

Notes and Statistics Regarding Completed "Ability in Families" Schedules

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Abilità e Famiglie

Abilità



14
4
3
2
23

TAVOLA PITAGORICA

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

72
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17
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47
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- 35

counts as 1. It is assigned to married distinction in one hand
and to distinction under two in other hand.

counts as $\frac{3}{4}$. It is assigned to considerable distinction in one
and to distinction under two in other hand.

counts as $\frac{1}{2}$. It is chiefly assigned to fullness of
growth of those who are still young in other hand.

Table of 256 combinations

to young. I have left a mark. a = not a + with
some time. I have left a mark.

Outline of contents

Table of 16 combinations

rough attempt at draft of paper

see heading.

Factor & Mother's hered influence



Exams - High degrees 1st or 2^d place,
+ first class in any branch

Minister of state, Head of Department ^{of state}, Permanent Sec^y
+ other high post in any public depart:

Ambassador, Governor of Colony ^{in the land}, Consul General, sec^y legation
Resident in a foreign court

General & Admiral in high command, high staff appointment,
+ Colonel of Volunteers
Public services

Judge at home or abroad ^{of High Court, or Judge}: Metropolitan Magistrate, County Court Judge
Commissioner

* Bishop, Dean, Archdeacon, Eminent clergyman, distinguished position
Missionary of repute, philanthropist

3 ^{far}
President and sec^y of great institutions

Physician, distinguished, to large London Hospital

^{in important University}
Professor. Head of college or great school

Inspector of schools. Head mistress

Large agency. Engineer in charge of important works

Founder of great business, Inventor. Eminent scholar
pioneer in industry. Explorer, discoverer, traveller

Editor of important paper. Writer of scientific memoirs

Author of standard work, Recognized authority in some science or art.

Honors, FRS, R Academy. DCL, &c. raised to peerage.
PC, KCB ^{and higher}. High freemasonic rank. Foreign orders.

850 is -

M.P. artistic skill

Successful business man, Mayor of important town ^{active in public life}
active in public life, Fellow of college, author of ^{repute}. Indian civil Serv.
Eminent clergyman ^{or minister}, Scholar of a College, many prizes. R Eng
prominent county man. good professional position. ^{well known} ^{for many}
^{years} able, much force of character, acquisitive mind of a high order.
social leader. helped his husband greatly in his literary work.
learned both Greek & Hebrew unassisted "have no hesitation in
entering her noteworthy and able"

Dict Nat Biog. Enycl Brit ^{Enycl Britan Long}
obituary notice in Times &c. in Journ: of Sc: Soc
Special biography.

Art - painter, poet, musician, sculptor, caricaturist
engineer, actor, architect.

Power of calculation, chess player

Mechanical skill, inventiveness

+ L.D. Q.C. Edinburgh gold medallist K. Pearson
{ helped her husband greatly in his literary work
{ a brilliant amateur? Lady Pelgrave

A counts as 1 ; B as $\frac{3}{4}$; C standing alone counts as nothing, but two or more Cs may be counted as B and a B with Cs may be raised to an A.

The letters added to the subjoined list are average estimates only. Whenever an honor has been obviously ~~the~~ gained through birth or wealth, its importance is diminished, possibly to zero; whenever it has been gained in the face of exceptional difficulties, its importance is augmented.

Experience has shown that although these rules may seem vague there is little difficulty in interpreting them correctly, for the result of different attempts at marking is closely the same.

Classification is into three divisions
^A as ^B counts as 1, ^C as ^{3/4}, ^C as ^{supplementary}
 counting ^{to} ^{which} no value is given, if ^{it stands alone} ^{unimportant}
 but which may ^{be} ^{added} ^{to} ^a ^B ^{into} ^{an} ^A. ⁱⁿ ^a ^{place} ^{of} ^a ^B.
 two or more ^{as} ^{counts} ^{as} ^a ^{star}, and ^a ^{cross} ^{with}
 important ^{supplementary} ^{considerations} may also use ^{to} ^{as} ^A

The letters added to the following list ^{are no more} ^{than} ^{average} ^{estimates}. When an hour or post-
 is clearly the result of mere birth or fortune the
 its importance is diminished, it may be ^{to} ^{zero}.
 when it has been ^{the} ^{face} ^{of} ^{exceptional} ^{difficulty}, its importance is ^{increased}.
 Experience has shown that there is little difficulty in ^a ^{constant} ^{interpretation} ^{of} ^{these} ^{rules} ^{generally},
 marking the ^{same} ^{marks}, ^{assigning} ^{the} ^{same} ^{marks}, ^{to} ^a ^{remarkable} ^{extent}
 same cases, ^{on} ^{different} ^{attempts}.

58
 36
 53
 48
 195
 2

194

189

44 34

188
 7

Note worthy success

A and B } almost

The holder of ^{any} of the following positions is ^{the holder is} ~~considered~~ ^{qualified} ~~for either~~ an A or a B mark, according to its importance, ~~but~~ ^{subject to} ~~occasional~~ ^{some} reservation.

When it ~~has~~ ^{the body is such that it may have} ~~obviously~~ ^{been gained} ~~otherwise~~ ^{through special position}

than through sheer ability, its importance is

^{rated lower (by example M.P.)} ~~lessened~~ ^{it has been}; when ~~gained~~ ^{in the face of difficulties} its importance is ~~enhanced~~ ^{Some of the holders of} ~~Some of the posts~~ ^{on the high may} ~~that are~~ ^{highly rated} ~~are~~ ^{also have to be taken into account} ~~Two or more B marks~~ ^{are equivalent to}

~~an A.~~ ^{Two or more} ~~Many~~ ^{A's} count as ^{a single} ~~one~~ A.

