Notes on Eugenics

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1. Definitions   'bred' has 2 meanings, so has "eugenic", are both
   nature & nurture — acquired & inborn & natural
2. Expectations   reasonable ones in morals & in physique, as in a picked stock. Example ("picked"
   Diff = men & cattle or even pigeons — length of a generation — Corporation must develop
7. Dogma must not interfere with treatment — Changes in creed of Xtn born, many other considerable creeds
   must know what people have contentedly endured
3. Races that are noted as finer than others — Conscript rejections
10. Certificates   index of efficiency = that of one sex with added to that of other   even Expectation of ... of produce
9. Instances of prohibited marriages their effects   Celibacy — Bavaria &c.
   severer restriction   segregation. Surgery, ... & death. What has been done in ...?
8. Mrs Grundy   instances — King of Spain. — Hottentot women on horse — Experience of Cavalry
   The ideals of different races & ages. — Waves of passion in a nation. Social influences.
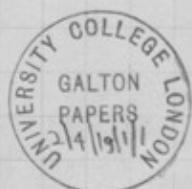5. Le Play — with the home entrance as it has
   Marriage — will it not become modified int partnership to be dissoluble with difficulty with strict regard to ...
   Instance of great deviations from our systems — Out of every girl to concentrate
   children between ages of 20 – 23 to state — prescribed condition of paternity
11. Pity — Charity — helpfulness reasonably directed, as by Quakers & Jews. Savoury of women
   as well as men. Tournaments — war — Bull fights. Some born without a conscience,
   Maternal instinct. influence of ... being overborne
6. Social duty first, individual second.
4. Efficiency for masses, not in individuals. — a slight slope between contending parties (...
12. Conditions of good rearing in ... by ... food, pure air, moderate hours — even influence of ...
13. What is immediately practicable ?

Letters are marked by the Post Office in two ways, first by the
stamps and occasionally by rows of seven lines made apparently by
a roller. The stamps are good impressions & other undecipherable, but
the roller giving beautiful impression. Why not make it
roller print the facts which the stamps impresses so inefficiently?
The type would be raised & fit into compartments in the face of the
and be secured in place by the back of the next piece. As there
seems no mechanical difficulty of detail and the experiment seems well worth trying

Notes on Discussions to be remarked on

1	Haddon	1	The world is gradually becoming self conscious
	Dr Mott	2	Register Officer – where a bill of health c⁴ be made
	Crackley	3	
	Dr Alice Vickery	4	Artificial control of the birth rate as a condition of Eugenics. Size of family adapted to socio- conditions of family and to a given epoch
2	Mr Skrine	5	
	Dr Westermarck	6	We restrict marriages not allowing probable parents of unfit to marry. Laws are not useless because many persons break them – Here cause & effect are so distinct that the never tempted by does not distinctly perceive the connection between them. There is hardly any proof to wh. moral conscience still stands in greater need of training than in its judgment on want of foresight. Individual caprice as against the most important of free society together
	Dr Drysdale	7	Some restrictions were already in force in England. In some great banks clerks mought not marry until their salary had reached a certain level
	Prof. Altmann	8	
	Dr Havelock Ellis	9	I imply a practical meaning "eucogamy", viz. equalising procreation — animals are bred for points & by a superior race of animals, not by themselves. to say, we breed than all round an improvement, then we are mad in the air — Let us be cautious about laying down practical limitations
3	Mrs Fawcett	10	The great majority have no conscience now about their responsibility for the inferior in later life of the race
	A.H. Huth	11	Our people will not accept restrictions as to the children of any one race. Here he quoted eight celibacy, only unfeeled, did not destroy marriage — Mr. G. does not define his creed. One which aims as a social body, without natural enforcement through selection of the fittest (Genes) legislation and still worse the so-called philanthropist steps in …
	Prof. McKendrick	12	
4	C.W. Mitchell	13	love is too strong. but to eliminate defective types, the criminally weak & diseased is reasonable.
	Prof. Muirhead	14	
	Dr Max Nordau	15	the breeder knows exactly what he wants & gets them at the cost of other qualities (much length). Old marriage laws had the custom of religion, which w⁴ be absent from modern restriction laws
	Dr Carrel	16	would not the residual type be very superior, and having always condemned to mate together, suffer?
	Yoer Delage	17	writes Eugenics to be translated not French as Eugenics or Eugenics, so we eugenics or eugenics. Social oppression should fall not in the union of the noble with the plebeian but with the mating of noble qualities with its reverse.
5	Prof. Posada	18	… seems to slow that the reflex of opinion influences the being & constitution of the human family. the day that a woman shows same repugnance to an impure husband as vice versa will be a great step
	Poulton	19	
	Hon B. Russell	20	
	Prof Sergi	21	As a practicable problem seems perhaps impossible — modern tendency is towards freedom hypothetical conventions are insufficient. Idea of high culture hear unmarried daughter of insane & epileptic parent.

5 (continued) Steinmetz 22 considers the objects of historical marriage restrictions ... He has written a report to Schallmayer

6   Sir R. Temple 23 Gifted & capable ... divisions of one class of mankind. All forms of marriage are due to consideration of wellbeing. The greater the restrictions the more systematic the repression become. Illegitimacy is the result of rebellion against consolation. Caste is a national disaster, rendering unprofitable the instinct of nationality or has subjected those who adopt it to those who do not.

