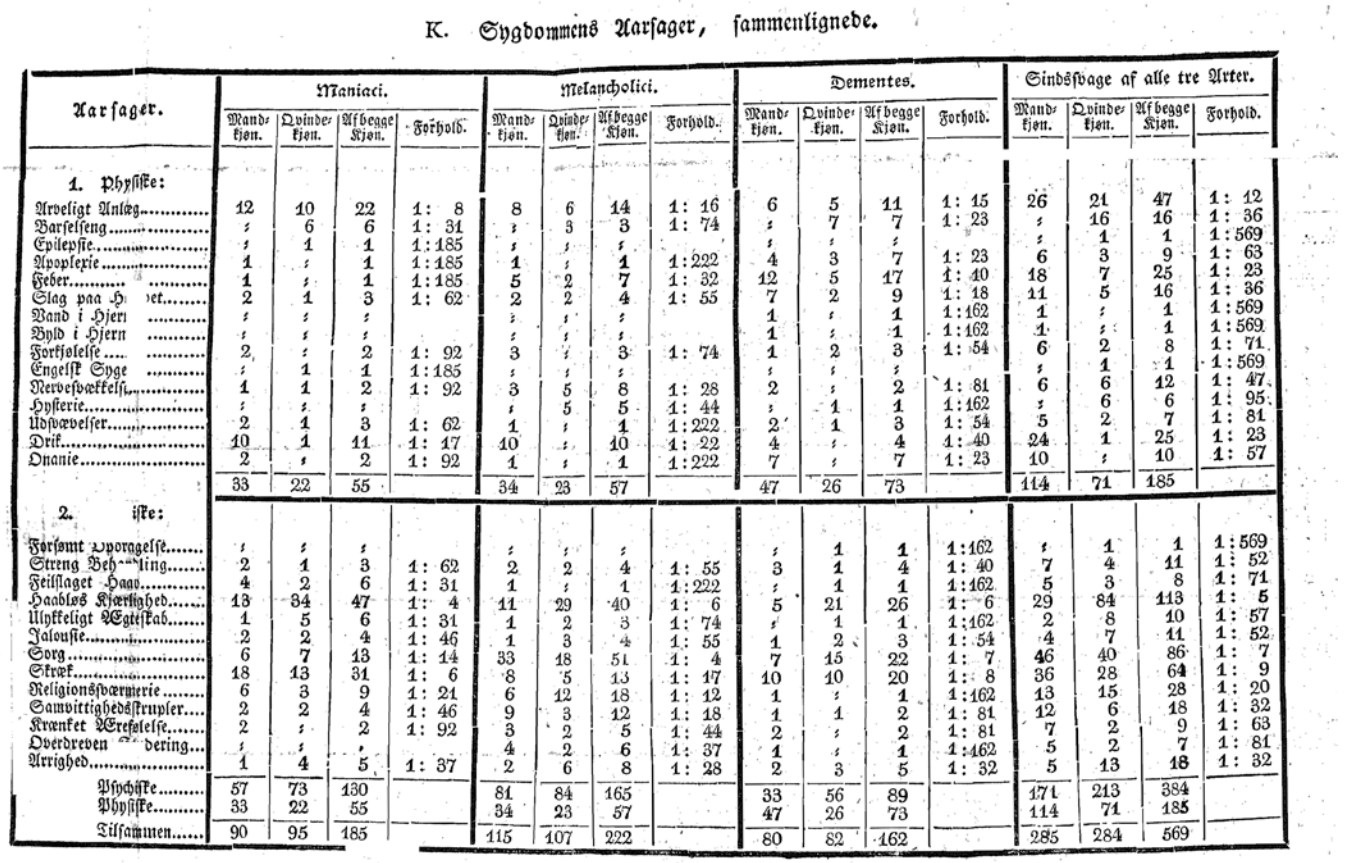
Insane Asylums and Genetics: How Human Heredity Became a Data Science



K. Sygdommens Aarsager, sammenlignede.

Aarsager.	Maniaci.				Melancholici.				Dementes.				Sindssvage af alle tre Arter.			
	Mandkjøn.	Qvindekjøn.	Af begge Kjøn.	Forhold.	Mandkjøn.	Qvindekjøn.	Af begge Kjøn.	Forhold.	Mandkjøn.	Qvindekjøn.	Af begge Kjøn.	Forhold.	Mandkjøn.	Qvindekjøn.	Af begge Kjøn.	Forhold.
1. Physiske:																
Arveligt Anlæg	12	10	22	1: 8	8	6	14	1: 16	6	5	11	1: 15	26	21	47	1: 12
Barselseng	;	6	6	1: 31	;	3	3	1: 74	;	7	7	1: 23	;	16	16	1: 36
Epilepsie	;	1	1	1:185	;	;	;		;	;	;		;	1	1	1:569
Apoplexie	1	;	1	1:185	1	;	1	1:222	4	3	7	1: 23	6	3	9	1: 63
Feber	1	;	1	1:185	5	2	7	1: 32	12	5	17	1: 10	18	7	25	1: 23
Slag paa H ...et	2	1	3	1: 62	2	2	4	1: 55	7	2	9	1: 18	11	5	16	1: 36
Vand i Hjern	;	;	;		;	;	;		1	;	1	1:162	1	;	1	1:569
Byld i Hjern	;	;	;		;	;	;		1	;	1	1:162	1	;	1	1:569
Forkjølelse	2	;	2	1: 92	3	;	3	1: 74	1	2	3	1: 54	6	2	8	1: 71
Engelsk Syge	;	1	1	1:185	;	;	;		;	;	;		;	1	1	1:569
Nervesvækkelse	1	1	2	1: 92	3	5	8	1: 28	2	;	2	1: 81	6	6	12	1: 47
Hysterie	;	;	;		;	5	5	1: 44	;	1	1	1:162	;	6	6	1: 95
Udsvævelser	2	1	3	1: 62	1	;	1	1:222	2	1	3	1: 54	5	2	7	1: 81
Drik	10	1	11	1: 17	10	;	10	1: 22	4	;	4	1: 40	24	1	25	1: 23
Onanie	2	;	2	1: 92	1	;	1	1:222	7	;	7	1: 23	10	;	10	1: 57
	33	22	55		34	23	57		47	26	73		114	71	185	
2. ...iske:																
Forsømt Opdragelse	;	;	;		;	;	;		;	1	1	1:162	;	1	1	1:569
Streng Behandling	2	1	3	1: 62	2	2	4	1: 55	3	1	4	1: 40	7	4	11	1: 52
Feilslaget Haab	4	2	6	1: 31	1	;	1	1:222	;	1	1	1:162	5	3	8	1: 71
Haabløs Kjærlighed	13	34	47	1: 4	11	29	40	1: 6	5	21	26	1: 6	29	84	113	1: 5
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Jalouste	2	2	4	1: 46	1	3	4	1: 55	1	2	3	1: 54	4	7	11	1: 52
Sorg	6	7	13	1: 14	33	18	51	1: 4	7	15	22	1: 7	46	40	86	1: 7
Skræk	18	13	31	1: 6	8	5	13	1: 17	10	10	20	1: 8	36	28	64	1: 9
Religionsvæmmerie	6	3	9	1: 21	6	12	18	1: 12	1	;	1	1:162	13	15	28	1: 20
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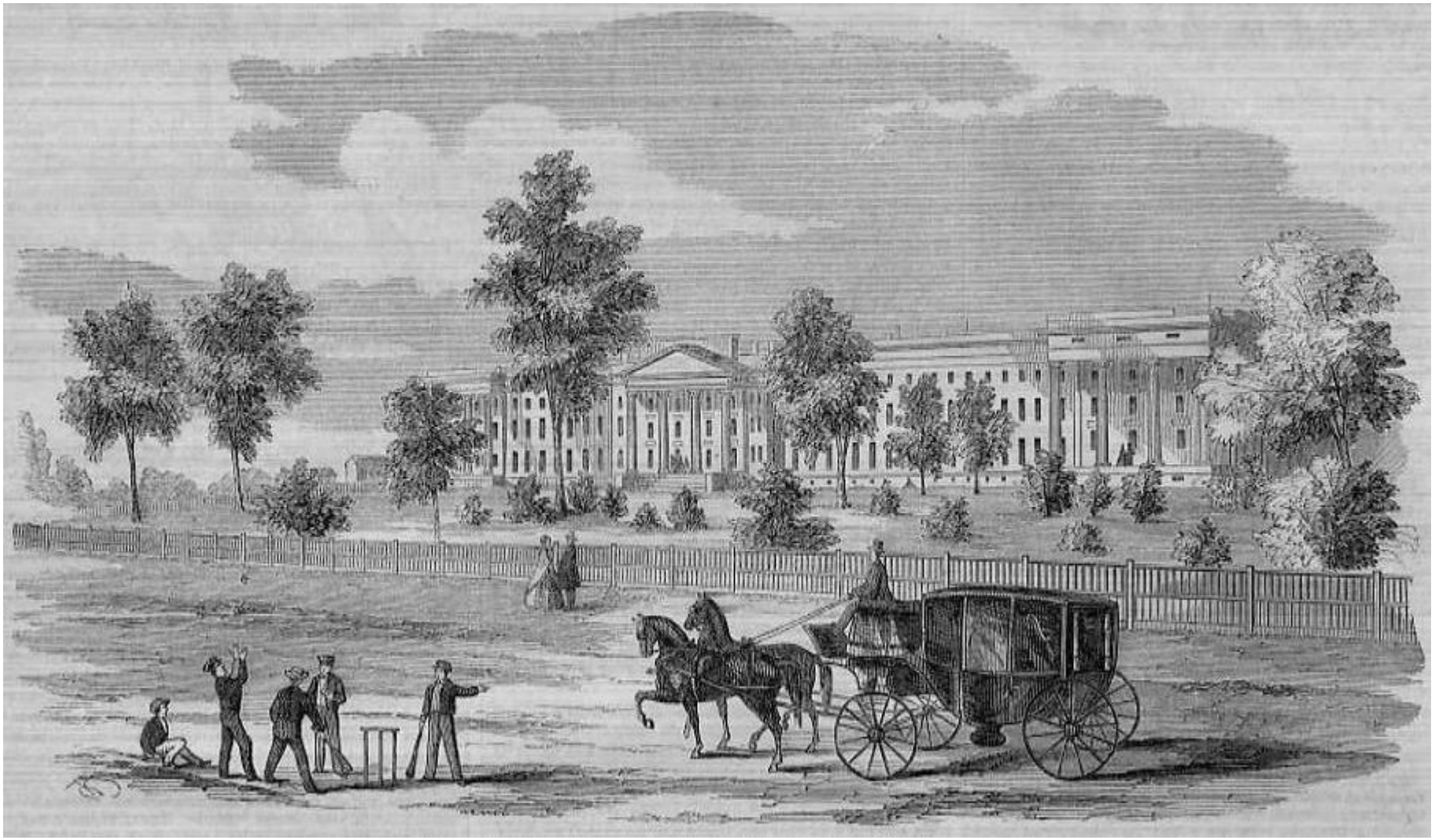
Tilsammen	90	95	185		115	107	222		80	82	162		285	284	569	

Theodore M. Porter
UCLA Department of History
12 December 2016

EARLY IDEAS ABOUT HEREDITY

- MENDEL WAS FASCINATED BY THE QUESTION "WHAT IS RESPONSIBLE FOR THE VARIATION IN PLANTS AND ANIMALS?"
- FOR 7 YEARS, 1856 - 1863, MENDEL CROSSED AND PRODUCED AROUND 28,000 PEA PLANTS.