^{A mark} C ^{may be attached to} ~~Another~~ ^{list of qualifications or given} ~~which~~ ^{when}

depends on personal estimate only; to which ^{the context & the character of the testimony can be taken into account} ~~a mark C~~ ^{may} be attached to ~~any one of them.~~

A single ^{may} ~~C~~ ^{high for} ~~is~~ ^{as} ~~nothing~~; ~~Two or~~ ^{more} ~~Cs~~ ^{may} have the value of a B, ~~and~~ ^{Cs} in connection with B may raise it to A,

^{the conditions of the case} ~~may~~ ^{determine} ~~these~~ ^{applications.}

One or many

As counts as 1, ^{one} B as $\frac{3}{4}$. C as $\frac{1}{2}$ &

D. ^{qualification} ~~A third list D~~ applies to women only,
 = ^{where merit can} and may qualify ~~them~~ for a B mark. Two or
^{more} ~~if~~ combined ~~they~~ may even ^{give you} ~~suffice for an~~ A. qualification

E. A fourth list E ^{applying to those who are still} ~~is for youths only~~, and
~~for as has shown high promise but~~
^{as one of considerable but not the very highest}
~~are too young to have had their chance of~~
~~performance.~~ Qualifications under this class
~~must be~~ ~~prece~~ ~~followed~~ preceded by
 year of birth & followed by year of performance
 as son b. 1890; ... scholar 1903. A B_h ^{mark} is the
 utmost ~~(except in rare cumulative cases)~~ ^{that}
 (that ^{can be gained}) ~~in this class.~~ ^{Qualifications}
^{any of the class of}
^{by these} qualifications.

C List of personal estimates, ^(of supplementary value) ~~principally~~

Prominent county man. Active in public affairs. Successful in business. Prominent in civic business matters, good professional position; of high repute as a Scholar, &c.

D. List in respect of women, generally allowed + or -

Reputed very clever, a social leader, artistic in any way to an unusual degree, ^{great} force of character. The following were suggestive returns - "I have no hesitation in judging her to be noteworthy", "acquisitive mind of a high order". "learned both Greek & Hebrew unassisted" "had a great and recognised influence in forming the character of her (distinguished) sons". "helped her husband greatly in his (standard, literary) work"

Civic, educational or philanthropic work sh^d be taken into account, also brilliant prize winnings at School & College

	α 0	$\bar{\alpha}$ $\bar{0}$	A 0	3 grades of ability opposite	Success			$\frac{1}{2}$
1 1	$\alpha + 0$		$\alpha + \bar{0}$	$\alpha + 0$	2	3	4	9
1 2	$\bar{\alpha} + 0$		$\bar{\alpha} + \bar{0}$	$\bar{\alpha} + 0$	3	4	5	12
5 1	$A + 0$		$A + \bar{0}$	$A + 0$	4	5	6	15

Units of Success			ability	mean
-2	2	are associated with	-1	-1
-1	3		-1, 0	$-\frac{1}{2}$
0	4		-1, 0, +1	0
+1	5		0, +1	$+\frac{1}{2}$
+2	6	$\frac{1}{2} = "$	+1	+1

	-1	$-\frac{1}{2}$	0	$+\frac{1}{2}$	+1
-2	.				
-1		.			
0			.		
+1				.	
+2					.

E list for youths only. ^{Excess} Place in examinations lower
 than ^{or high over that of} those mentioned above. School scholarships
 and exhibitions of fair importance

// A, whether one or many, qualifies for a +. There is
 therefore no need to add ^{object} a long list of ^{or again adding} achievements ^{minor}.
 (The greater ^{being} is supposed to include the less.) unless it
 be to show ^{the existence of} ~~general~~ ability of many kinds, or not ~~one~~
 special form of it only.

A single B qualifies for a +, Two or more B's qualify
 for a + + +

The following qualifications for note worthiness have
 been received. They ^{have been} ~~are~~ arranged for convenience into
 different classes. It is easy to assign average marks
 to most of them, but usually the context has to be taken into
 account, raising the importance of some & lowering that of
 others, as when a position has been won in the face of difficulty
 or drifted into through social position. It has been
 found easy to mark consistently in making attempts at difficult work

natural

, Ability, talent, genius, whatever name be
 given to it is allotted in very different measures
 to different persons (like the Talents in the
 Parable (Luk. 19: 11-27)) The common word "Talent"
 which is derived from this parable, expresses all
 that and is well expressed by the hackneyed word
 "talents" which is derived from the parable.

Success in life depends partly on talents (natural
 gifts, whether obviously inherited or otherwise) and
 partly on ^{opportunity} advantage, using ^{I will use both of them} these words in a very
 wide sense & ~~the~~ ^{the} ~~different~~ ^{different} ~~essence~~ ^{essence} to justify the
 phrase "Success is wholly the result of ability
 & opportunity". In other words ability &
 opportunity are severally correlated with success
 using correlation in the technical sense given to
 it in biometrics & consequently defining the quality
 form of the relation that connects them in a
 definite & accept way.

Of course success is but an imperfect test of
^{intelligence or} potential ability, though the most trustworthy that
exists. First let us consider the

Correlation may be a very complex order &
doubtless is so here, but a very simple
instance suffices to show the general form
of its character whether it be simple or
otherwise, and which in the last analysis
depends on the practically universal fact
that mediocre values of a variable quality
occur more frequently than extreme ones on either
hand. Thus mediocre ability is more common
than very high or very low ability, mediocre
opportunity is more common than exceptionally
favorable or exceptionally unfavorable opportunity.

β b b $T\beta$ grade of ability
 π h h P of knowledge
 -1 0 0 -1

R9v

	π	h	h	P	Success			
β	$\beta\pi$	βh	βh	βP	-2	-1	-1	0
b	$b\pi$	$b h$	$b h$	$b P$	-1	0	0	+1
b	$b\pi$	$b h$	$b h$	$b P$	-1	0	0	+1
β	$\beta\pi$	βh	βh	βP	0	+1	+1	+2

Success	Corresponding Grade of ability			mean grade of ability		
-2	β			-1	-1	-1
-1	β	β	b	-1	0, 0	$-2 \times \frac{1}{4} = -\frac{1}{2}$
0	β	b	b	β	-1, 0, 0, 0, +1	$0 \times \frac{1}{6} = 0$
+1	b	b	β	β	0, 0, +1, +1	$+2 \times \frac{1}{4} = \frac{1}{2}$
+2	β			+1	+1	+1