Prof Tönnies (1) physical mental and moral ability tend much to exclude one another. Should one of these be favored at the cost of the other two. 2) It wd be cruel to raise the intellectual capacity of labourers ... they wd be disgusted with the monotony of their toil – note of intellect involves decay of sympathy, promotes psychosis & nervous seeking. Strong physique and much with refinement and tact. 3. doubts unanimity as to which marks are desirable. 6. power of love. 7 does not believe eugenics can become a religion as matters stand the function of religion is to give immediate relief, the life of a race is foreign to popular feeling

7   Weismann 25 – Raises question whether tuberculosis can be bred out.

   Mrs V. Welby 26

Diploma
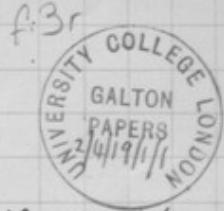
The Council of the Eugenics Education Society

hereby record their opinion that the Immediate Descendants of

John Henry Smith				and of	Mary Robinson			
	day	month	year			day	month	year
born	16	Feb	1848		born	3d	March	1853
son of Alexander ~~George~~ Smith					daughter of George Goodenough			
and of Louisa Merryweather					and of Violet Macintyre			

are of Exceptional Worth to the Country, as compared with

the offspring of other parents of similar social position.

In forming this conclusion the Council have paid regard to

the Physique, Ability, Character, and Number of the Descendants in conformity

with their Bye Laws.

The names, dates of birth, and of death (when deceased) of all their

children who survived their —th year are given below

	Names	M or F	Born			Died		
			day	month	year	day	month	year
1	George Howard	M	13	December	1876	3	January	1903
2	Mary Anne, marr: John Inglesant	F	8	January	1878	—	—	—
3	John Henry	M	21	March	1879	—	—	—
&c	&c							

Guizot Protestant family from Nîmes
Father guillotined
" Mother took refuge in Geneva
Thiers - Marseilles - on mothers
side related to André & Mr J Chénier
Arago born Estagel . Pyrenees
orientales
Hugo Victor - French Lorraine Vendée
Dumas Alex. Gr mother a negress
Lamartine French but true name
was Prat
Sand George. Gr mother illeg dau.
of Maurice of Saxony
Scheffer Ary - Dutch
Broglie in Italian 1750
Marr Albertine de Stael
Rachel Jewish of Switzerland
Montalembert mother English
Chateaubriand
Waddington
Lacordaire French apparrull

Jan 14/84

L᷉ᵈ Alfred Churchill told
me that his nephew the present
duke of Marlborough was exactly
like his great grandfather in
features & in two mental characteristics
1. Not understanding the value of
money — He the present duke has
ran through £150.000 already
no one knows how; there is
nothing t shew for it
2. Women.   The older duke
was concerned in a divorce suit
with one of the Stuart family &
also kept a woman with a
large family, by him.

psychic | Eugenic
| calligenic

γενος

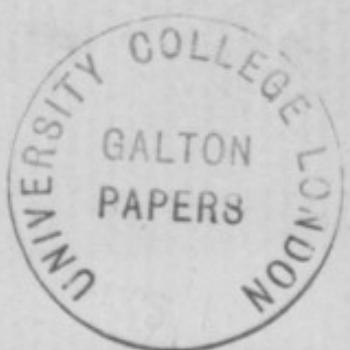Ευγένεια   — νικος

καλλιγένεια   ἡ the bearer of
a fair offspring — Demeter as the
ζῦλον   Earth was invoked by this name

ζίμα

ρίζα

ς

Weismann Studies in Theory of Descent — Translated by Meldola
with preface by Ch. Darwin — Sampson Low & Co 1882

Vol II   On the Mechanical Conception of Nature

p.639 in the way of a directive force
p.634. Denies existence of a "phyletic vital force" — is something inexplicable
634. on observ. of which & therefore inferentially to all creatures. 639. Stick to
causality as long as possible & not go to a transcendental philosophy
641. The (ontogenetic) vital force is already abandoned & replaced by belief in physico-chemical
processes & (642) why not the phyletic   (due to Wöhler & his colleagues, who manufactured urea, &c / p.643)
643. Is not the variability a fact.
645 Von Hartmann says that natural selection is not a mechanical explanation. Quaere.

He urges 1, Variability is not unlimited in direction — yet it ought to be to satisfy Darwinism
& if not limited it is by a phyletic vital force — but it need not be unlimited & sofar as
it is limited it need not be so through a vital force.   As regards 1, there are many directions
to the variation w-beneficial a could fit in to the environment — examples from bulbs.
652. Who ever asserted that any type can be reached from any point — 653 there
are necessary correlations in Darwinism — Organic equilibrium — this differs from an
"innate tendency to variation conformable to law" 654 Wigand is absurd when he says
that a gooseberry ought to be bred to the size of a pumpkin if variability was not internally limited.
Ratio of volume to surface be ____ Darwin modified his original assertion of unbounded variability
and limited its direction (Origin of Species 5th Ind: Ed: p. 6.)
By as regards 2, Hartmann's view that heredity is not a mechanical principle — Darwin acknowledged
the small chance of single individuals leaving an hereditary mark [Here my non-blends might come in]
a. Allen on the mammals & birds of East Florida. Bulletin Museum Compar. Zool. at Harvard Coll. vol II No 3
655 _ _ tendency to vary in a given direction, of useful subjects itself.
688. Haeckel defends reproduction as surplus last-ordered growth. If multiplication & cell-
multiplication are purely mechanical processes, so also is heredity
1812. Haeckel that heredity depends on transference of motion & variability upon a change of this motion
to be this justifiable though not to the remotest degree proved). In Darwin pangenesis that a transference of
matter & not a species of motion, peculiar to this matter. The assumption of consciousness in the plastidule
scarcely helps. Does not account for atavism appearing at monogostts
[use phrase Social equilibrium, not organic. as illustrated by the Little gardens with Keswick quarries]
   [He has not an idea of my sample theory]

690 Ontogeny = life of individual. phylogeny of type.
   [Accumulation of small differences — but if it will only not occasionally large ?]