Mendel: always a story of data. But not the whole story.



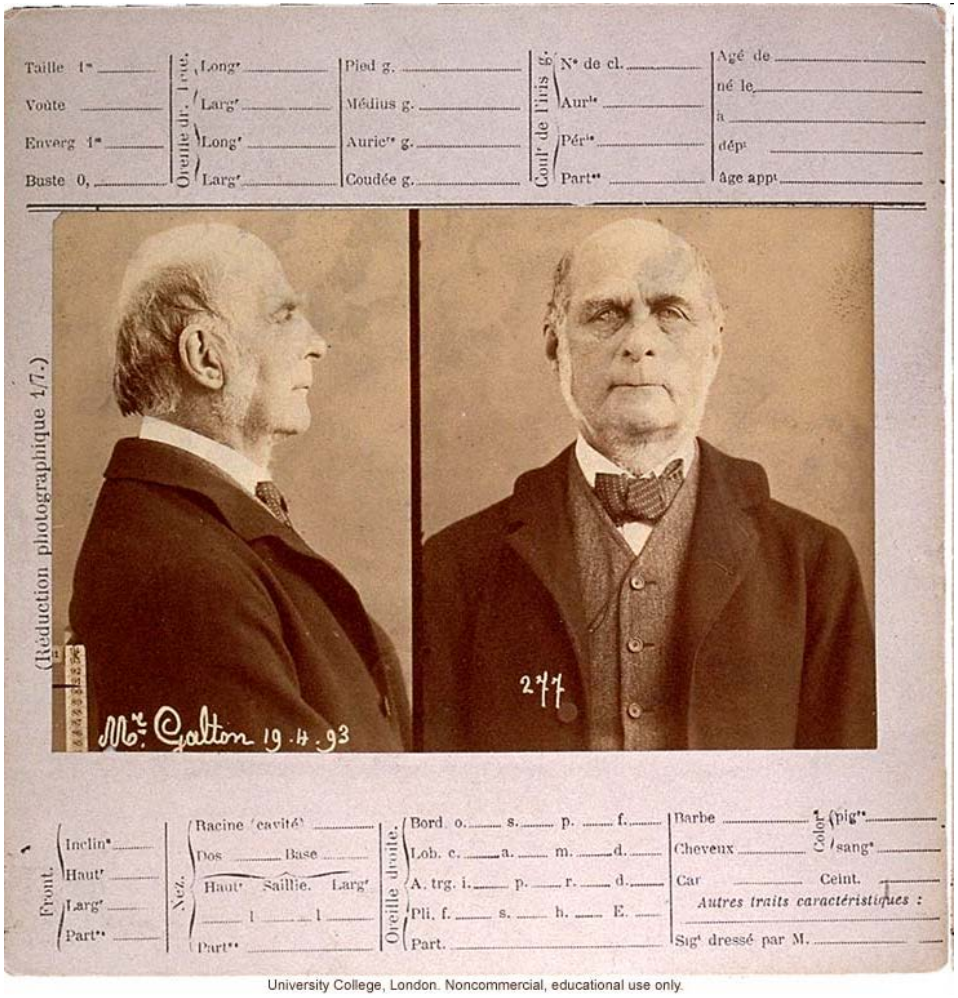
Columbus, Ohio Lunatic Asylum, 1840s? The asylum was another important site of data on heredity, and on a question that really mattered.

Is the history of (human) genetics primarily about genes and DNA?

Did eugenics spring forth from the head of Galton (Darwin's cousin) like Athena from Zeus?

Data frenzy grew up in connection with a range of state institutions.

What are the institutions of science?



Francis Galton and Bertillonage

He speaks ‘of two twin brothers who had been confined, on account of monomania, at Bicêtre… Physically the two young men are so nearly alike that the one is easily mistaken for the other. Morally, their resemblance is no less complete, and is most remarkable in its details. Thus, their dominant ideas are absolutely the same. They both consider themselves subject to imaginary persecutions; the same enemies have sworn their destruction, and employ the same means to effect it. Both have hallucinations of hearing. They are both of them melancholy and morose; they never address a word to anybody, and will hardly answer the questions that others address to them. They have always been kept apart and never communicate with one another.

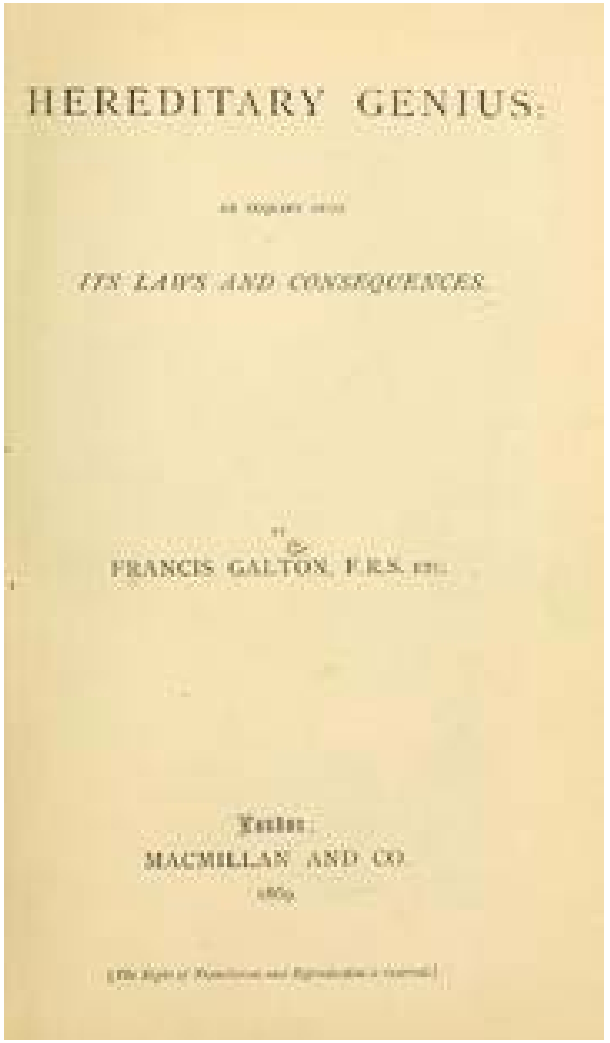
From a flyer by Francis Galton sent out in 1875 asking for information about twins. Galton quotes here from the French alienist Moreau de Tours (Galton Papers, University College, London)

Galton didn't believe these claims, nor did the asylum directors to whom he sent his circular.

But he clearly was aware of the asylum as an important site of date on human heredity.

His book *Hereditary Genius* (1869) may have been inspired by the writing of an asylum director (Maudsley).

Hereditary data from asylums was already an old story by then


HEREDITARY GENIUS.

ITS LAWS AND CONSEQUENCES

FRANCIS GALTON, F.R.S.

MACMILLAN AND CO.

THE HISTORY OF TWINS, AS A CRITERION OF THE RELATIVE POWERS OF NATURE AND NURTURE.[1]

By Francis Galton, F.R.S.

THE exceedingly close resemblance attributed to twins has been the subject of many novels and plays, and most persons have felt a desire to know upon what basis of truth those works of fiction may rest. But twins have many other claims to attention, one of which will be discussed in the present memoir. It is, that their history affords means of distinguishing between the effects of tendencies received at birth, and of those that were imposed by the circumstances of their after lives; in other words, between the effects of nature and of nurture. This is a subject of especial importance in its bearings on investigations into mental heredity, and I, for my part, have keenly felt the difficulty of drawing the necessary distinction whenever I tried to estimate the degree in which mental ability was, on the average, inherited. The objection to statistical evidence in proof of its inheritance has always been: 'The persons whom you compare may have lived under similar social conditions and have had similar advantages of education, but such prominent conditions are only a small part of those that determine the future of each man's life. It is to trifling accidental circumstances that the bent of his disposition and his success are mainly due, and these you leave wholly out of account—in fact, they do not admit of being tabulated, and therefore your statistics, however plausible at first sight, are really of very little use.' No method of enquiry which I have been able to carry out—and I have tried many methods—is wholly free from this objection. I have therefore attacked the problem from the opposite side, seeking for some new method by which it would be possible to weigh in just scales the respective effects of nature and nurture, and to ascertain their several shares in framing the disposition and intellectual ability of men. The life history of twins supplies what I wanted. We might begin by enquiring about twins who were closely alike in boyhood and youth, and who were educated together for many years, and learn whether they subsequently grew unlike, and, if so, what the main causes were which, in the opinion of the family, produced the dissimilarity. In this way we may obtain much direct evidence of the kind we want; but we can also obtain yet more valuable evidence by a converse method. We can enquire into the history of twins who were exceedingly unlike in childhood, and learn how far they became assimilated under the influence of their identical nurtures; having the same home, the same teachers, the same associates, and in every other respect the same surroundings.

My materials were obtained by sending circulars of enquiry to persons who were either twins themselves or the near relations of twins. The printed questions were in thirteen groups; the last of them asked for the addresses of other twins known to the recipient who might be likely to respond if I wrote to them. This happily led to a continually widening circle of correspondence, which I pursued until enough material was accumulated for a general reconnaissance of the subject.

[1] In my *English Men of Science*, 1874, p. 12, I treated this subject in a cursory way. It subsequently occurred to me that it deserved a more elaborate enquiry, which I made, and of which this paper is a result.

There is a large literature relating to twins in their purely surgical and physiological aspect. The reader interested in this should consult *Die Lehre von den Zwillingen*, von L. Kleinwächter, Prag. 1871; it is full of references, but it is also disfigured by a number of numerical misprints, especially in p. 26. I have not found any book that treats of twins from my present point of view.

The reader will easily understand that the word 'twins' is a vague expression, which covers two very dissimilar events; the one corresponding to the progeny of animals that have usually more than one young one at a birth, and the other corresponding to those double-yolked eggs that are due to two germinal spots in a single ovum. The consequence of this is, that I find a curious discontinuity in my results. One would have expected that twins would commonly be found to possess a certain average likeness to one another; that a few would greatly exceed that degree of likeness, and a few would greatly fall short of it; but this is not at all the case. Twins may be divided into three groups, so distinct that there are not many intermediate instances; namely, strongly alike, moderately alike, and extremely dissimilar. When the twins are a boy and a girl, they are never closely alike; in fact, their origin never corresponds to that of the above-mentioned double-yolked eggs.