	$\overset{1}{0}$	$\overset{2}{0}$	$\overset{3}{0}$	Success
1	$a \mid a0$	$a\bar{0}$	$a0$	2 3 3 4
	$\bar{a} \mid \bar{a}0$	$\bar{a}\bar{0}$	$\bar{a}0$	3 4 4 5
2	$\bar{a} \mid \bar{a}0$	$\bar{a}\bar{0}$	$\bar{a}0$	3 4 4 5
1	$A \mid A0$	$A\bar{0}$	$A0$	4 5 5 6

rank of Success	rank of corresponding absolute	corresponding mean absolute	deviate
1	2	1	1.0 -1.0
1 1/2	3	1, 1 2, 2	$\frac{1}{4} \times 6$ 1.5 -0.5
2	4	1, 2, 2, 2, 2 3	$\frac{1}{5} \times 12$ 2.0 0
2 1/2	5	2, 2, 3, 3	$\frac{1}{4} \times 10$ 2.5 +0.5
3	6	3	1×3 3 +1.0

deviate
-1.0
-0.5
0
+0.5
+1.0
+2
+1
0
-1
-2

5 grades of ability and opportunity each -

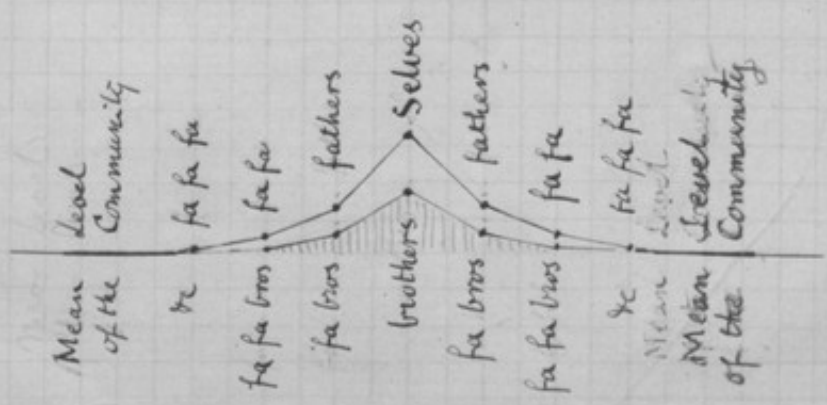
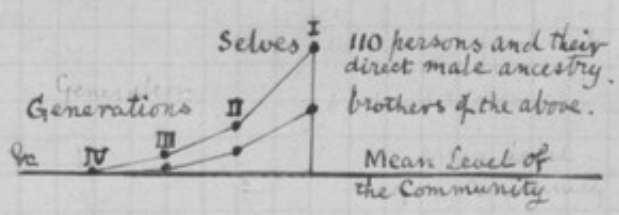
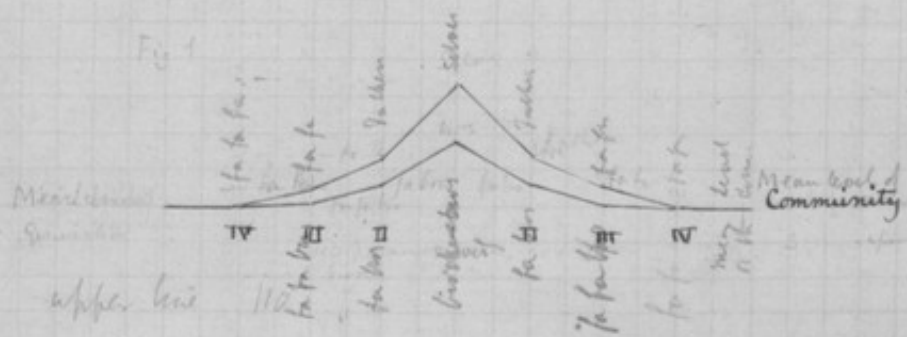
-2	-1	0	+1	+2
1	4	6	4	1

 = 16
correspondence cases in each grade (Total 16) -
ability & opportunity supposed for sake of argument, to
be independent variables, which they are not.

[illegible]

These are earlier attempts - not good

R. 106



Grade of Success	Nos in each corresponding grade of Ability					No. of Cases Total	Their mean values
	-2	-1	0	+1	+2		
-4	1	-	-	-	-	1	-2.0
-3	4	4	-	-	-	8	-1.5
-2	6	16	6	-	-	28	-1.0
-1	4	24	24	4	-	56	-0.5
0	1	16	36	16	1	70	0.0
+1	-	4	24	24	4	56	+0.5
+2	-	-	6	16	6	28	+1.0
+3				4	4	8	+1.5
+4					1	1	+2.0

$2^8 = 256$ ✓

$\begin{array}{r} -8 \\ -4 \\ \hline 8/-12(1.5) \end{array}$	$\begin{array}{r} -12 \\ -16 \\ \hline 25/-28(1) \end{array}$	$\begin{array}{r} -8 \\ -24 \\ +4 \\ \hline 59/-28(0.5) \end{array}$	$\begin{array}{r} -2 \\ -16 \\ +16 \\ +2 \end{array}$
$\begin{array}{r} -4 \\ +24 \\ +8 \\ \hline 56/+28 \end{array}$	$\begin{array}{r} +16 \\ +12 \\ \hline 28/+28 \end{array}$	$\begin{array}{r} 4 \\ +8 \\ \hline 8/+12(1) \end{array}$	
		$\begin{array}{l} 2^4 \\ 2^5 \\ 2^6 \\ 2^7 \\ 2^8 \end{array}$	$\begin{array}{ccccccccc c} 1 & 4 & 6 & 2 & 1 & & & & & \\ 1 & 5 & 10 & 10 & 5 & 1 & & & & \\ 1 & 6 & 15 & 20 & 15 & 6 & 1 & & & \\ 1 & 7 & 21 & 35 & 35 & 21 & 7 & 1 & & \\ 1 & 8 & 28 & 56 & 70 & 56 & 28 & 8 & 1 & =256 \end{array}$

see page 27

Each possible combination of Ability and Opportunity,
 together with their summed values.

These are taken to be those of the resultant Successes

Grades of Opportunity	Grades of Ability							
	1 case		Two cases		Two cases		1 case	
	-1	Success	0	Success	0	Success	+1	Success
1 case -1	-1	-2	-1	-1	-1	-1	0	0
2 cases 0	0	-1	0	0	0	0	+1	+1
2 cases 0	0	-1	0	0	0	0	+1	+1
1 case +1	+1	0	+1	+1	+1	+1	+2	+2

Grades of Success	Number and value corresponding to the		Grades of Ability		Grades of Opportunity		Total Value	Mean Value
	No. of cases	Value	No. of cases	Value	No. of cases	Value		
-2	1	-2	-	-	-	-	-1	-1.0
-1	2	-1	-	-	-	-	-2	-0.5
0	1	0	1	0	1	0	0	0.0
+1	2	0	2	0	2	+2	+2	+0.5
+2	1	+2	1	+2	1	+2	+4	+1.0

of each person's success or failure and its comparison
with the ability-opportunity?