706 The requirements of a "pre-established harmony" demand that an animal fitted for special
condition of life should make its appearance at that precise period of the Earth's history when these
(before mentioned) special conditions are all fulfilled, - so forth

Discouragements (from Malthus) f.8 (a

? I. 51 Savages (? who) may not marry unless skillful enough to support a family (see Hall about th Scandinaver)

104. Curious statement that the women in Formosa are not allowed to bring ~~women~~ children into the world before age of 35

Sparta 109. Spartan interference with marriage

Norway 136 Marriage delayed in Norway. (see below 310)

Hindostan. 223 Religious discouragement (marriage of younger brother before elder

Thibet 240. Numerous Ecclesiastics.

China 257 Celibacy of the Bonzes 1000.000 in th Empire & of the literary bachelors

(Religion preaches Marriage in one place & twice a celibacy in another.

258.9 Cheaper to buy a full grown slave in China than to breed him consequently servants in China as in England are to a great degree unmarried.

Norway 310. ~~Labourer~~ can't marry without a cottage & land, & these are limited. there are no manufactures.

313 There are many servants in a house

Discouragement &c   Malthus (continued)

Russia   # ~~Russia~~.
II. 366   When licentious habits prevail the births
per thousand are always fewer than elsewhere

France   384   Early marriages to avoid conscription produced
crowds of children who died.
388.   Town mortality

Switzerland   398   ~~Sudden agitation & increase~~
411   Extinction of Bourgeoisie families
416-19   Conversation at the Lac de Joux
420 –   Remarks thereon – sorry to make people understand.

England   449   Gentlemen of any sufficient income to a
bachelor (very well put)
451 –   Tradesmen & farmers – clerks – labourers.
452   Servants

Scotland   .492   Difficult to depopulate by taking away children
Take away industry & the thing is done at once.

Vol II

256. There are few actions that tend so directly to diminish the general happiness, as to marry without the means of supporting children.

338. A greater degree of respect & of personal liberty should be accorded to single women — an encouragement of Celibacy.

339. Instruct children on the principles of [?] — refers to Adam Smith's wealth of nations vol III. bk. c. i p.18 see note p. 340

France   368 — again gaols

404. Every child that dies under 10 years of age is a loss to the nation of all that has been expended on its subsistence till that period.

414. In every old state, it is observed that many grown people remain for a time unmarried

Discouragements

Ireland { Q⁰ as to effect of potatoe famine in making Irish marry late
see Cobden letter — a suggestion to abble to Irish Registrar-Gen⁰.

Clerks in Gov⁰: Offices till they get £300 a year (see. MS scrap)

Greece   Newton. Land Tenure Rep: I .26   "It is Extremely rare for sons
to marry till their sisters are provided to, and their feeling
pervades all classes" p. 45 ratio of annual marriages to population
very small, only 62 per 100.00 as against 80 in England, France.
& Italy.

Russia.   Land Tenure Report Vol II. 32
Custom enforces a strange form of marriage, that of a very young
Boy to a woman much older that the family might reap the
advantage of adult female help. — result great men beat
their wives & general immorality — Men wish to leave their wives
behind & roam about — some villages nothing but women in
Summer months.
↑Application mortality (children 51¾ per cent live to 5 years
as against 72½ p:c in Gt Britain France & Belgium. see
particulars of mortality in Summer months when mother help in
the fields.. women very fecund.

Encouragements (Malthus) f.12 E

Germany   I. 130. Tacitus' discription of the Germans. each. house
Arabs   surrounded by vacant spaces   —   —
            156~8. Arabs encouraged by their religion to marry

Russia   204. Empress Catherine encouraged manufactures &
            ?of — at once made a start

Persia   212. Marriage in Persia is expensive. Poor do not
            marry till late

Hindostan   223. religious encouragement
Thibet   240 numerous Ecclesiastics
China   250   Religious notices to marriage
            256 "Whatever is strongly recommended - - - -
            - - - kind of religion duty (Staunton)

Nation   368 the true Encouragement to marriage is the high
            price of labour & an increase of Employment.
France   304 Early marriages to avoid conscription
Switzerland 393 Sudden agitation to procure more population
            portioning girls (protected)
France   422. Pope? increased rather than diminished
            by the revolution

Encouragements (Malthus) continued

France vol I. 442   Great number of children in France.

England   449 — Gentlemen of sufficient income for a bachelor
                    only (very well put)
               451.   Tradesmen & farmers — clerks — labourers
               452 —   Servants

Scotland
  Shetland   488.   Landlords encouraged tenants to marry (poverty
               & distress)

Island of Jura 490
   Elgin   491   only 3 bachelors in a parish of 830

               535 (or 2 or 3 pages on) all new colonies increase rapidly
                    Greece — Israelites. English, &c &c

vol II

Biberstedt famy 19 ---   Maud the milkmaid —
               205   Prosperity cause of population
France   ⌠ 333 . — again referred to
          ⌡ 368 — again. quotes Arthur Young vol I C xii p 408
               413 Town which made as little injuries as possible to human
                        &c

Encouragements

Ireland   Priests encourage early marriage —(see Cobbets letters)

"Boys at the wages of men, younger married & furnished houses
"lodgings".   i.s. prospect of a family not being an encumbrance.