I have received about eighty returns of cases of close similarity, thirty-five of which entered into many instructive details. In a few of these not a single point of difference could be specified. In the remainder, the colour of the hair and eyes were almost always identical; the height, weight, and strength were generally very nearly so, but I have a few cases of a notable difference in these, notwithstanding the resemblance was otherwise very near. The manner and address of the thirty-five pairs of twins is usually described as being very similar, though there often exists a difference of expression familiar to near relatives but unperceived by strangers. The intonation of the voice when speaking is commonly the same, but it frequently happens that the twins sing in different keys. Most singularly, that one point in which similarity is rare is the handwriting. I cannot account for this, considering how strongly handwriting runs in families, but I am sure of the fact. I have only one case in which nobody, not even the twins themselves, could distinguish their own notes of lectures, &c.; barely two or three in which the handwriting was undistinguishable by others and only a few in which it was described as closely alike. On the other hand, I have many in which it is stated to be unlike, and some in which it is alluded to as the only point of difference.

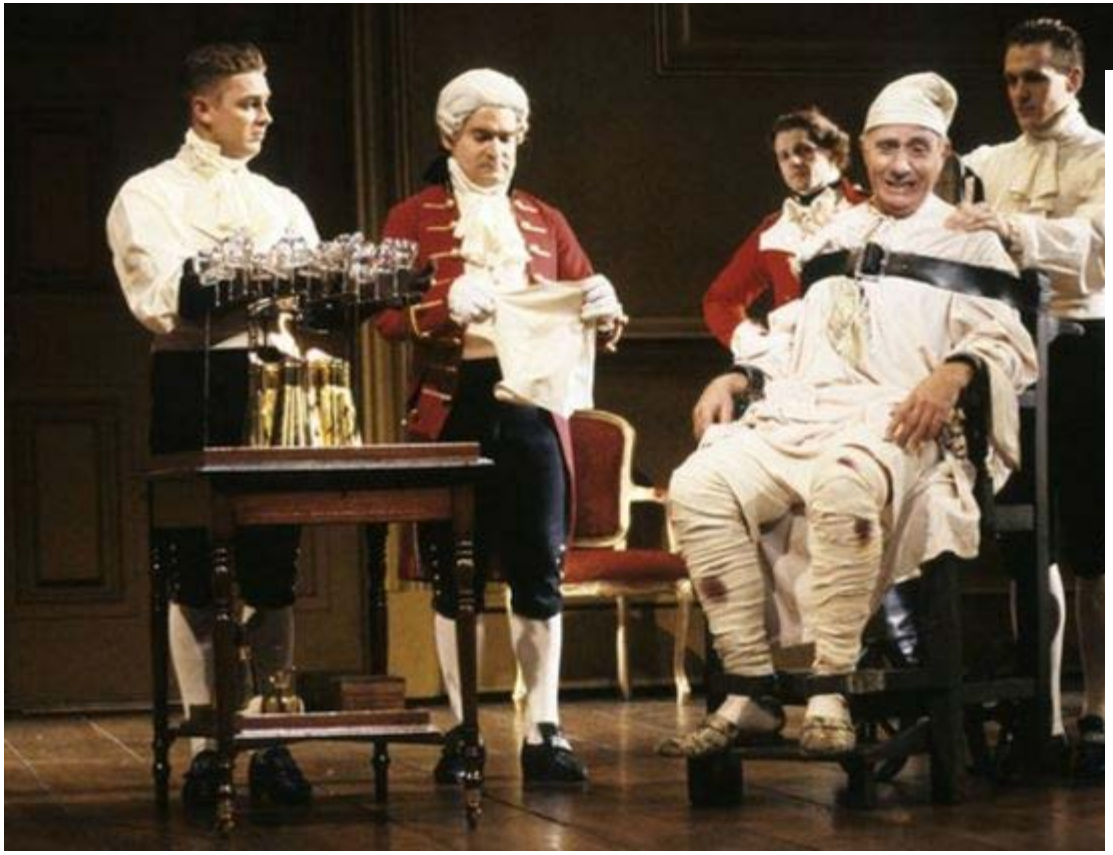
One of my enquiries was for anecdotes as regards the mistakes made by near relatives, between the twins. They are numerous, but not very varied in character. When the twins are children, they have commonly to be distinguished by ribbons tied round their wrist or neck; nevertheless the one is sometimes fed, physicked, and whipped by mistake for the other, and the description of these little domestic catastrophes is usually given to me by the mother, in a phraseology that is somewhat touching by reason of its seriousness. I have one case in which a doubt remains whether the children were not changed in their bath, and the presumed A is not really B, and *vice versâ*.' In another case an artist was engaged on the portraits of twins who were between

TABLE VI.

The principal, occaſional, and remote cauſes of inſanity, together with the comparative proportion of cured, incurable, and dead, as influenced by each of theſe different cauſes; and alſo the proportion of relapſes: founded on the Bedlam regiſters.

The principal occaſional, and remote cauſes of inſanity; and proportion of relapſes.	Total number of inſane from each of the different cauſes.	Cured	Incurable.	Dead.
Misfortunes, troubles, diſappointments, grief, vexation, loſſes, croſſes, jealouſy, ill-uſage, anxiety, deſpair, diſtreſs	383	109	235	39
Religion and methodiſm —	166	54	90	22
Frights — —	96	38	51	7
Love — —	136	50	80	6
Study — —	40	10	27	3
Pride — —	23	2	20	1
Drink — —	111	31	68	12
Parturition — —	145	66	69	10
Fever — —	212	100	86	26
Family and hereditary —	213	90	103	20
Venereal — —	24	10	11	3
Contuſion, fracture, and fall	13	8	5	0
Obſtruction — —	18	8	5	
Ulcer and ſcab dried up —	7			
Relapſes from all the preceding cauſes, and alſo from preceding leſion by inſanity —	1205	508	623	74
Total —	2829			

From William Black, *An Arithmetical and Medical Analysis of the Diseases and Mortality of the Human Species* (1789), p. 133



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Relapſes from all the preceding cauſes, and alſo from preceding leſion by infanity —	1205	508	623	74
Total —	2829			

Family and Hereditary

William Black's table of causes of insanity from an investigation evoked by the madness of George III (1789)

CAUSES PHYSIQUES. N° 7.

Salpêtrière.

Hérédité	105		150
Convulsions de la mère pendant la gestation	11		4
Épilepsie	11		2
Désordre menstruel	55		19
Suite de couches	52		21
Temps critique	27		11
Progrès de l'âge	60		4
Insolation	12		4
Coups ou chutes sur la tête	14		4
Fièvre	13		12
Syphilis	8		1
Mercure	14		18
Vers intestinaux	24		4
Apoplexie	60		10
Total	351	Total	107

Esquirol's tables, 1816: physical causes. Labelling should be Salpêtrière for left column and Esquirol's private asylum for right column. Evidently he regards heredity as a special sort of cause.

K. Sygdommens Aarsager, sammenlignede.

Aarsager.	Maniaci.				Melancholici.				Dementes.				Sindssvage af alle tre Arter.			
	Mandkjøn.	Qvindekjøn.	Af begge Kjøn.	Forhold.	Mandkjøn.	Qvindekjøn.	Af begge Kjøn.	Forhold.	Mandkjøn.	Qvindekjøn.	Af begge Kjøn.	Forhold.	Mandkjøn.	Qvindekjøn.	Af begge Kjøn.	Forhold.
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Barselseng	;	6	6	1: 31	;	3	3	1: 74	;	7	7	1: 23	;	16	16	1: 36
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Feber	1	;	1	1:185	5	2	7	1: 32	12	5	17	1: 10	18	7	25	1: 23
Slag paa H[illegible]et	2	1	3	1: 62	2	2	4	1: 55	7	2	9	1: 18	11	5	16	1: 36
Vand i Hjern	;	;	;		;	;	;		1	;	1	1:162	1	;	1	1:569
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Religionsphantasterie	6	3	9	1: 21	6	12	18	1: 12	1	;	1	1:162	13	15	28	1: 20
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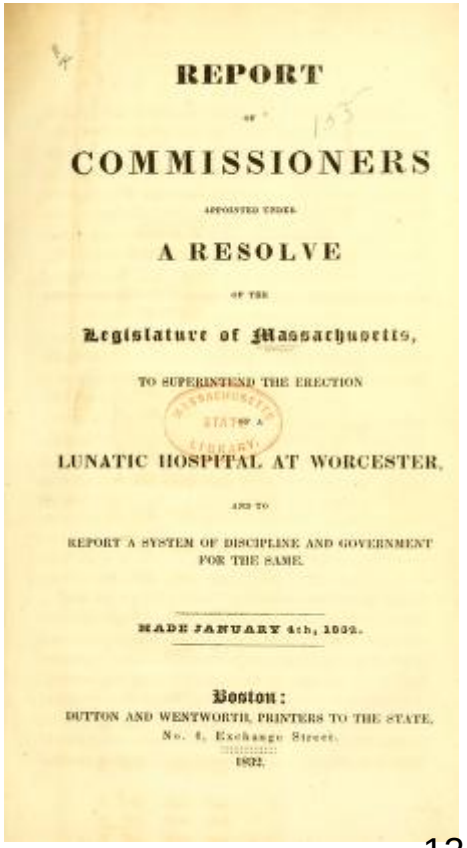
Frederik Holst, M.D., *Beretning, Betankning og Indstilling fra en til at undersøge de Sindsvages Kaar i Norge* (1828), table of causes by disease form, from a census.

Statistics and asylum reports

The Worcester State Asylum in Massachusetts, opened 1833, claimed for the asylum report the standing of science.



REPORT

OF

COMMISSIONERS

APPOINTED UNDER

A RESOLVE

OF THE

Legislature of Massachusetts,

TO SUPERINTEND THE ERECTION

OF A

LUNATIC HOSPITAL AT WORCESTER,

AND TO

REPORT A SYSTEM OF DISCIPLINE AND GOVERNMENT FOR THE SAME.

MADE JANUARY 4th, 1833.

Boston:

DUTTON AND WENTWORTH, PRINTERS TO THE STATE,

No. 4, Exchange Street.

1833.

TABLE 12.

Showing the causes of Insanity, &c.