Opportunity	-1	0	0	+1
-1	-2	-1	-1	0
0	-1	0	0	1
0	-1	0	0	1
+1	0	+1	+1	+2

see page 27

Ability	Circumstance	Success
-1	+1	-2

Grades of Success	No. in each case of grade of ability-opportunity			Total Value	Mean Value	Total Cases
-2	1	-	-	-1	-1.0	1
-1	2	2	-	-1	-0.5	4
0	1	1	1	0	0.0	6
+1		2	2	+1	+0.5	4
+2			1	+1	+1.0	1

5/4	-1	-1	-2
-1	-1	-2	1

Grades of Success	No. of cases and values in Ability that are associated with the various Grades of Success			Total		Mean values
				Cases	Values	
-2	1 case of -1			1	-1	-1.0
-1	2 cases of -1	2 cases of 0		4	-2	-0.5
0	1 case of -1	4 cases of 0	1 case of +1	6	0	0.0
+1		2 cases of 0	2 cases of +1	4	+2	+0.5
+2			1 case of +1	1	+1	+1.0

The center of

A.12v

A comparison small number of

The center of a comparison of small number of ^{hereditary} centers of ^{large part of the whole} hereditary ability, about which a large part of the total ability of the nation is clustered, ^{clustered} with rapidly diminishing closeness ^{distance} as the distance of kinship from ^{its} center increases ^{as the distance increases}.

Three variables ^{come into play} have to be considered ^{as well as} with

1. Success, Ability & Fortune ^{as well as} according to the following definitions

Success, ^{unaccompanied} must be of a kind that ^{with few exceptions have been made} has been publicly recognized in some form, ^{their value has been nearly equal to} subject to ^{fair value} modification according to circumstances. I have marked ^{in each individual instance} them for my own purposes with either a * or a + or a -

I have ^{technically} the first as 3 the second as 2 & the selection values 3, 2, & 1

In ^{very few cases} a success ^{that has been} publicly recognized by the family ^{especially} has been allowed a low mark, especially ^{in the case of} the female, unaccompanied.

Unaccompanied success. The following list is compiled from

the returns I have ^{actually} received, they have all ^{received} a * or a + after taking the ^{Honors & Hypothetical notes} circumstances ^{into} account, ^{also the context;} some have received only a -

List. ^{check for major} see p 11 13 for the minor

Objekt

Success, ability and fortune, principles - actual and

Marked employed in success

~~8 General Principles~~ 9 ~~General Principles of Treatment~~ 10, in terms of base
ascending & descending
Zones of equal heredity & significance

Zones of equal heretofore significant

male & female herd influences

Distribution of success according to ^{nearness} ~~state~~ of kinship & comparison with the community

Remarkably sifter families.

Success, ^{it has been} as defined well enough ^{by its examples} (above) for the purpose of the present inquiry is a variable correlated with two other variables ability & fortune which terms will be used ^{as far as} to comprehend as far as to exclude every other influence

Ability then will be taken to include all internal powers (that are conducive to good or ill success,)
 & Fortune to include all external influences
 Table p. 22 seems clear, thus

	Success if A=C		Success if A=C
A = -1 C = -1	-2	A = 0 C = -1	-1
A = -1 C = 0	-1	A = 0 C = 0	0
A = -1 C = 0	-1	A = 0 C = 0	0
A = -1 C = +1	0	A = 0 C = +1	+1

170
65
16

330
136
62

are given here
 All possible combinations of three Grades of Ability, $-1, 0, +1$, whose respective frequencies are $1, 2, 4$, with three similar Grades of Circumstance. The summed values of each combination is taken to represent the value of the Resultant Success.

Table I

A	C	Sum of A+C	A	C	Sum of A+C	A	C	Sum of A+C	A	C	Sum of A+C
-1	-1	-2	0	-1	-1	0	-1	-1	+1	-1	0
-1	0	-1	0	0	0	0	0	0	+1	0	+1
-1	0	-1	0	0	0	0	0	0	+1	0	+1
-1	+1	0	0	+1	+1	0	+1	+1	+1	+1	+2

Table II
 Values of S corresponding to each value of S

Values of S (Sum of A+C)	Value	No. of Cases	Summed Value	Value	No. of Cases	Summed Value	Value	No. of Cases	Summed Value	Total Cases	Total Summed Value	Mean Value of A corresponding to each value of S
-2	-1	1	-1	-	-	-	-	-	-	1	-1	-1.0
-1	-1	2	-2	0	2	0	-	-	-	4	-2	-0.5
0	-1	1	-1	0	4	0	+1	1	+1	6	0	0.0
+1	-	-	-	0	2	0	+1	2	+2	4	+2	+0.5
+2	-	-	-	-	-	-	+1	1	+1	1	+1	+1.0

The figures shaded with blue & in heavy type

This inquiry was commenced by me partly as well
 the object of learning how far abstrac^t clustered in
 families & how far it ~~was~~ ^{is} sporadic, and to ~~obtain~~ ^{obtain}
 what ~~the~~ ^{any other} ~~various~~ ^{points} ~~questions~~ ^{connected} with "Eugenics," that is
~~the~~ ^{the} ~~best~~ ^{best} ~~of~~ ^{of} conditions under which a high breed of
 mankind admit of being ~~formed~~ ^{permanently} established

It has served especially as a ballon d'essai
 to learn whether ^{an extensive} this sort of inquiry was likely to
 prove as ~~useful~~ ^{as I had hoped it might be}
 of sufficient value to make it worth while to
 proceed further. The answer is in the affirmative.

~~The foundation must be carefully~~

The only feasible measure of ~~success~~ ^{as simplified by ~~consideration~~ ~~of~~ accompanying information} abstrac^t in
 this sort of inquiry is Success. The first step
 is to justify its ^{employment} ~~use~~ ^{in that respect} ~~for~~ ^{what I}
~~have~~ ^{called} ~~actuarial~~ ^{statistical purposes} 'use'. If so it is hardly
 worth dwelling on the fact that in individual cases

3. continued from the page in front

p. 15v

It is therefore ~~extremely~~ probable that Success is ~~roughly~~ ^{roughly} and ~~as~~
the average, roughly proportionate to ~~the~~ natural ability, and ~~thereas~~
at its measure. This view ~~is~~ is strongly confirmed by the study of the
marks gained in large competitive examinations which
always ~~the~~ run in fair accordance with the Normal law of Frequency.
The argument ~~is~~ ^{is} these. The marks are equivalent to Success, by the
combined result of natural ability & circumstances. Natural ability, the distribution
of which has been measured & discussed, ~~has been~~
found to conform with considerable precision to the law of Normal Frequency.
Therefore of natural ability may be safely assumed to do so. If then
the combined effects of ability & circumstances be normal, and if ability be normal,
it follows that circumstances must be normal also. After making ~~the~~ allowance
for imperfect conformity to the normal law of frequency, the broad conclusion
seems ~~conclusive~~ ^{irrefragable}. That Success serves as a rough statistical measure of ability, ~~consequently~~
that ~~therefore~~ the word "Success" in the preceding Tables & figures may be safely
replaced by "Ability" ^{or} "Natural Ability".