Encouragement
& Discouragement
to marriage

chiefly from Malthus

f.14v

f.1

Scheme of Kinships

(All who are within 2 degrees of Kinship also First cousins. [...])
No. of male Kinships exclusive of the Subject who may be of either sex, is 17

Scheme of the 34 nearest Kinships to the Subject of the Genealogy, including first cousins
including all of the first & second degrees and first cousins

No. of Males		
2		
3		
7 + Subject		
3		
2		
17 + Subject		

6 × = 5 ○
Grand father paternal — Grand mother paternal

4 × = 3 ○
Grand father maternal — Grand mother maternal

10 × — 9 ○ — 2 × = 1 ○ — 8 × — 7 ○
Father's bros. — Father's sis. — Father — Mother — Mother's bros. — Mother's sis.

24 × — 23 ○ — 22 × — 21 ○ — 16 × — 15 ○ — 14 × — ○ — 11 ○ — 12 × — 13 ○ — 18 × — 17 ○ — 20 × — 19 ○
First cousins on father's side — Bros ½ sis ½ bros father's side — SUBJECT ½ sis ½ bros mother's side — Sisters — First cousins on mother's side

30 × — 29 ○ — 26 × — 25 ○ — 28 × — 27 ○
Nephews nieces father's side — Sons — Daus — nephews nieces mother's side

34 × — 33 ○ — 32 × — 31 ○
Gr. son gr. dau gr. son gr. dau
Grand children

may be determined in respect to

~~to~~ (several oth~~er~~s   let it be remembered
~~deformed in~~ , descendant as ½ to 100 and)

but whatever be the selection, let those selected be distinguished ~~from~~
seventy
as being of rank *B.P. Above the credit of description I will suppose,   with following remarks

the persons from whom the selection is made,   are fully adult   ~~to be males of not less~~
than 25 years of age. ~~and of the industrial classes.~~   Exactly the same remarks
will apply to families of the terms
an abbreviated model for

Family

Whatever be the descent ~~tendency~~ of the selection hereafter described on I

I ~~will call~~ distinguish the selected forms by the mark X. — This

a matter of detail.

5

Near Kinships of the Subject of the genealogy
The list includes all ~~up to the third~~ degree, and first-cousins also.
(There are 34 classes of kinship in all, of which 17 refer to males & 17 to females)

(Omit this)

General Titles	MALES		FEMALES	
Parents	FATHER		MOTHER	
Grand parents	Father's father	Mother's Father	Father's mother	mother's mother
Uncles and Aunts	" brothers	" bros:	" sisters	" sisters
First }	" bros sons	" bros sons	" bro: daus	" bros dau
Cousins } {	" sisters son	" sis: sons	" sis: daus	sis. dau
Half blood bros & sis	½ bros Father's side	½ bros, mother side	½ sisters, father's side	½ sisters, mother's side
Bros and Sisters	BROTHERS		SISTERS	
Nephews & nieces	Brother's sons	Sis: sons	brother's daus	sister's daus
Children	SONS		DAUGHTERS	
Grandchildren	son's sons	daus sons	son's daus	dau's daughters

Family. This word is used here to signify all kindred of the first and
second degree, and first cousins also. A Table of the kinships is
given below,

Of course families overlap. Brothers & sisters bear the same
kinships in an ascending line & partly the same in collaterals
Families are conveniently registered under double surnames, the first
being that of the mother, the last that of the Father.

Families. In that term I include all persons of the first & second ~~and~~ first cousins ~~through the~~ ~~considerations~~ refer only to the adult males ~~they~~ ~~include~~ family.

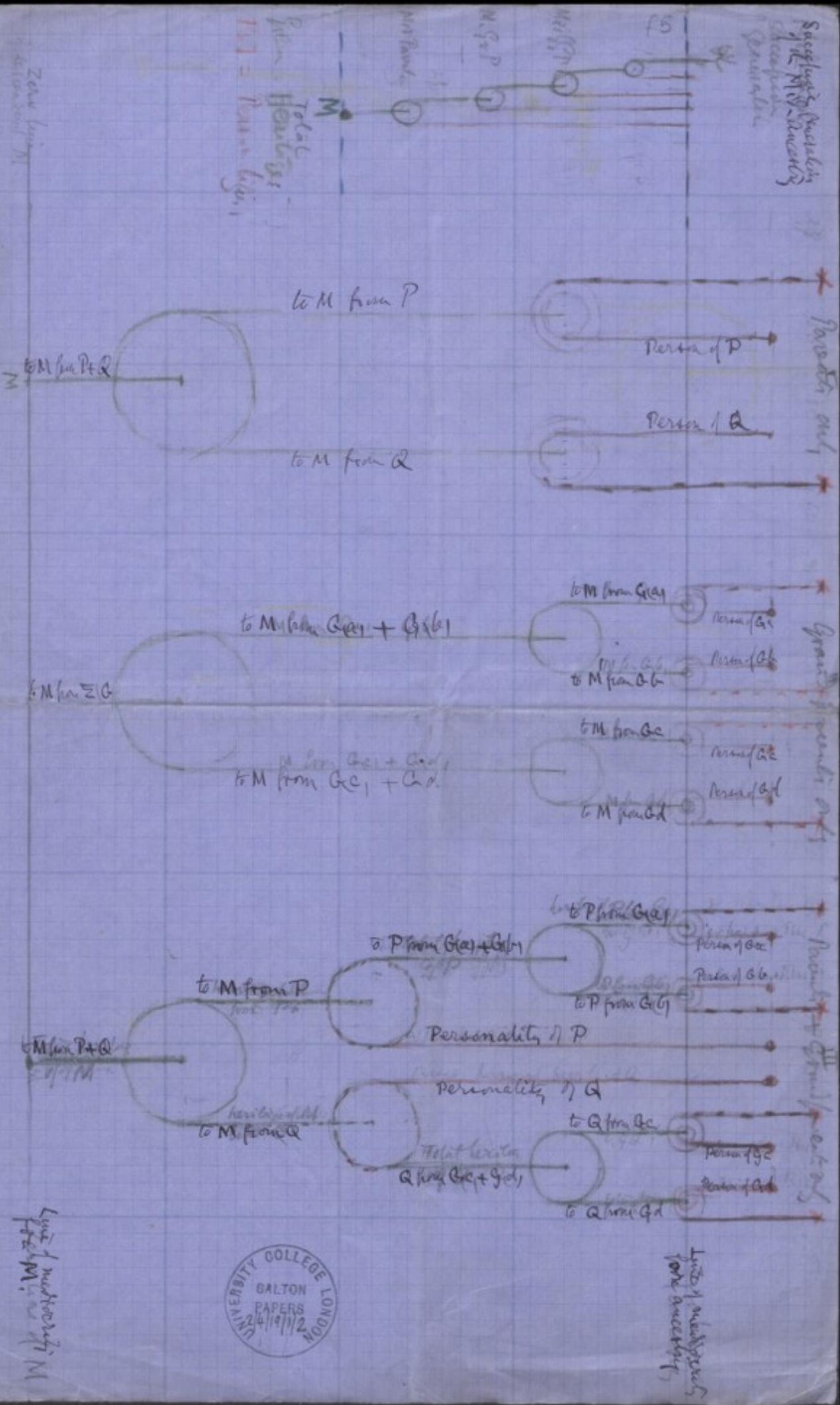~~The kinship is reckoned from~~ a specified individual, called the SUBJECT, who may be of either sex. The families of different Subjects will often overlap but they are to be treated as distinct