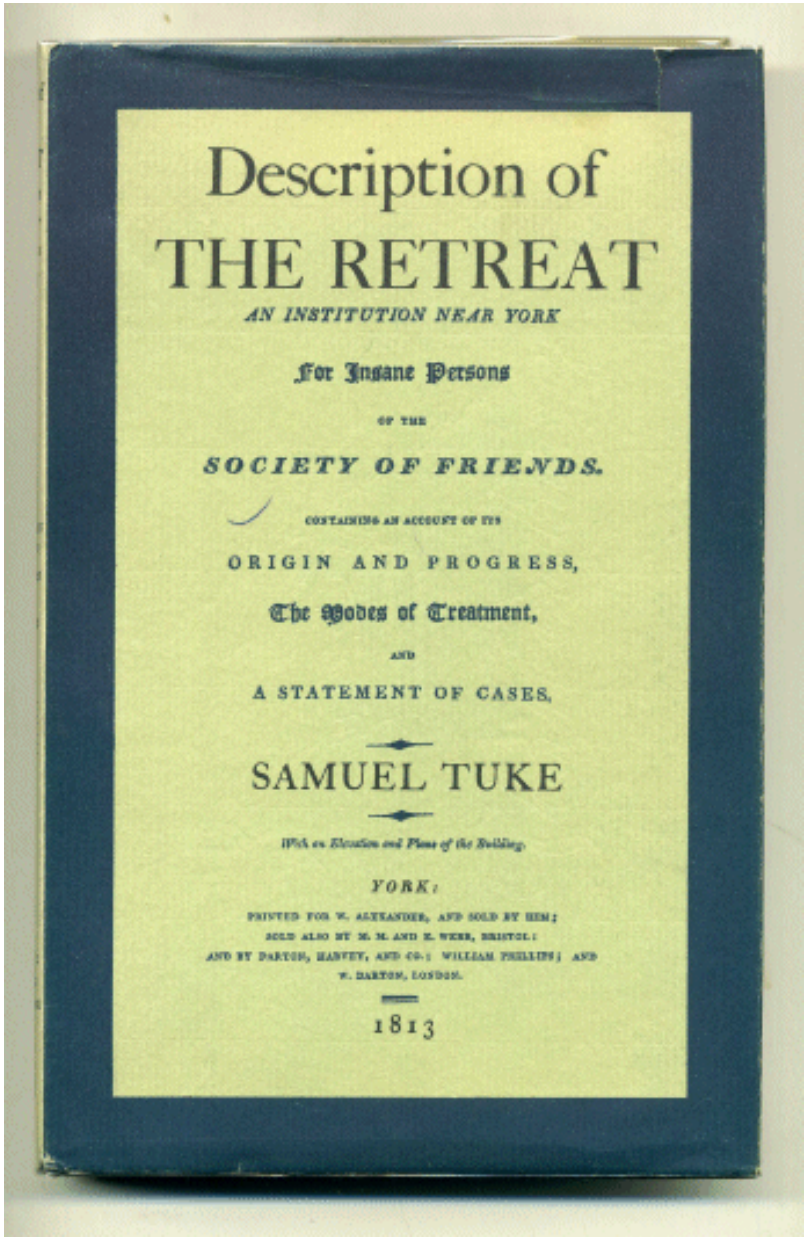
Intemperance,	129	Periodical,	112
Masturbation,	75	Homicidal,	15
Ill health,	122	Actual homicides,	11
Religious,	53	Suicidal, or having a strong propensity to self-destruction,	69
Loss of property,	48	Actual suicides,	3
Disappointed affection,	34	Many unknown,	
Disappointed ambition,	20		
Hereditary, or having insane ancestors or near kindred,	210		

Of 312 Patients in the Hospital, whose cases have been examined, 149 had dark complexion, and other peculiarities as noted in the table.

Dark hair,	141	Full habit,	25
Dark complexion,	149	Spare habit,	121
Dark eyes,	140		

Of the 312 above named, 165 have light eyes, and other peculiarities as noted in the table.

Light hair,	160	Full habit,	76
Light complexion,	163	Spare habit,	88
Light eyes,	165		



Description of
THE RETREAT
AN INSTITUTION NEAR YORK

For Insane Persons

OF THE

SOCIETY OF FRIENDS.

CONTAINING AN ACCOUNT OF ITS

ORIGIN AND PROGRESS,

The Modes of Treatment,

AND

A STATEMENT OF CASES.

SAMUEL TUKE

With an Elevation and Plans of the Building.

YORK:

PRINTED FOR W. ALEXANDER, AND SOLD BY HIM;
SOLD ALSO BY M. M. AND R. WEBB, BRISTOL:
AND BY DARTON, HARVEY, AND CO.; WILLIAM PHILLIPS; AND
W. DARTON, LONDON.

1813

From the York Retreat admission forms

There is reason to think that the disease is hereditary—at least, one or two near relatives have labored under similar delusions.

There appears to be some doubt respecting this particular. It is certain there was a good deal of eccentricity in the character of his mother & grandmother but whether arising from this source or not opinions vary.

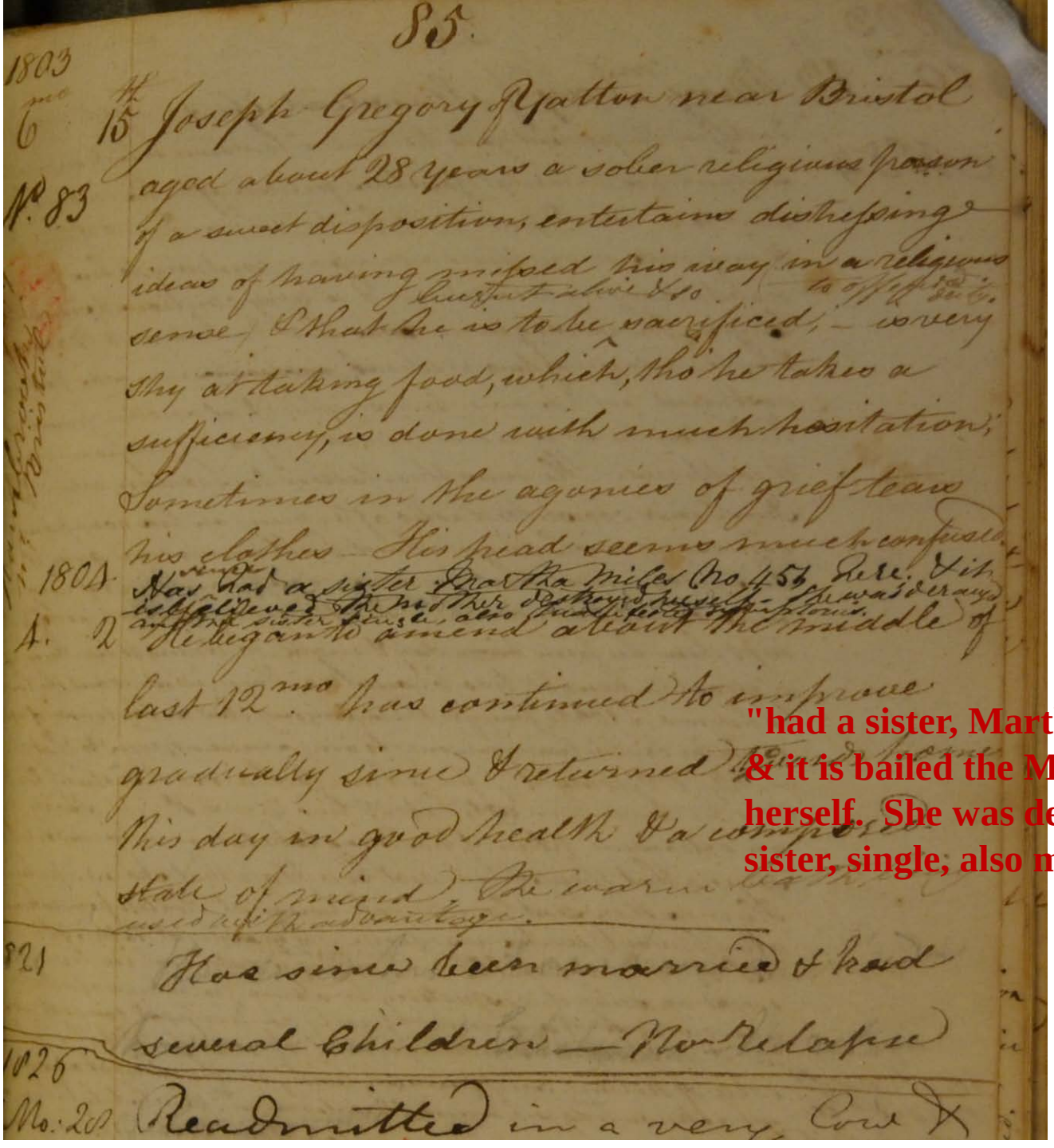
Her sister R.E. died here [at the Retreat]

Her Mother's Father committed suicide under the depressing effect of large pecuniary losses and some first Cousins of her Father are insane.

Not known to be hereditary—his Father during some function of his life acted strangely. What made his friends suspect that his mind was not in a healthy state.

“Successful treatment of the insane depends upon a full knowledge of their respective cases… Information relative to even the more remote history of the case, would frequently be important in directing the right course of moral and medical treatment.”

from an 1842 admission form at the York Retreat, designed to be filled out by families.



85.

1803 6mo 15 Joseph Gregory Patton near Bristol
No. 83 aged about 28 years a sober religious person
of a sweet disposition, entertains distressing
ideas of having missed his way in a religious
sense & that he is to be sacrificed, — is very
shy at taking food, which, tho' he takes a
sufficiency, is done with much hesitation;
Sometimes in the agonies of grief tears
his clothes — His head seems much confused.
1803 Has had a sister Martha Miller No 454 here & it
is bailed the Mother destroyed herself. She was deranged
& another sister single, also manifested symptoms.
A. 2 He began to amend about the middle of
last 12mo. has continued to improve
gradually since & returned
this day in good health & a composed
state of mind. He married
well & with advantage.

821 Has since been married & had
several Children — No Relapse

1826 No. 20 Readmitted in a very Cont

"had a sister, Martha Miller No. 454 here & it is bailed the Mother destroyed herself. She was deranged and another sister, single, also manifested symptoms."

OBSERVATIONS

AND

ESSAYS

ON THE

STATISTICS OF INSANITY;

INCLUDING AN INQUIRY INTO

THE CAUSES INFLUENCING THE RESULTS OF TREATMENT

IN

ESTABLISHMENTS FOR THE INSANE:

TO WHICH ARE ADDED

THE STATISTICS OF THE RETREAT, NEAR YORK.

BY JOHN THURNAM,

LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON;
FELLOW OF THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY OF LONDON;
RESIDENT MEDICAL SUPERINTENDENT OF THE RETREAT, NEAR YORK.

LONDON:
SIMPKIN, MARSHALL, & CO., STATIONERS' HALL COURT;
YORK: JOHN L. LINNEY.

1845.

TABLE 15.—SHEWING THE PREDISPOSING CAUSES OF THE DISORDER, SO FAR AS THESE WERE STATED OR COULD BE ASCERTAINED.