the range of deviation within which and beyond which the individual
event in average is equally likely to fall, shall be reduced to
any desired amount.

natural gifts are frequently ^{stunted} repressed by ^{unequal} difficult
 circumstances, a ^{forced into} developed brilliancy under favorable
 men. I could perhaps as readily as most persons
^{desires} ~~from~~ experience ~~gained~~ ^{of} injuries in heredit, give
 powerful illustration of all this. ^{but these are} ~~but it is not to our point~~
^{but that consideration may be} ~~point~~. It would be quite as easy to still earlier
^{to show that} ~~to obtain proof of~~ ^{mean} death occurring at every age,
 but that would not affect the ^{actuarial} ~~death~~ expectation of
 life at each & every age, upon which Insurance
 tables are constructed. However uncertain ~~the~~ an
 individual case may be, it is certain that by averaging
^{two groups of the same general description} ~~many~~ ^{and that} ~~cases~~ the uncertainty is reduced, ^{and that} by averaging
^{more & more of them} ~~many~~ the uncertainty gradually yields and becomes
 replaced by practical certainty. ^{The effect of} ~~All that greater or~~
 less uncertainty in individual ^{cases} ~~can~~ ^{can} effect is ~~the~~ determined
 the number of ^{then} ~~cases~~ that must be averaged before the
 uncertainty is reduced to ^{any} ~~within~~ the desired ^{amount} range. The
 scatter lessens as the numbers that are averaged increase,

2. ^(from 2 pages forward) instance lets both ways. The one boy will suffer from social distinctions from which the other is exempt. Isaac Taylor's answer does not do the point - "We, God's mercy spare! from social scales with ease, saved by that generous gift, inspititude to please." It is not great enough too much to suppose further, that appropriate ~~use of~~ ^{adjustment} of ~~material~~ ^{the} the grade of Success achieved shall be the turn of the grade of Nature & Circumstances ~~inspected~~. ~~That the effect combination of one a~~ ~~few plus grade of nature with a plus grade of circumstances shall produce a~~ ~~plus grade of Success; if with a minus ^{grade of} circumstances a plus one grade; and if~~ ~~with a minus grade a respective~~
The grades will rank as plus 1, zero, and minus 1

Thus +1 of Nature with +1 of Circumstance shall lead to +2 of success; if with 0 of Circumstance to +1 of Success, if with -1 of Circumstance to 0 of success. Similarly for all other combinations. It is easy to make a square table, with three 3 grades of Nature along the top & three of Circumstances by the side and to write in each of its nine compartments the sum of the two corresponding grades. When this is done the success will range from +2 to -2 and their associated grades of Nature will be as follows: +2 of Nature +2 of Success: +1 of Nature +1 of Success: 0 of Nature 0 of Success: -1 of Nature -1 of Success: -2 of Nature -2 of Success. There is "Regression" throughout to the extent of exactly $\frac{1}{2}$. So in this case Nature is strictly proportional to Success. It may be objected that the number of Median Cases is greater than that of either of the exceptional ones. So be it; let them be twice or three or frequent as the others, however, make no difference in the result. In the first case the arguments at all a broken off for +1, 0, 0, -1, but the result will come out the same. Similily if the Median Cases are as numerous as the extreme ones. The regression of $\frac{1}{2}$ always remains.

Go back one page

~~In short that~~

Very many ^{different ways of estimating success} ~~rough attempts~~ might be quoted, that all ~~point~~ ^{agree} in this, one of the best is the distribution of marks in competitive examinations whose distribution is much closer to normal than ^{is} ~~the~~ ^{the} ~~claim~~ ^{claim} for Success generally.

though at a ^{well known} slower rate ~~to~~ ^{into} ~~that~~ ^a matter
 so familiar to those who occupy themselves with the
 theory or practice of problems in chance, I will enter
 no further here.

The question then is ~~are~~ we justified by rational
 consideration in using success as ⁱⁿ an actuarial sense
 a measure of ability? I shall ^{endeavour to} show that we are.

The problem is obviously of the same general form
 as a vast number ~~with~~ which ^{successfully} are dealt with in
 Biometrics, and that ~~form~~ ^{form} tells us a great deal.
 I do not stop to define Success, ^{in the sense of all etc.} but of course it
 admits of being so defined that ^{all} ~~any~~ person ~~may~~
 would understand ~~what fairly well~~ what is intended
 by the use of the word. ^{by myself} I am ~~no more at present~~
~~than~~ that it shall be considered a Variable, having
 the ~~common~~ ^{usual} properties of variables, that moderate
 values ~~shall~~ ^{are} be more frequently met with than
 extreme ones, & ~~precisely~~ ^{as} ~~the~~ ^{a little} ~~more~~ do I
^{in short, that it is a quasi-normal variable, and a little more,}

^{claimed} ~~case~~ in respect to Ability, the little more ^{being due to it for} ~~being~~ ^{the} considerable assurance we have that it ~~is~~ ^{that every} ~~all other~~ ^{measurable} human qualities ^{which have yet} ~~that have been~~ ^{has been found to be} ~~discovered~~ ^{is} a fairly normal variable. ~~The~~

Success is due partly to ability and partly to one or more of a vast group of causes that may be labelled "Circumstance" ^{is another variable but let it further} ~~Here again our definition~~ must wait. It will suffice to say that every element of success other than ability shall be ^(included in it) ~~called~~ Circumstance, and ~~if~~ ^{that} Circumstances is a variable.

Now if Circumstance were a normal variable and if it were independent of Ability we should proceed ~~survivingly~~, but we have no right to assume this first and the second is not true. In instance, a bright clever boy attracts ^{a favor} notice, and ^{he} is afforded ^{of education & advancement} opportunities that never come to ^{one who is} a dull & stupid one. ^{nevertheless} Allowing fully for all this it will still be inadvisable to follow out the results on the supposition, ^{an imaginary} not

depends wholly on

The Success of each man is the combined effect

of his Nature & of Circumstance.