~~The~~ Kinships in the first degree are Father, Mother, of the SUBJECT, his or her brothers & sisters, his or her sons and daughters, briefly written Fa, Mo, Bro, Sis, Son, Daus — 6 kinships. 1 individual ~~Fa, mean Father~~, ~~Mo means Mother~~, ~~Bro means brothers~~ ~~but sum itself~~ Kinships in the second degree are combinations of these, two & two, that cannot be expressed by a single one of them. They are as follows, in natural

Half brothers & sisters :— Fa'son, Fa'dau; Mo'son, Mo'dau :— 4 kinships, number of individuals in each
Grandparents Fa'fa, Fa'mo; Mo'fa, Mo'mo :— 4 kinships one individual in each
Uncles & Aunts Fa'bro, Fa'sis; Mo'bro, Mo'sis :— 4 kinships, an unknown number of individuals in each
Nephews & Nieces Bro'son, Bro'dau; Sis'son, Sis'dau :— 4 kinships, — — — — —
Grandchildren Son'son, Son'dau; Dau'son, Dau'dau — 4 kinships. — —
First cousins Fa'bro'son Fa'mo'son; Mo'fa'son, Mo'sis'son
Fa'bro'dau; Fa'mo'dau; Mo'bro'son, Mo'sis'so } 8 kinships — — — —

Total kinships in a family 34. 17 kinsmen & 17 kinswomen

f 5

to M from P

to M from P+Q

M

to M from Q

Person of P

Person of Q

to M from G(a) + G(b)

to M from ΣG

to M from Gc₁ + Cd.

to M from G(a)

Person of Ga

Person of Gb

to M from Gb

to M from Gc

Person of Gc

Person of Gd

to M from Gd

to P from G(a) + G(b)

to P from G(a)

Person of Gc

Person of Gb

to M from P

to P from Gb

Personality of P

Personality of Q

to M from P+Q

to M from Q

to Q from Gc

Person of Qc

Total hereditary
Q from Gc + G(d)

to Q from Gd

Person of Qd

THE PROBLEM
OF THE
FEEBLE=MINDED

With an Introduction by

The Rt. Hon. SIR EDWARD FRY, G.C.B.

And Contributions by

FRANCIS GALTON, F.R.S.
REV. W. R. INGE, D.D.
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PREFACE

THERE are at this moment some 150,000 persons in the country, who, while not certifiably insane, are suffering from mental defect—unhappy in themselves, a sorrow and burden to their families, and a growing source of expense and danger to the community. Under proper care, in surroundings adapted to their needs, the majority of them can be trained to do work which supplies a stimulus and an interest to their limited intelligences and provides a substantial share of the cost of their maintenance. Left unprotected, they suffer moral and physical degradation. Mental defects are hereditary; the feeble-minded are prolific; and thus the relative amount of feeble-mindedness and insanity increases at an ever-growing rate and threatens the race with progressive deterioration.

The Poor Law Commissioners have dwelt in their Report on the gravity of the evil, and both the majority and the minority express their entire agreement with the recommendations of the Commission on the Feeble-minded. "If, as we hope," they say, "the recommendations of that Commission are carried into effect, a system of control over the feeble-minded will be initiated which will free the Poor Law administrator from one of his greatest difficulties."

To bring home to a wider public the urgency of the case, it was thought well to issue an abstract of the Report of the Royal Commission on the Care and Control of the Feeble-minded.

The Committee responsible for the publication of this book have been fortunate in securing the help of Mrs. Walter Slater, who has prepared the abstract, and of Mrs. Hume Pinsent, one of His Majesty's Commissioners, who has read the proof sheets. Their thanks are also due to Sir Edward Fry for the Introduction, and to Mr. Francis Galton, the Rev. Professor Inge, Miss Dendy and Professor Pigou, who have written on those aspects of the question on which respectively they can speak with authority.