PREDISPOSING CAUSES.	Society of Friends and connected with it.			Unconnected with the Society of Friends.		
	Male.	Fem.	Total	Male.	Fem.	Total
PHYSICAL CAUSES.						
Hereditary tendency, the only predisposing cause known	31	39	70	1	1	2
Fright to the mother; in two cases followed by premature birth	2	1	3	.	1	1
Congenital weakness of mind in various degrees	24	26	50	2	.	2
Decided congenital peculiarity of mind	17	16	33	2	4	6
Extreme degrees of melancholic, or nervous temperament	4	4	8	1	1	2
Lactation by a parent strongly predisposed	1	2	3	.	.	.
Period of senility (average age at attack 72 years)	2	4	6	.	.	.
Insufficient exercise	2	.	2	.	.	.
Fever	2	1	3	.	.	.
Rickets	.	1	1	.	.	.
Apoplexy and paralysis	1	1	2	.	.	.
Epilepsy	4	.	4	.	.	.
Blindness	1	1	2	.	.	.
Chorea	.	1	1	.	1	1
Hysteria	1	4	5	.	2	2
Hypochondriasis	2	1	3	.	.	.
Dyspepsia, and other disorders of the stomach, &c	6	12	18	1	1	2
Gouty and rheumatic disorders	.	2	2	.	1	1
Injudicious blood letting	.	1	1	.	.	.
Spermatorrhœa	1	.	1	.	.	.
Irregular and suppressed catamenia	.	7	7	.	.	.
Intemperance and free living	7	.	7	5	1	6
	108	124	232	12	13	25
MORAL CAUSES						
Neglected or perverted education; in three cases very indulgent, in one very rigid	4	.	4	.	1	1
Ill-regulated temper and disposition	4	7	11	1	2	3
Solitary mode of life	.	1	1	.	.	
Mental disquietude from various causes	3	7	10	1	3	4
Political enthusiasm	1	.	1	1	.	1
Excitement connected with religious hopes, fears, or speculations	4	5	9	1	2	3
	16	20	36	4	8	12
NO PREDISPOSING CAUSES KNOWN	74	73	147	9	8	17
Total	198	217	415	25	29	54

“Predisposing causes have attracted less attention than exciting causes, but they are often the most important, and often also more easily guarded against.”

(John Thurnam, 1841)

Lasciate ogni speranza

"The accumulation of disheveled, untidy patients is marked, and there is a lack of optimism which should be present in every public institution."

"It is apparent to patients that hope is left behind when they enter."

----Massachusetts Board of Insanity (1915). This line from Dante begins to appear in relation to asylums in the 1840s!

Table of male (A) and female (B) patients with mentally ill relatives on side of: I fathers, II mothers, III both parents, IV siblings. 1 if parent shows mental condition; 2 if other relative on father's/mother's side. Figures in percent.

From Wilhelm Jung, "Untersuchungen über die Erblichkeit der Seelenstörungen" In *AZP*, 21 (1864), p. 622.

Wilhelm Jung constructs a database of family insanity.

	A. I.		A. II.		B. I.		B. II.	
	A. I.	A. III.	A. II.	A. III.	B. I.	B. III.	B. II.	B. III
unter 1. . .	37,17	—	43,70	—	42,45	—	58,86	—
unter 2. . .	33,96	—	32,34	—	41,00	—	35,29	—
überhaupt aufgeführten	36,14	—	41,17	—	42,06	—	54,28	—
mit Angabe der Form								
unter 1. .	70,83	71,18	65,21	68,83	77,08	78,70	81,60	81,6
unter 2. .	80,95	73,07	75,00	64,28	69,56	68,00	70,00	70,5
überhaupt aufgeführten	73,90	—	66,66	—	74,64	—	77,57	—
überhaupt als geisteskrank aufgeführten	41,97	45,16	47,00	49,53	53,62	55,81	61,73	60,6

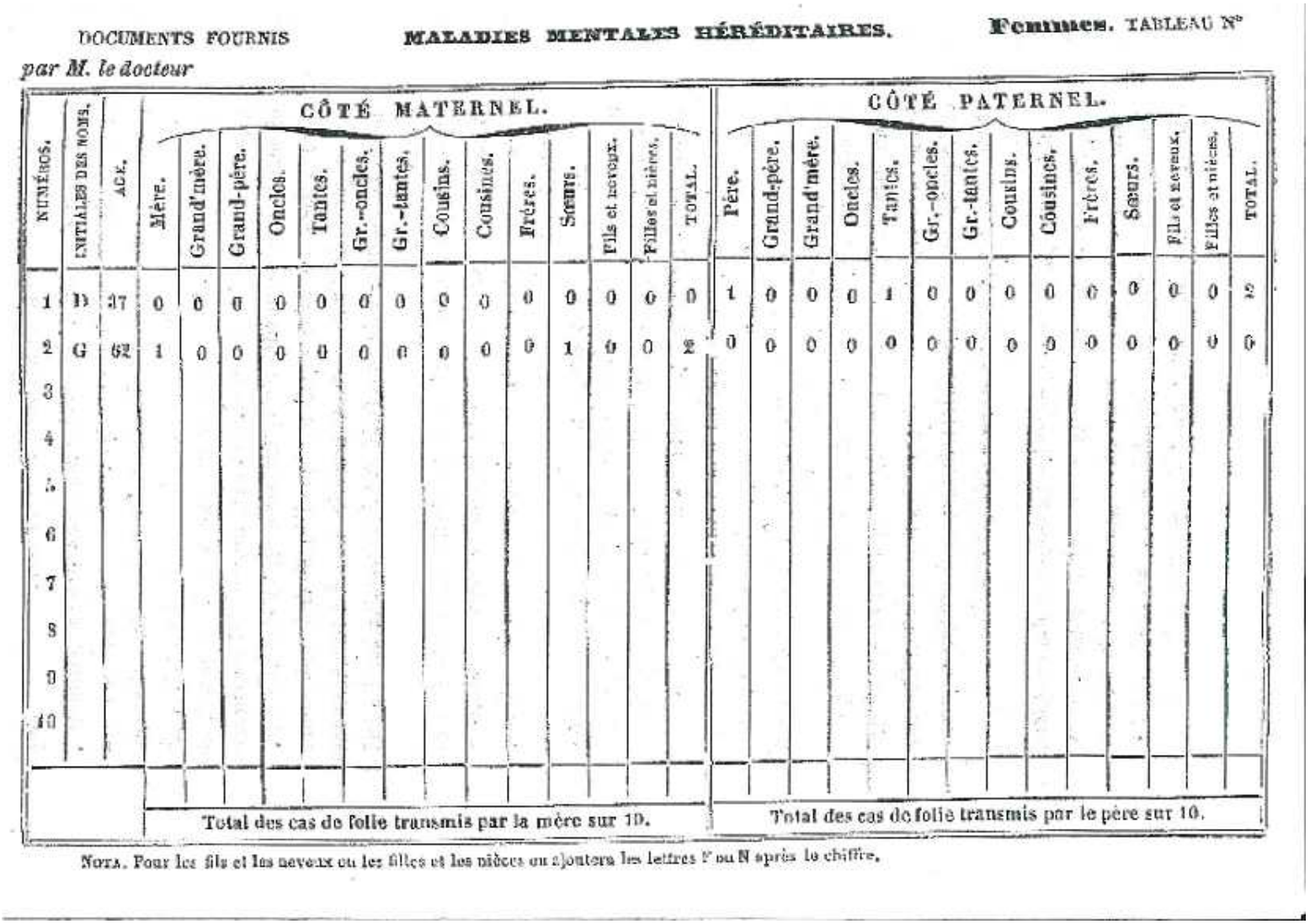
	A. IV.		B. IV.		Insgesammt	
	Bruder	Schwester	Bruder	Schwester	A. IV.	B. IV.
überhaupt als geisteskrank Angegebenen	28,57	26,09	52,96	42,87	27,33	47,84
mit Angabe d. Form d. Geistesstörung	81,81	57,14	78,26	61,76	69,47	70,01
mit Hülfe der Listen I. bis III. erhaltenen Summe .	81,81	66,66	75,92	73,13	74,23	74,52
		71,79				

4. Empfänglichkeit des Geschlechts für das erbliche Irresein.

	Männer	pCt.	Frauen	pCt.
Hood	121	8,58	240	10,62
Thurnam	65	32,82	77	35,48
Crichton-institution	253	48,56	194	51,05
Baillarger	271	49,72	274	50,27
Leubus	492	48,71	518	51,29

Five authors demonstrate the greater hereditary “receptivity” of women to insanity, from Jung (1866), 220.

By 1860s, many tables were designed to look for correlations, especially hereditary ones.



DOCUMENTS FOURNIS par M. le docteur

MALADIES MENTALES HÉRÉDITAIRES.

Femmes. TABLEAU N°

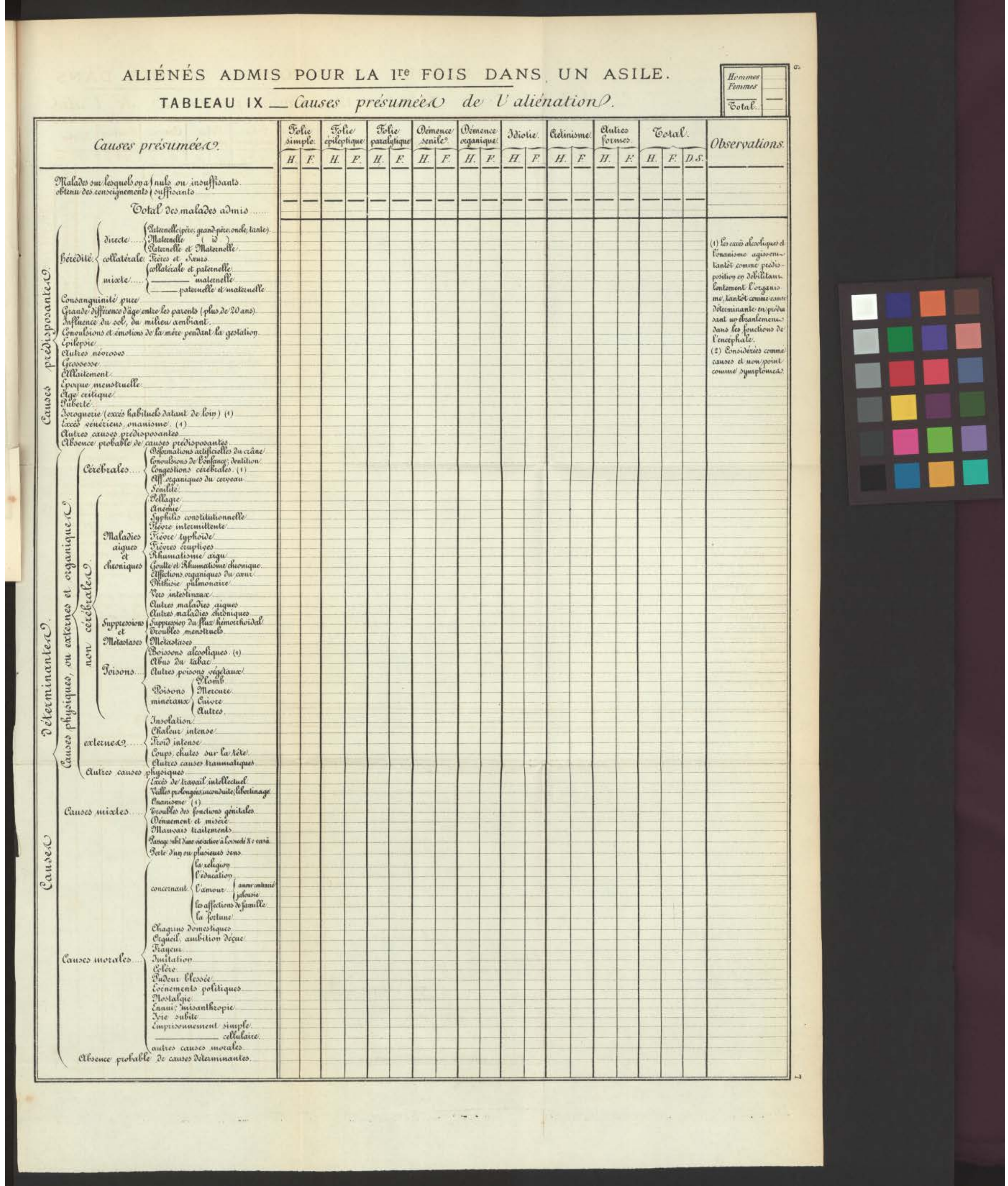
NUMÉROS.	INITIALES DES NOMS.	AGE.	CÔTÉ MATERNEL. Mère.	Grand'mère.	Grand-père.	Oncles.	Tantes.	Gr.-oncles.	Gr.-tantes.	Cousins.	Cousines.	Frères.	Sœurs.	Fils et neveux.	Filles et nièces.	TOTAL.	CÔTÉ PATERNEL. Père.	Grand-père.	Grand'mère.	Oncles.	Tantes.	Gr.-oncles.	Gr.-tantes.	Cousins.	Cousines.	Frères.	Sœurs.	Fils et neveux.	Filles et nièces.	TOTAL.
1	D	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1
2	G	62	1	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
			Total des cas de folie transmis par la mère sur 10.														Total des cas de folie transmis par le père sur 10.													