~~Under~~ Nature

includes ~~potential~~ ^{much} ~~ability~~, among many ^(that have an appreciable effect on success) ~~other things~~

^{and may be perceived} ~~the qualities of aptitudes of all sorts that are conducive to~~

~~success as absolutely under an able person~~

^{as intellectual gifts of various kinds} ~~do as able mind~~ a persevering disposition, appropriate

^{all these will be grouped under the term natural ability, or more briefly "Ability"} ~~tastes~~ Circumstance includes healthy surroundings, education

^{of social} ~~family~~ influences, ^{distractions,} ~~social~~ means, and leisure.

There would be little difficulty, ^{roughly} ~~in~~ sorting the mass of

our countrymen ^{men whose history was known} ~~of the~~ into three grades of favorable

status - good, mediocre, & bad - ^{respectively, as to their natural ability} in respect to Nature

and to ^{their} Circumstances ^{and opportunities to sort them} respectively. For and For

rough purposes we may consider them independent

of each other ^{which} ~~which~~ ^{might} ~~be~~ ^{be done} ~~not do this~~ if the inquiry

^{conducted} ~~was~~ ^{more} ~~precise~~, because ^{they are in some small degree} ~~they are in some small degree~~

^{somewhat} ~~correlated~~, thus a ^{bright} ~~bright~~ intelligent & attractive

boy will receive more favors and opportunities of advancement

than a dull stupid & unattractive one. But even this

Go back 2 pages

I would say, that that S , A & F are three normal variables and that in each case the S is the simple sum of A & F . Then let see how far a knowledge of S helps us to a knowledge of A .

Partly, because the binomial problem, of dealing with grades, is nearer to our work, partly because ~~to its being easily understood~~ ^{it can be followed} with much less ^{knowledge of} mathematics than the exponential one, and partly, perhaps chiefly, because the genesis of its results is clearly displayed. I will use it here, in a very simple shape.

A & F shall each be divided into 3 grades, small ^{or -1, 0, or +} medium and large, the ^{relative} numbers in them being taken (on well known grounds) as 1 of small, 2 of m, 1 of large. To find the sum of every possible combination between them, each of the ^{four} constituent units of the one -1, 0, 0, +1 must be added to each of those of the other as has been done in the table I. The resultant values of S will be one of -2, four of -1,

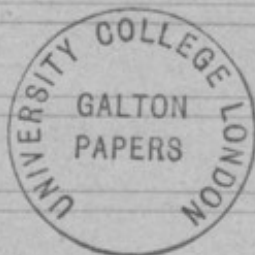
This example shows us what ^{has} to be expected, when, the neglected ^{if possible to take} difficulties have ~~been~~ taken into account. There is nothing in them so far as I can see to militate against the acceptance of \hat{S} as a rough

a. ^{Considerable} ~~Short~~ ^{term} 3 independent variables of which the first is simply the sum of 2 others taken at random

1 Not normal

2 Not independent

3 not simply correlated, but even discontinuous complex of many queer functions
 solution lies in the "mixing"
 also if success & ability are both normal the 'distance' must be to



6 of 0, 4 of +1, and 1 of +2, 16 in all.

We then classify these values as has been done in Table 2, placing by the side of each the number & values of their A constituents, and thence get the average value of the ^(call it \bar{a}) A, that is associated with each value of S. ^(in each S) These values are ^{checked} counted outward from 0 in mediocrity. We see that $\bar{a} = \frac{1}{2} S$.

This ^{generalization} holds, however many grades we ^{long} deal with. It is quite clear enough theoretically, ^{still I thought} it is safer to test, so I did this for the 156 combinations of the 16 units of Ability ^(in 5 grades, numbers, severally) (1, 4, 6, 4, 1) combining each unit with the ^{in 5 grades} 16 similar units of Faculties.

It is needless to generalise this problem. As that is ^{difficult to show} being the fact & the generics of the regression. ^{Actually speaking}, \bar{a} is here ^{undoubtedly} a true measure of \bar{a} , for it is simply the half of S. Had a larger weight been given to f, then \bar{a} would have been less than its half, that is all.

fa fa	16	3	3	2
fa bro	17	13	3	1
bro sm	4	11	2	-

me fa	13	8	2	1
me bro	11	14	3	-
si sm	1	4	1	-

A.20av

Total	31	27	8	3
-------	----	----	---	---

	25	26	6	-
--	----	----	---	---

fa fa bro	8	1	-	1
-----------	---	---	---	---

me me bro	1	1	-	1
-----------	---	---	---	---

fa bro son	10	7	1	1
------------	----	---	---	---

me si sm	6	5	3	1
----------	---	---	---	---

Grand total	119	35	9	5
	84			

	32	32	9	2
	64			

fa si	1	3	-
-------	---	---	---

me ti	-	4	1
-------	---	---	---

bro da	-	2	-
--------	---	---	---

ti da	1	1	1
-------	---	---	---

	1	4	-
--	---	---	---

	1	5	2
--	---	---	---

F.20c

(67)

Father's side

Kinship	*	+	-	RS	Index of Success
fa fa	16	3	3	2	57
fa fa bro	11	13	3	1	62
bro son	4	11	2	-	36
					155

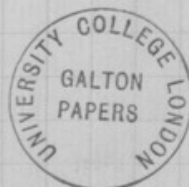
181

Mother's side

Kinship	*	+	-	RS	Index of Success
me fa	13	8	2	-	57
me bro	11	14	3	-	64
si son	1	4	1	-	12
					133