A PRACTICABLE EUGENIC SUGGESTION.

Abstract of a paper to be read before the Sociological Society at the School of Economics and Political Science (University of London), Clare Market, W.C., on Wednesday, February 21st, at 8 p.m., by Mr. W. McDougall.

Influences and measures affecting the future composition of the population (apart from immigration and emigration) may be conveniently classed in four groups, according as they affect the rate of reproduction of the following four classes of persons: (1) The worst elements of the population, *e.g.*, the hereditarily criminal and degenerate; (2) all those, or the bulk of those, below the average of civic worth; (3) the bulk of those above the average of civic worth; (4) the best elements of the population, those of eminent civic worth. The influences of each of these classes may be called positive or negative according as they tend to promote or diminish the rate of reproduction.

Ever since Darwin established the mutability of species and the principle of evolution through natural selection, there has been some demand for negative measures of the first of these four classes, for some weeding out of the least fit elements of the population. In spite of the teaching of Mr. Galton and of Prof. Karl Pearson, it is not yet generally recognised that in this country at the present time positive measures of the third and fourth classes are far more urgently needed, and that the relative importance of influences of these four kinds is the inverse of the order in which they are stated above. The contention that positive influences of the fourth class are most urgently needed in this country is based on the three following propositions: (1) That the continued strength and prosperity of any country is dependent upon the continued production of a sufficient supply of persons of eminent civic worth; (2) that mental and moral qualities are hereditary in the same-sense as physical qualities, that, therefore, the superior elements of the population will produce the bulk of such personalities of the succeeding generation; (3) that the class which would produce the bulk of the persons of eminent civic worth of the future generations, if all classes were equally fertile, tends in an increasing degree, owing chiefly to artificial and removable causes, to be relatively sterile, and that if this tendency persists there must result in a short time a great diminution in the numbers of such persons. These propositions are supported by the concensus of opinion of the highest authorities.

It is then contended that the principal causes of this relative sterility of the better elements are the severe competition of modern life, the spread of a luxurious standard of living, and prudential considerations leading to late marriage and to voluntary restriction of the family after marriage. For the market-price of such a combination of intellectual, moral and physical capacities as constitutes high civic worth is an income sufficient to maintain a very small family only, and this is attainable only towards middle life. The suggestion here to be made is that in view of these facts it is of the utmost importance to introduce the custom of remunerating the services of all classes of persons selected for superior capacities in proportion to the size of the family. This reform might be most easily introduced in the case of the highly selected classes of government servants. But it may be hoped that if thus introduced it may be generally adopted. The elaborate machinery of selection of capacity which is at present at work and is constantly growing in extent and efficiency, works powerfully under the present system of remuneration for the degradation of the population. Under the proposed reformed system it might become a great eugenic agency. The reform suggested aims not at any interference with nature and with individual liberty, but seeks merely to do away with a system which interferes with the course of nature and which is, apart from all biological considerations, an unjust anachronism. There can therefore be no objection to such a reform; the only questions for dispute are—What is the extent of the good results that may be expected? How can the reform be introduced and given the widest possible application?

Some notes of value
here, might be
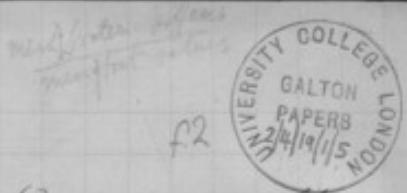published in Annals
of Eugenics K. P.
Sept 26, 1929

Galton

(1) Money worth to the state of an infant
male child of selected parents

(2) Worth estimated by either Class Place
only Scale Value

(3) a) ~~~~ on Mendelism 1720

b) measurement of People

Purity of ~~Race~~ breed.

In a mixed race the offspring, ~~differ from~~ ~~one~~ with same parents, differ considerably from one another, & as the race becomes purer they ~~the individuals~~ become more alike and in an ideally pure one ~~they~~ would be undistinguishable, ~~that is to say the males & the females~~.

A definition of the relative purity of two breeds, of the same plant or animal, which should be based upon their general idea, is ~~most~~ most ~~conveniently~~ reached by regarding not the differences between the ~~offspring~~ but those between the parents and their offspring. Thus, to take the simplest case, suppose that we wish to measure the growing purity of a particular breed, in respect to the stature, or to some single linear dimension, and that the measures of the male offspring of the same parents in one generation are 23, 25, 24, 28 millimetres, then the ~~mean~~ differences between each & the other are (neglecting signs) are 2, 1, 5; 1, 3; 4. total = 16, or mean diff. = 2.67

$\frac{1}{2}(n \cdot n-1) = 6$ in number and their values selected from

If the male offspring of two of these, had the measures 24, 26, 24, 27, 25 the number of differences w.d be 10, and their values 2, 0, 3, 1; 2, 1, 1; 3, 1; 2 total = 16, a mean value = 1.60   Therefore the increase of purity would have been from 2.67 to 1.60 in respect to the males, and there would be some other, probably parallel, increase in respect to the females.