NOTA. Pour les fils et les neveux ou les filles et les nièces on ajoutera les lettres F ou N après le chiffre.

French form, 1843, intended to yield uniform data from multiple doctors on relatives affected by insanity from different doctors. (by Jules Baillarger)

At an “international” congress of alienists in Paris in 1867, the French initiated an effort to standardize the statistics.

This table of causes of insanity, from their 1869 report, is one of 32 tables proposed.



ALIÉNÉS ADMIS POUR LA 1re FOIS DANS UN ASILE.

TABLEAU IX — *Causes présumées de l'aliénation.*

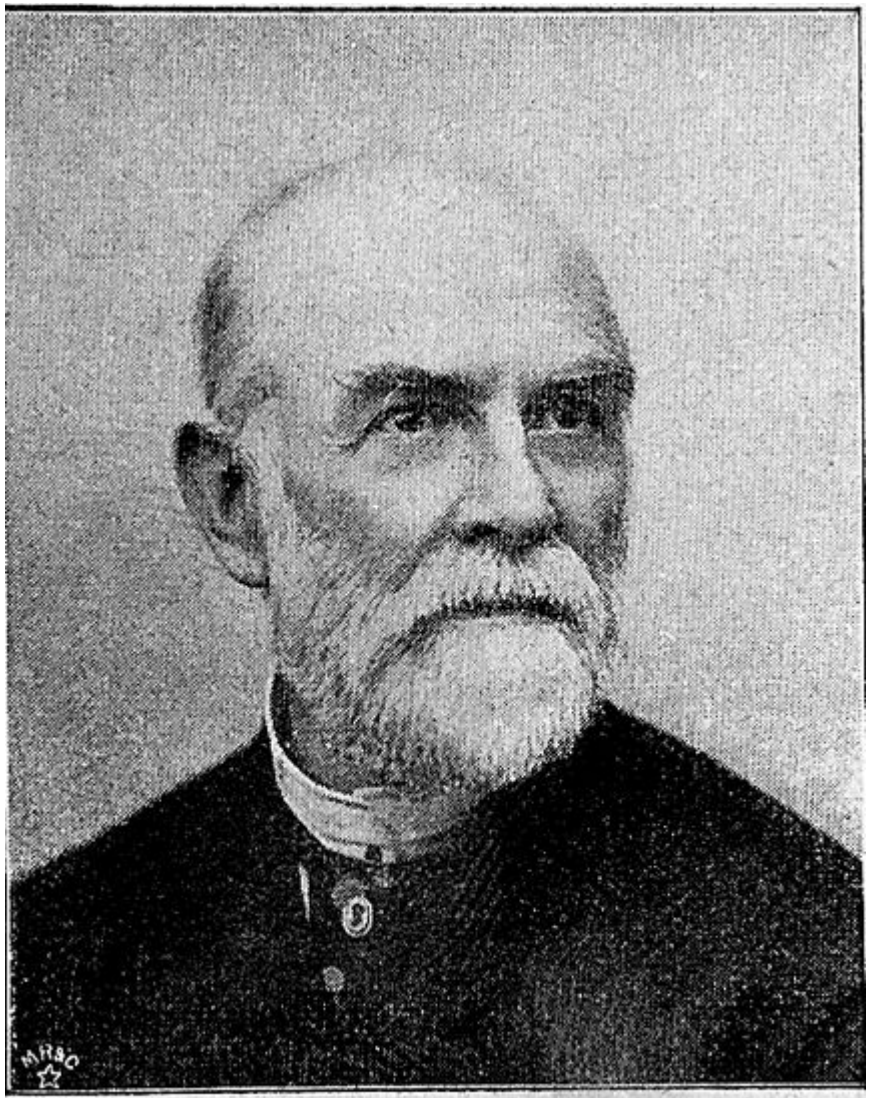
Hommes	
Femmes	
Total	—

Causes présumées.	Folie simple H.	Folie simple F.	Folie épileptique H.	Folie épileptique F.	Folie paralytique H.	Folie paralytique F.	Démence sénile H.	Démence sénile F.	Démence organique H.	Démence organique F.	Idiotie H.	Idiotie F.	Crétinisme H.	Crétinisme F.	Autres formes H.	Autres formes F.	Total H.	Total F.	Total D.S.	Observations.
Malades sur lesquels on a obtenu des renseignements — nuls ou insuffisants																				
Malades sur lesquels on a obtenu des renseignements — suffisants																				
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Total des malades admis																				
Causes prédisposantes. Hérédité. directe — Paternelle (père, grand-père, oncle, tante)																				
Hérédité. directe — Maternelle (id)																				
Hérédité. directe — Paternelle et Maternelle																				
Hérédité. collatérale — Frères et Sœurs																				
Hérédité. mixte — collatérale et paternelle																				
Hérédité. mixte — ——— maternelle																				
Hérédité. mixte — ——— paternelle et maternelle																				
Consanguinité pure																				
Grande différence d'âge entre les parents (plus de 20 ans)																				
Influence du sol, du milieu ambiant																				
Convulsions et émotions de la mère pendant la gestation																				
Épilepsie																				
Autres névroses																				
Grossesse																				
Allaitement																				
Époque menstruelle																				
Âge critique																				
Puberté																				
Ivrognerie (excès habituels datant de loin) (1)																				
Excès vénériens, onanisme (1)																				
Autres causes prédisposantes																				
Absence probable de causes prédisposantes																				
Causes déterminantes. Causes physiques, ou externes et organiques. Cérébrales — Déformations artificielles du crâne																				
Cérébrales — Convulsions de l'enfance; dentition																				
Cérébrales — Congestions cérébrales (1)																				
Cérébrales — Aff. organiques du cerveau																				
Cérébrales — Sénilité																				
non cérébrales. Maladies aiguës et chroniques — Pellagre																				
Maladies aiguës et chroniques — Anémie																				
Maladies aiguës et chroniques — Syphilis constitutionnelle																				
Maladies aiguës et chroniques — Fièvre intermittente																				
Maladies aiguës et chroniques — Fièvre typhoïde																				
Maladies aiguës et chroniques — Fièvres éruptives																				
Maladies aiguës et chroniques — Rhumatisme aigu																				
Maladies aiguës et chroniques — Goutte et Rhumatisme chronique																				
Maladies aiguës et chroniques — Affections organiques du cœur																				
Maladies aiguës et chroniques — Phthisie pulmonaire																				
Maladies aiguës et chroniques — Vers intestinaux																				
Maladies aiguës et chroniques — Autres maladies aiguës																				
Maladies aiguës et chroniques — Autres maladies chroniques																				
Suppressions et Métastases — Suppression du flux hémorrhoïdal																				
Suppressions et Métastases — Troubles menstruels																				
Suppressions et Métastases — Métastases																				
Poisons — Boissons alcooliques (1)																				
Poisons — Abus du tabac																				
Poisons — Autres poisons végétaux																				
Poisons — Poisons minéraux — Plomb																				
Poisons — Poisons minéraux — Mercure																				
Poisons — Poisons minéraux — Cuivre																				
Poisons — Poisons minéraux — Autres																				
externes — Insolation																				
externes — Chaleur intense																				
externes — Froid intense																				
externes — Coups, chutes sur la tête																				
externes — Autres causes traumatiques																				
Autres causes physiques																				
Causes mixtes — Excès de travail intellectuel																				
Causes mixtes — Veilles prolongées, inconduite, libertinage																				
Causes mixtes — Onanisme (1)																				
Causes mixtes — Troubles des fonctions génitales																				
Causes mixtes — Dénuement et misère																				
Causes mixtes — Mauvais traitements																				
Causes mixtes — Passage subit d'une vie active à l'oisiveté & vice versâ																				
Causes mixtes — Perte d'un ou plusieurs sens																				
Causes morales — concernant la religion																				
Causes morales — concernant l'éducation																				
Causes morales — concernant l'amour — amour contrarié																				
Causes morales — concernant l'amour — jalousie																				
Causes morales — concernant les affections de famille																				
Causes morales — concernant la fortune																				
Causes morales — Chagrins domestiques																				
Causes morales — Orgueil, ambition déçue																				
Causes morales — Frayeur																				
Causes morales — Imitation																				
Causes morales — Colère																				
Causes morales — Pudeur blessée																				
Causes morales — Événements politiques																				
Causes morales — Nostalgie																				
Causes morales — Ennui; misanthropie																				
Causes morales — Joie subite																				
Causes morales — Emprisonnement simple																				
Causes morales — ——— cellulaire																				
Causes morales — autres causes morales																				
Absence probable de causes déterminantes																				

Observations:

(1) Les excès alcooliques et l'onanisme agissent tantôt comme prédisposition en débilitant lentement l'organisme, tantôt comme cause déterminante en produisant un ébranlement dans les fonctions de l'encéphale.

(2) Considérées comme causes et non point comme symptômes.



Ernſt Engel.

Ambitious new head of the Prussian Statistical Office in 1863.

