..	1	1	2	..	..

Of the 9 who had been insane, 3 men and 3 women had been confined in an asylum once, 1 man twice, 1 woman three times, and 1 man four times. In addition to the above cases of distinct mental disease, many of these epileptics are

more or less weak-minded, being dirty in their habits and idle at their work; they are occasionally given to emotional outbursts, and exhibit a general want of moral self-control. The existence of so large a number of cases of paralysis is somewhat remarkable. The ordinary temporary hemiplegia following an epileptic fit is not here referred to. All the 11 prisoners in the above table had organic hemiplegia at the time they came under observation. It is further remarkable that, in the large majority of cases, 7 out of 9 among those returned as idiopathic, the hemiplegia was on the left side. The principal details in connection with these cases may be gathered from the tabular analysis opposite (Table XVIII.).