What is true for a ~~linear~~ measure of length is ~~true~~ equally true for one of number such as number of seeds in a ear of corn, or for time as ~~period~~ number of days before maturity, or for speed as ~~rate~~ time in running on some particular race, or for quantity as yield of milk.   The advantage of limiting the test to fraternal differences is ~~two~~ fold. (1) If the parental differences are used, the difficulty of dealing with the two sexes (that of the father & mother) is equal terms. It is true that a sexual correction may be applied by which female of measures can be converted into their male equivalents (which is done in the case of human stature by multiplying all female heights by 1.08). This method is at its best subject to individual error, though it be correct on the average, while it is not widely applicable at all in numerous cases, as in the last of the above examples (2) the parents-filial difference is ad very trustworthy on account of the difficulty of measuring (a) that both parents & offspring shall have been nurtured alike (b) that the comparisons are made at the same epoch of life (c) and by the same observer. All these difficulties disappear when we confine the observation to differences between brothers & to differences between sisters. If we find that the parents-filial relation is a function of the fraternal one, then in a race of men whose statistical characteristics are constant, the one can be easily calculated from the other. Consequently, the omission of the ~~former~~ (leaves us void of theoretical importance. (parents filial relation)

We have thus obtained a ~~good~~ an accurate measure of the increase, or decrease of the purity of a particular race, in two successive generations, but more is wanted. An absolute measure of purity is desirable in order to collate the rate of increase or decrease on ~~quite~~ different plants & animals. Then ~~we may replace~~ the measures given above ~~& be there~~ of height at the withers of ~~some~~ particular breed of small dogs. A corresponding set of measures made in ~~another breed~~ whose mean height was say 3 times as great, would probably be about 3 times as great also & similarly as to the differences & their mean of them. It is therefore reasonable to consider "purity of breed ~~as expressed by the~~ ~~but~~ any generation as expressed by a fraction index of which the ~~denominator~~ numerator is the mean fraternal difference and the denominator is the mean fraternal stature, (in whatever may be the characteristic)

I used the word fraternal vaguely ~~in~~ to signify according to the context, either brothers only, or sisters only, or ~~both~~ brothers & sisters taken together. The index of purity is serviceable, are not such as to risk the introduction of a "spurious correlation"

There is not likely to be a ~~serious~~ much statistical difficulty in ascertaining the mean fraternal stature, even though the fraternity is ~~not~~ small, because the observations which are ~~intended to deal with~~ successive generations; the curve of change can be found by smoothing the successive fallible values, and the corrected values thence deduced, replace the observed, ~~and more fallible~~ ones.

Even yet we have not obtained all that we require, the index of purity of breed thus far referring only to some single characteristic and not to the "points" of the plant or animal taken as a whole. The simplest, and presumably the safest course is to be guided by the rules current in prize giving in a particular breed by finding the index for each points separately, then weighting them in accordance with the importance assigned severally to them by the laws of the Club &c, & taking a general mean. Then suppose the maximum weights are allotted for excellence 2 to A, 3 to B, 4 to C and that the observed indices were for A, 2.67; for B, 1.34; for C, 2.20 then the general index is $\frac{1}{9}\{2\times2.67 + 3\times1.34 + 4\times2.20\} = 2.02$

$$\begin{array}{r} 5.34 \\ 4.02 \\ 8.80 \\ \hline 9)18.16 \\ 2.02 \end{array}$$

Of course difficulties connected with mixed correlation may enter this process of combining indices in the estimate assigned by the Club Rules not used under its technical name nor ~~with such accuracy~~, but in a rough & ready way based on experience. The above calculation introduces no additional element of ~~doubt~~ uncertainty, whilst it gives precision in other respects, that was previously wanting.

12 balls   8 are A   4 are B

Let judgement of examiner (1) be such that he is right
1 out of 2 times (and wrong 1 out of 2 times) i.e. is of no value at
all, and a mere random selection — Then

     his correct judgements among his 8 selectedth balls = 4, his incorrect = 4 }

              4 balls selected as B = 2,   "   " = 2 }

Total } 12

Exam^r 2. right 3 out of 4 times
Correct $_{\text{among}}$ among his 8 balls selected as A = 6 , incorrect = 2 } 12
         4   B = 3   —— = 1 }

Exam^r 3 right about $3\tfrac{1}{2}$ out of 4 times $\left(\text{or say } \tfrac{36}{40} = 0.9\right)$ $\tfrac{4}{40}$

correct out of 8 ——— A = 7.2   incorrect = 0.8 }
          4   B = 3.6   = 0.4 } 12

What will be the chance of (2) . (3) according?
  they will do so $\tfrac{3}{4} \times 0.9 = \tfrac{27}{4} = 0.675$

Of those that either one or the other or both select, how many will be right?
  Of the 2 failures of Exam (2) 0.9 × 2 = 1.8 would be corrected by Exam (3)
    1 B " " " " " 0.9 — — .. x 0.2 wd remain wrong
                              x 0.1 wd remain wrong
total A correct 7.8 incorrect 0.2 total 8.0 }
      B " 3.9   0.1   " 4.0 } 12

Suppose Exam 3, was allowed only $\tfrac{1}{4}$ the weight is to give $\tfrac{1}{4}$
the no of marks that Exam (2) gives then
allows for correction to A and 1.8 but $\tfrac{1}{4}(1.8) = 0.45$
    a B $\tfrac{1}{4}(0.9) = 0.225$
So that total correct A wd be 6 + 0.45 incorrect 2 − 0.45 total 8 }
         B   3 + 0.225   1 − 0.225 " 4 } 12

The money worth to the State of an infant male child of selected parents.

Dr. Farr has discussed this question with high actuarial skill in respect to the child of an ordinary Agr. labourer, supposed to have a settled life the average of his class. He compares the present value of the expenditure incurred in his maintenance and that of the wages he will gain wherewith hereafter to maintain his own children, and strikes a balance found to be £ to the good. This was in 18... The figures would now require revision.