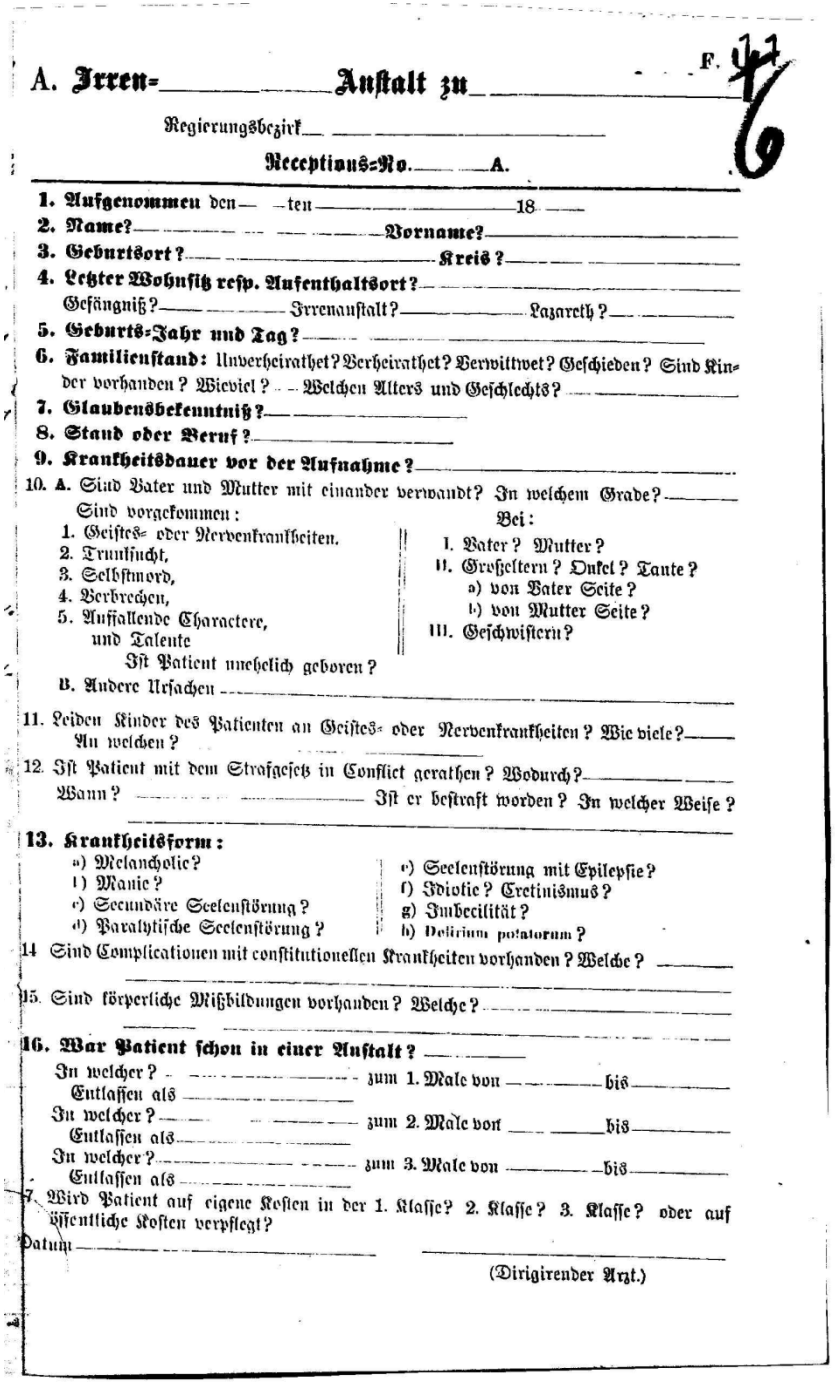
About 1870 he introduced index cards, one card for each individual, as the basis of the Prussian census.

This made it much easier to sort by category and make tables using correlated variables.

It also underlay a vast project of date integration.

At right, a *Zählkarte* from Siegburg Asylum, which seems to be very nearly standardized over much of Germany by the 1880s. Questions 10 and 11 concern heredity.

.



F. 47/6

A. Irren-_____Anstalt zu_____

Regierungsbezirk_____

Receptions-No._____A.

1. Aufgenommen den____ten_____18____

2. Name?_____ **Vorname?**_____

3. Geburtsort?_____ **Kreis?**_____

4. Letzter Wohnsitz resp. Aufenthaltsort?_____

Gefängniß?_____ Irrenanstalt?_____ Lazareth?_____

5. Geburts-Jahr und Tag?_____

6. Familienstand: Unverheirathet? Verheirathet? Verwittwet? Geschieden? Sind Kinder vorhanden? Wieviel? Welchen Alters und Geschlechts?_____

7. Glaubensbekenntniß?_____

8. Stand oder Beruf?_____

9. Krankheitsdauer vor der Aufnahme?_____

10. A. Sind Vater und Mutter mit einander verwandt? In welchem Grade?_____

Sind vorgekommen:

1. Geistes- oder Nervenkrankheiten.
2. Trunksucht,
3. Selbstmord,
4. Verbrechen,
5. Auffallende Charactere, und Talente

Ist Patient unehelich geboren?

Bei:

I. Vater? Mutter?
II. Großeltern? Onkel? Tante?
a) von Vater Seite?
b) von Mutter Seite?
III. Geschwistern?

B. Andere Ursachen_____

11. Leiden Kinder des Patienten an Geistes- oder Nervenkrankheiten? Wie viele?_____ An welchen?_____

12. Ist Patient mit dem Strafgesetz in Conflict gerathen? Wodurch?_____ Wann?_____ Ist er bestraft worden? In welcher Weise?_____

13. Krankheitsform:

a) Melancholie?
b) Manie?
c) Secundäre Seelenstörung?
d) Paralytische Seelenstörung?
e) Seelenstörung mit Epilepsie?
f) Idiotie? Cretinismus?
g) Imbecilität?
h) Delirium potatorum?

14 Sind Complicationen mit constitutionellen Krankheiten vorhanden? Welche?_____

15. Sind körperliche Mißbildungen vorhanden? Welche?_____

16. War Patient schon in einer Anstalt?_____

In welcher?_____ zum 1. Male von_____ bis_____
Entlassen als_____
In welcher?_____ zum 2. Male von_____ bis_____
Entlassen als_____
In welcher?_____ zum 3. Male von_____ bis_____
Entlassen als_____

17. Wird Patient auf eigene Kosten in der 1. Klasse? 2. Klasse? 3. Klasse? oder auf öffentliche Kosten verpflegt?

Datum_____

_____
(Dirigirender Arzt.)

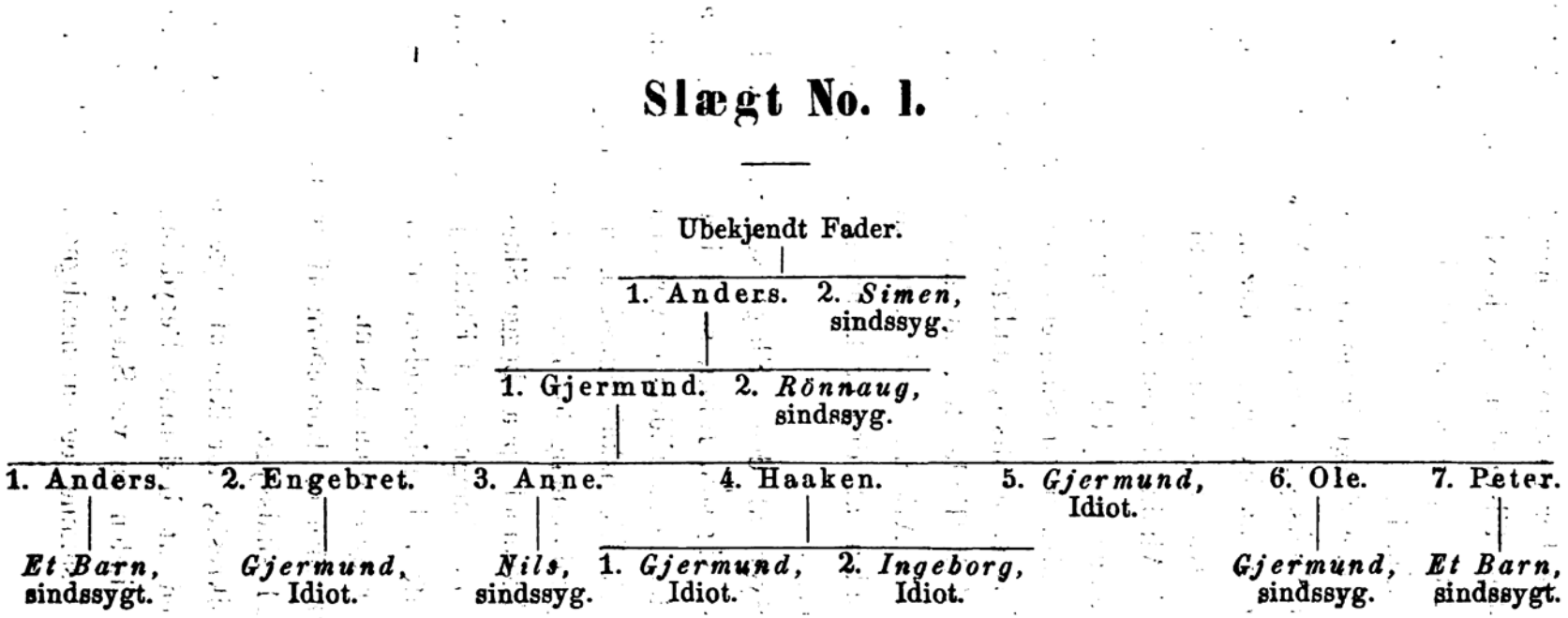
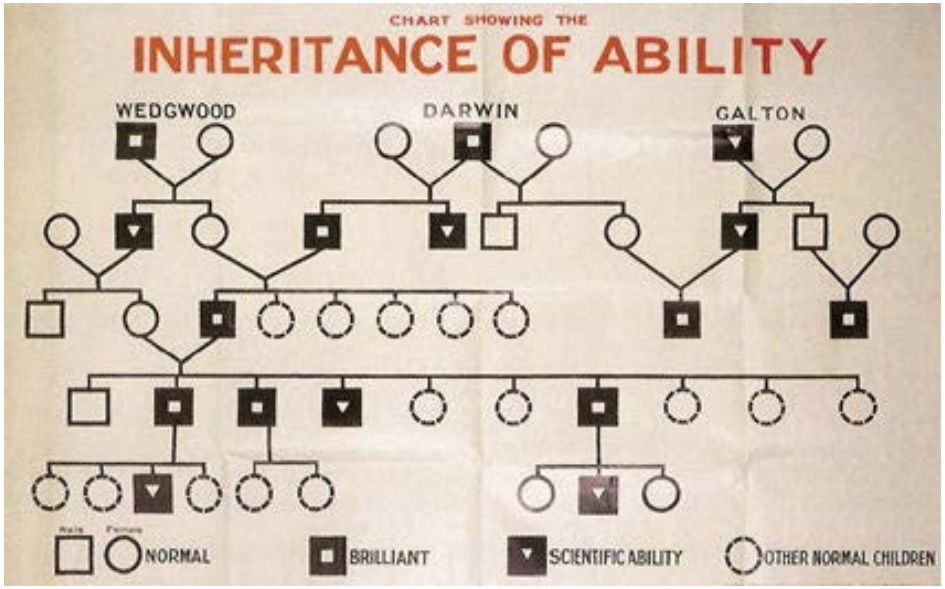
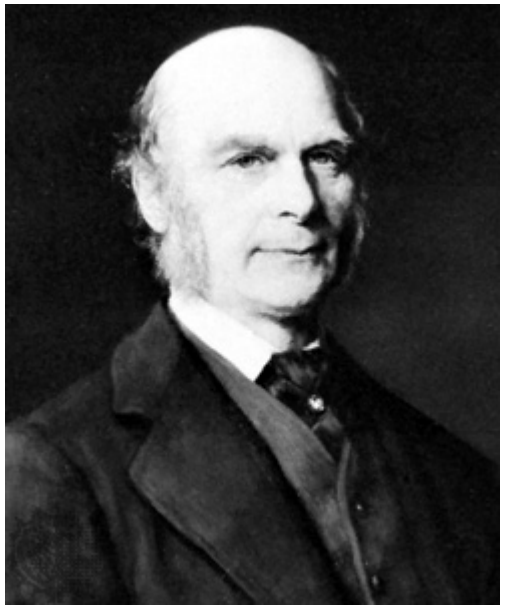