144

Wrong in some small points

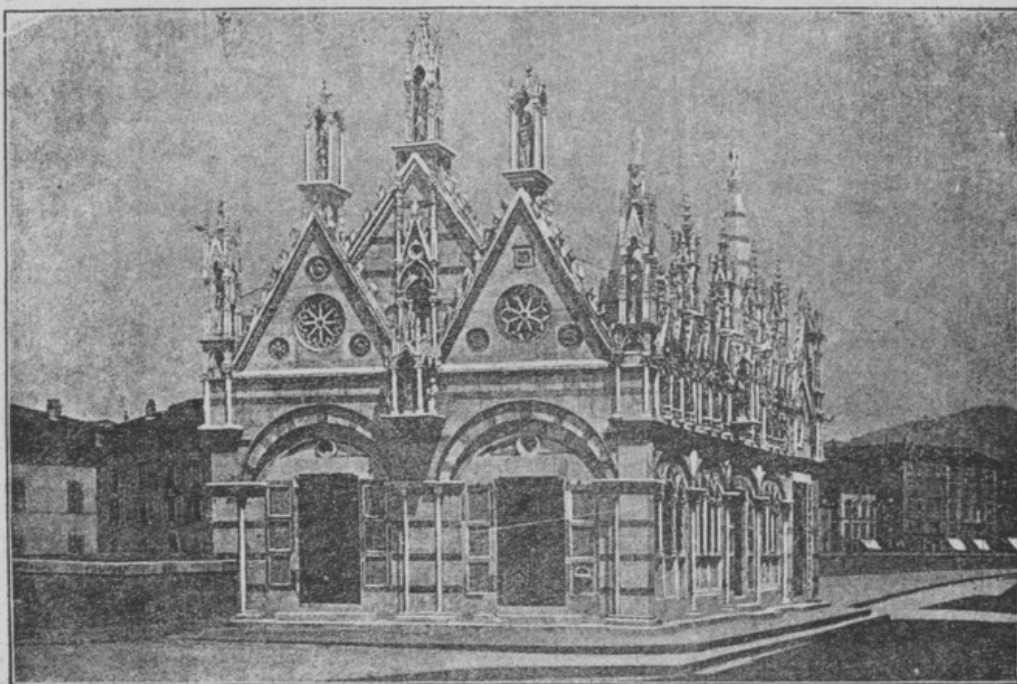


	Nos	Sum of Indices	
		Obs	Rep
Grand fathers, both sides	2	114	72
Great uncles, both sides	2	45	22
First cousins male, both sides	4	145	36
Father	1	135	135
Uncles, both sides	2	126	
Brothers	1	167	

* revise and print in improved form

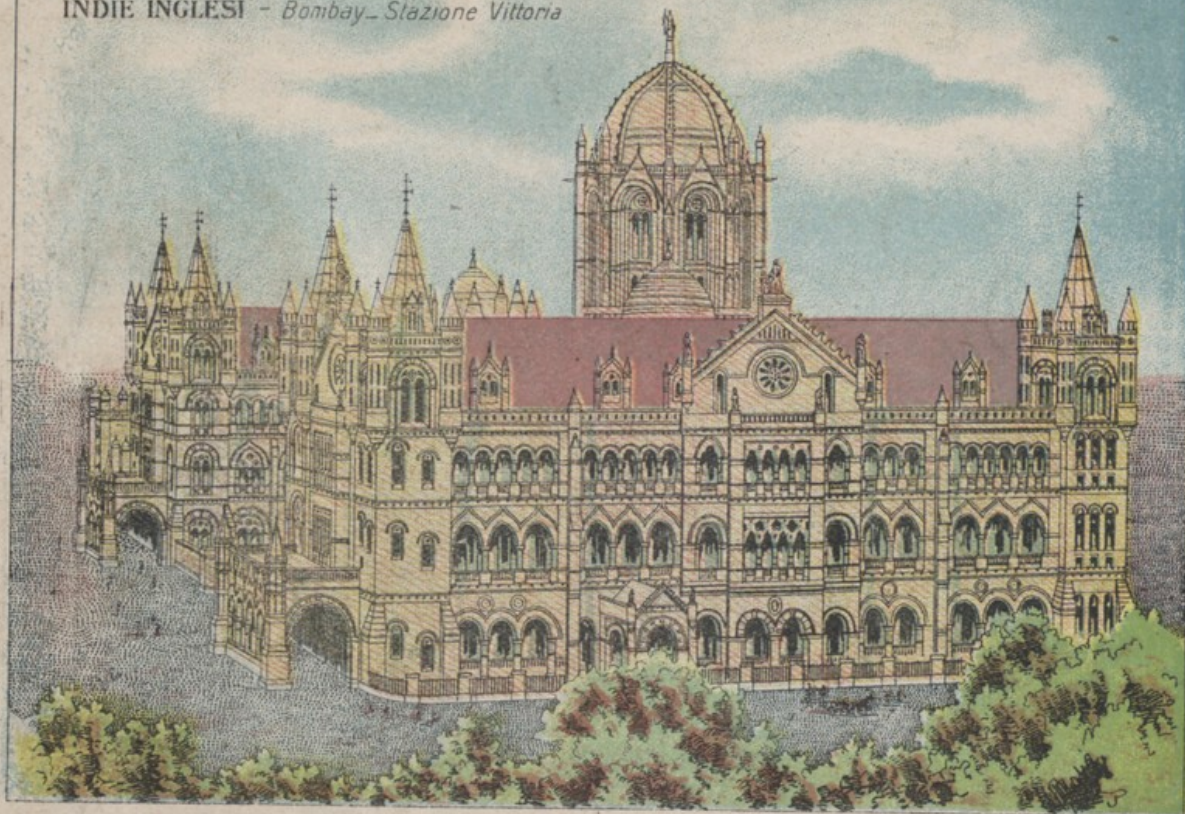
Group	Equally numbered groups	Sum of indices	rough ratios	very rough ratios		
I	Selves (110)	330			173	276
	Brothers	167				
		497	100		525	500
II	Fathers	135				
	Father brothers	62				
		197	40	3	225	200
IIIa	Fa fa	57				
	Fa fa brothers	26				
		83	15	1	75	75
IIIb	Me fa	57				
	Me fa bro	11				
		68	15	1	75	75

Me me bro (16) and 16 common with 5 = one * a one + one = 312 persons at least in London
 * 75, being the mean of 83 and 68 is preferable
 P. the Londoners.