Chart of family mental illness (”Heredity”), from a Norwegian study by Ludvig Dahl, *Bijdrag til Kundskab om de Sindssyge i Norge* (1859), seemingly the first such pedigree chart of mental defect. Half a century later, the collection of pedigrees by the thousands became the heart of eugenics,





The pedigree above includes Douglas Galton, cousin of Francis, an engineer and health reformer, presided over reports on school-children who could not keep up (“mentally defective” or “feeble-minded.”

Karl Pearson, biometrician and statistician, had his doubts about Mendelian explanations. He got data from prisons officials, schoolteachers asylums, and special schools. Often, they were the ones who first made contact.

He soon recognized that doctors, psychologists, prison administrators, school officials, and the like were not just collectors of hereditary data, but were thoroughly committed to studying it. They too were often disappointed by Mendelian reductions.

At the Eugenic Record Office (Cold Spring Harbor, Long Island, NYC)

The materials for a science of human heredity “lie hidden in records of our numerous charity organizations, our 42 institutions for the feeble-minded, our 1,200 refuge homes, our 1,300 prisons, our 1,500 hospitals, and our 2,500 almshouses. Our great insurance companies and our college gymnasiums have tens of thousands of records of the characters of human blood lines. These records should be studied, their hereditary data sifted out and properly recorded on cards …

… and the cards sent to a great central bureau for study in order that the data should be placed in their proper relations in the great strains of human protoplasm that are coursing through the country. Thus could be learned not only the method of heredity of human characteristics, but we shall identify those lines which supply our families of great men … and also our insane and feeble-minded, blind and deaf, prisoners, criminals, paupers."

Charles B. Davenport (1910)

“The efforts of this office are directed toward the indexing of all the defective and sterling germ-plasms of the American population.”

H. H. Laughlin (1912)

The project involved data management practices like those of life insurance, of libraries, and of modern business and government more generally.

“The constant increase of mental illness and the need for institutional care together with the disproportionately heavy burden that the maintenance of people with inferior characteristics (*minderwertige Anlage*) imposes on state and society, will advance the attainment of this goal” [improved collection of hereditary data]

Ernst Wittermann (1913)

“… every family tree is only a particular instance in the dice game of heredity, and proves, by itself, nothing.”

Ernst Rüdin (1915)

Let all “anthropological, criminal-statistical, recruitment-statistical, school-statistical, and psychiatric data, together with the results of obligatory medical reporting,” be “gathered in a scientific central office.”

Ernst Rüdin (1907)

Die Centralstelle

(Imperial, Prussian, and Bavarian census)

Data Central

(files at Cold Spring Harbor)

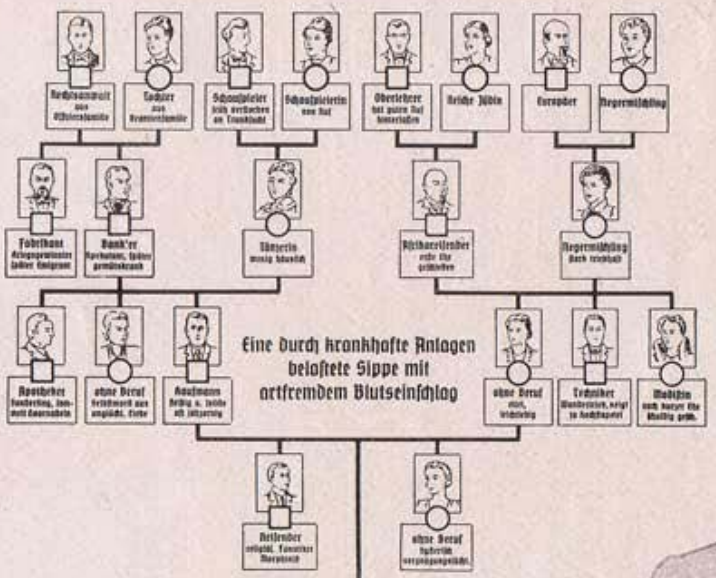
Incurable inmates, who now fell below the expectations of the welfare state, were at least no longer reproducing themselves. The study of heredity accented a different contribution of asylums to the public good.

Rüdin wrote in 1911 of an **avalanche** of insanity, and the **duty** to control it.

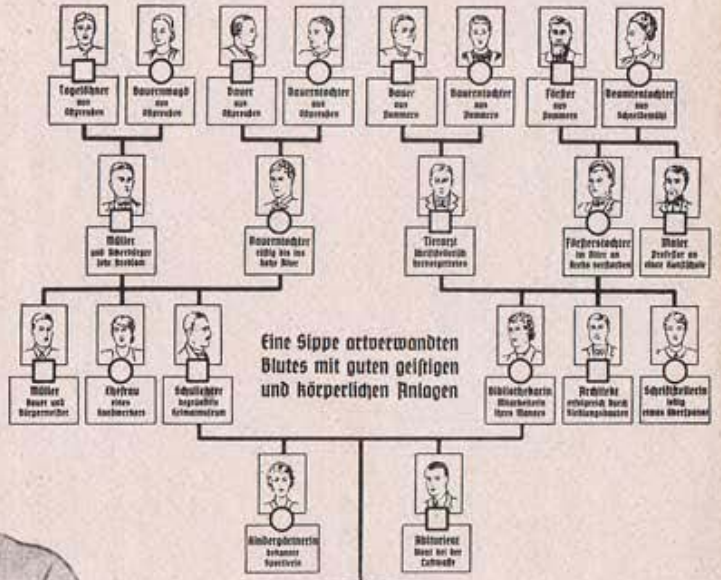
Die richtige Gattenwahl

ist die Voraussetzung für eine wertvolle und glückliche Lebensgemeinschaft

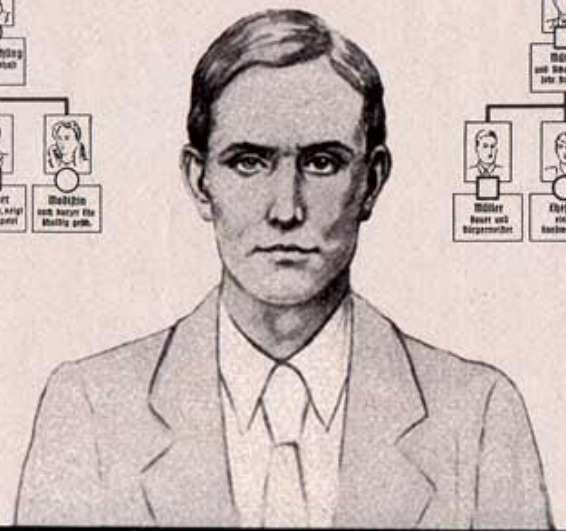
Entscheide dich erst, wenn sich ein klares Bild über die Erbanlagen der Sippe des anderen ergeben hat.



Eine durch krankhafte Anlagen belastete Sippe mit artfremdem Blutseinschlag



Eine Sippe artverwandten Blutes mit guten geistigen und körperlichen Anlagen



Heirate nur den Sproß einer erbgesunden, artverwandten Sippe

Geistiges und körperliches Erbgut feiert in den Kindern Auferstehung

In deiner Wahl liegt das Schicksal deines Geschlechtes und der Nation

Bildstelle: Reichsausschuß für Volksgesundheitsdienst

German interwar eugenics drew heavily from these statistical traditions. The key figure is Rüdin, who came out of a strong Swiss eugenic and statistical tradition (Ludwig Wille's efforts at standardization; Jenny Koller's experimental controls).

His techniques owed more to Munich (Kraepelin's Zählkarte), and to Halle (Jolly's massive paper integrating data from several institutions in the area).

… and still more to Stuttgart, with its great databases, the censuses of J. L. A. Koch, the demographic corrections and pedigree techniques (the *Proband*), as well as medical data of Wilhelm Weinberg.

Deutsche Forschungsanstalt für Psychiatrie, founded 1917, became a Kaiser Wilhelm Institut in 1927, with support from a Jewish philanthropist, and then the Rockefeller Foundation.

The Nazi seizure of power created both opportunities and dangers, but this KWI as well as the KWI Anthropology in Berlin remained places of serious science.

The KWIA moved to experimental integration of genetics and development, the KWIP to statistics-based eugenic prediction. Multi-gene genetics was very cumbersome.

The KWIP was also engaged in analysis of (rather) big data. They had access to asylum records, prison records, and also to population level data. The Weimar-era census of Bavarian made the KWIP a model Centralstelle.

This was serious science. Its eugenics was not much more compromised than the American version until the end of the 1930s.

As science, it formed the basis of postwar psychiatric genetics, an important element of human and medical genetics. E.g. émigrés Eugen Kahn (Munich Psychiatric Clinic) and Franz-Joseph Kallmann in the US, visitors Aubrey Lewis and Eliot Slater from Britain.

There were great hopes all over northern Europe and North America to solve the problem of inherited insanity and feeblemindedness with Mendelian genetics and new diagnostic categories (Kraepelin's).

In every country it largely failed (on its own terms) ca. 1920-1930.

In other respects, Mendelian human genetics did much better (blood groups, catalogues of rare diseases).

The intense concern with mental and psychological conditions never went away

To be realistic about the history, with its professional, medical, and bureaucratic dimensions, is also to be more realistic about our present capacities.