Cattedrale di Siena

INDIE INGLESÌ - *Bombay - Stazione Vittoria*



LIT. A. PRETTO & C. VICENZA

	7	8	9	10	11	12	17	18	19	20
	fa bro	fa si	me bro	me si	bro	si	bro son	bro da	si son	si da
Page 1 means	2.58	2.58	2.33	2.05	2.67	2.50	2.21	5.45	4.20	2.90
" 2 means	2.44	1.88	3.06	2.35	2.19	1.90	2.59	3.06	2.00	1.46
" 3 "	2.06	2.72	2.13	2.65	2.24	2.19	2.81	2.38	1.38	1.92
" 4 "	2.91	2.55	2.37	2.22	2.46	2.17	3.09	2.75	1.55	2.00
1 Sums	62	62	49	43	72	65	61	60	42	32
2 "	39	32	49	40	46	38	44	52	26	19
3 "	37	49	34	45	47	46	45	38	18	25
4 "	35	28	19	40	32	26	34	33	17	18
	173	171	151	168	197	175	184	183	105	94
1 cases	24	24	21	21	27	26	19	11	10	11
2 "	16	17	16	17	21	20	17	17	13	13
3 "	18	18	16	17	21	21	16	16	13	13
4 "	12	11	8	9	13	12	11	12	11	9
	70	70	61	64	82	79	63	56	47	46
Average to each kinship.	2.47	2.45	2.48	2.63	2.40	2.22	2.92	3.27	2.23	2.05

Kinship	Means kin below	Totals	
		Kinmen	Female
7 fa bro	2.47	173	70
11 bro	2.40	197	82
me bro 9	2.48	151	61
fa si 8	2.45	171	70
si 12	2.22	175	79
me si 10	2.63	168	64
	2.45	1035	426
Mean of means	2.41	General Mean 2.43	
7 fa bro	2.47	9 me bro	2.48
11 bro	2.40	Mean 2.48	
Mean	2.43	8 fa si	2.45
		10 me si	2.63
12 si	2.22	Mean 2.63	
Mean	2.33		



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Ability in Families
of Fellows of R-Society

Original Statistics



	lage 1 ^{included}				lage 2 ^{included}				lage 3 ^{3*}				lage 4 ^{3*}				Totals Sum of 1, 2, 3, 4				Sum 1	Indices of Sums			5
	*	+	-	S	*	+	-	S	*	+	-	S	*	+	-	S	*	+	-	S	*	+	-	S	
fa fa fa	1	1	-		-	-	-		1	-	-		1	-	-		3	1	-		4	11	3	11	
fa fa bro	3	-	-		3	-	-		1	-	-		1	1	-	1	8	1	-	1	9	26	24	26	
fa me bro	1	-	-		-	-	-		-	-	-		-	-	-		1	-	-		1	3	26	3	
fa fa	3	2	1	2	3	2	2	-	5	3	-		5	1	-		16	8	3	2	24	57	48	67	
fa bro	2	7	3		1	2	-		5	2	-		3	4	-	1	11	15	3	1	26	62	33	66	
fa si	1	2	-		-	1	1	-	-	-	-		-	-	-		1	2	1	-	4	9	3	12	
fa me	-	-	2		-	-	1	-	-	-	-		-	1	-		-	1	3	-	1	5	3	5	
fa	10	3		3	2	7	4	-	4	11	1	1	11	4	-		27	25	5	4	52	135	81	136	
bro	13	6	6	4	9	3	4	1	7	5	7	-	8	7	-		37	21	17	5	58	167	111	170	
1/2 bro { fa son	1	-	-		1	1	-	1	1	-	-		-	2	-		3	3	-	1	6	15	17	15	
me son	-	-	-		-	-	-		-	-	-		-	-	-		-	-	-		-	-	-	-	
bro son	-	3	1	-	-	4	1	-	1	1	-		3	3	-		4	11	2	-	15	36	12	36	
bro da	-	-	-		-	2	-		-	-	-		-	-	-		-	2	-		2	4	4	4	
fa bro son	3	2	1	1	2	3	-		1	-	-		4	2	-		10	7	1	1	17	45	30	45	
fa bro da	-	-	-		-	-	-		-	-	-		-	-	1		-	-	1	-	-	1	1	1	
fa si son	1	1	1	-	-	1	3	-	2	-	-		2	1	-		5	3	4	-	8	25	15	25	
fa si da	-	1	-		-	-	1	-	-	-	-		-	1	-		-	2	1	-	2	7	4	5	
son	-	6	3	-	-	3	3	-	1	6	6	-	-	1	2	-	4	16	14	-	17	46	24	49	
me fa fa	-	-	-		1	1	-		1	-	-		-	-	-		2	1	-		3	5	6	5	
me fa bro	-	-	-		1	-	-		2	1	-		-	-	-		3	1	-		4	11	9	11	
me me bro	-	1	-		-	-	-		1	-	-	1	-	-	-		1	1	-	1	2	5	11	5	
me fa	4	4	1	-	1	1	-		4	-	1	-	4	3	1	-	13	8	3	-	21	57	39	58	
me bro	5	1	-		2	3	-		2	7	3	-	2	3	-		11	14	3	-	25	64	33	64	
me si	-	2	-		-	-	1	-	-	1	-		-	1	-		-	4	1	-	4	9	9	9	
me me	1	-	-		-	-	1		1	2	-		-	-	-		1	3	4	-	4	8	9	10	
me	-	-	1		1	1	3	-	3	1	-		-	2	-		4	4	4	-	8	15	10	24	
si	2	3	2	-	1	1	1	-	-	2	2	-	-	-	-		3	6	5	-	9	26	17	26	
1/2 Si son { fa da	-	-	-		-	-	-		-	-	-		-	-	-		-	-	-		-	-	-	-	
me da	-	-	-		-	-	-		-	-	-		-	-	-		-	-	-		-	-	-	-	
Si son	-	2	-		1	-	-	1	-	2	-		-	-	1	-	1	4	1	-	5	12	3	12	
Si da	-	-	-		1	1	1	-	-	-	-		-	-	-		1	1	1	1	2	6	12	6	
me bro son	2	4	-	1	1	1	1	-	4	3	-		2	1	-		9	9	1	1	18	44	27	46	
me bro da	1	-	-		-	-	-		-	-	-		-	1	-		1	1	-		2	5	4	5	
me si son	-	-	-		4	2	3		2	2	-	1	-	1	-		6	5	3	1	11	31	18	31	
me si da	-	-	-		-	-	-		-	-	-		-	-	-		-	-	-		-	-	-	-	
da	-	2	3	-	-	1	-		-	1	2	-	-	2	-		-	6	5	-	6	17	12	17	
W. salt	-	-	-		-	-	-		-	-	-		1	1	-		1	1	-		2	5	5	5	
bro	5	1	-	3	1	-	1		3	3	-		1	1	-		10	5	-	4	15	40	28	40	
da	-	-	-		-	-	-		-	-	-		-	-	-		-	-	-		-	-	-	-	
Totals	58	55	25	14	36	41	31	4	53	54	22	3	48	44	5	2	195	194	83	23					

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Fairford
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S. 6

3	14	15	11	9	11	8	10	7	13	16	8	14	15	13	12	12	7	21	31	18
4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22-23	24-25	26-27	28-29	30-31	32-33	34-35	36-37	38-39			
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