My problem is of the same kind but depends on different data. It deals with the offspring of parents who have been selected for their civic worth, at the rate say of 1 in 50 or 1 in 20 of their class. In other words 2 per cent, or 5 per cent as it came may be, have been picked out as the best by the judgement of the selectors, much as 2 per cent the best pears would be picked out of a basket as charged for as being of a higher grade. It will be convenient to use the term "per cent selected" with an appropriate figure prefixed, as 2% selection, or 5% selection, to express both the fact & the rigour of selection.

Picked couples

The offspring will be less exceptional on the average than the parents, in a definite degree — or we can foretell the distribution of capacity in the children of any large number of parental couples who are all exceptionally gifted to any definite degree. Conversely we can tell what conditions must be fulfilled in order that an infinity of ~~a group of~~ persons may be called into existence whose average value is specified, when the distribution of capacity among them will be known.

It may be possible roughly to estimate the value to the state of such a group of persons proceeding on similar lines to those followed by the late Dr. Farr in calculating the value at birth of a male child, such as an English labourer, but it is difficult. The problem that is desirable to solve is what would be the average money value to the state of a group of children whose average natural capacity whose people that of the picked superior to that of their contemporaries and equal to that of a group picked out of them, with a specified rigour of selection. Let x be the value of average value of these children, then it would be an advantage of the State to spend any sum not exceeding x in procuring & nurturing it. If it were known roughly it would be easy to consider the State might reasonably do.

Some clue towards the value of it is to be had by comparing the wages of picked workmen with those of workmen generally. In literary work of all kinds the difference is very great, whether we consider simple clerkships and the higher appointments.

Brandfather picked	Santon Arch.	Corporal Serjt.	Certain Foreman	Policemen	Clouters	railway guardener
Hungerford deaths	Centennial grad. along		roughly offering several picked			
+0.5	63	37	1/3			
+1.0	75	25	1/4			
+1.5	85	15	1/7	1.5 × 2/3 = 1.0		
+2.0	9?	9	1/10			
+2.5	95	5	1/20	2.5 × 2/3 = 1.7		
+3.0	98	2	1/50	3.0 × 2/3 = 2.0		

Eugenics as mankind, a forecast.
Scribble

It seems timely to put forwards in no dogmatic way the
basis worth presentation will take of Eugenics.   They are intended for consideration a discussion at leisure, for extracting helpful criticisms & disposing ... leisurely discussion to that clearer ideas may be gained of the road in front, before the time arrives to march.

I will suppose (1) that Eugenics has taken firm hold upon the
national conscience (2) that large sums are in prospect to its support,
of the same order of magnitude as those now devoted to charitable purposes
or to old age pensions, & it concerns, and that the point to be considered is how to
administer them most usefully & most wisely.   The amount would ... or ... as it proceeds,
I cannot follow more than a few all the roads by ... chiefly ... pursue
which seems to be the main one.

The object, briefly, is to call into existence a large contingent
of citizens who are naturally endowed about the average of our present contemporaries with
health & vigour of mind & body (and of naturally good characters) and the
question is how to spend money in the most economical way, in accordance
with public sentiment, of doing this.

It seems to me that whatever is done should be tentative for
some time, & yet on a sufficiently large scale to give trustworthy
results. How are we to begin?

I have already written somewhat to this effect in a
paper read here on (— — Local Association) which I need
not recapitulate but should be glad if I were referred
and taken into account together with what will now be said.
There are two aims. (1) the most fearbly, not helping eugenic
families to procure better house accommodation, food &
generally than they would otherwise be able to procure
can only here be treated incidentally to promote early eugenic
marriages. If the best field of operation at first seems to be
rural urban districts where the existing human stock is relatively sound &
that points to the northern rather than to the southern countries.
Also to deal with the labouring agricultural population to
whom an extra few shillings a week is a potent motive.

Let us then confine our ideas for the present to and
districts in which other conditions are also favourable, such as active
& efficient professional & administrative workers, healthy
residents of good social position & so forth.

Money grants might I conceive be made, in a few
and previous ways, to families, as for example an extra shillings

weekly for each child under 15 years of age. But this would amount to £2.12 for each child annually (or $15 \times 2 = 30 + 15 \times 12 = 180 = 9$ equal to a total sum of £39 for each child. This is a large sum, but the value of birth of each male child of an English labourer was calculated by D. Farr to be £20, & that the Old age Pension cost six times as much as is proposed. Looking at it from a national point of view the money would be well spent, on the whole, there would of course be together with individual that coming those in an excess of individual merits, about the present average

The obvious remark is that if the money so spent be ultimately remunerative, the scheme could be made self supporting. But the difficulties of doing this seem intolerable, to say nothing of the hardship of handicapping a youth who has his way to make with a serious debt. The difficulties of delivery arise partly from the variability of the offspring, whom it would be unjust to lay alike & partly to the mobility of the population so that their whereabouts could not be followed without a large & costly & inquisitorial bureaucracy. So far as I can foresee, all attempts to recover the money spent in advance by various means must be abandoned. The charges be borne by the State, that is by the population at large.

Worth defined by Census Phrase.   (half, quarter, tenth or
                                           other division of)

The phrase that so & so ranks among the upper fifth of [a] class
[consisting?] of [a] hundred persons, is a definite fact of [substantial] importance
I [elaborate] this idea more fully than [hitherto], [than] I have
happen had occasion to [comment] on [this], but before now.

In the first place, Comparison of the [merits] of alternative objects is [a]
most familiar act, and classification of a number of objects of like kind
in order of merit [through defined] that [which is known] as an [Census] is [merely] no more than a
[personal] [following] of their [power]. [Errors] are familiar [enough] in Scholastic [Competitive]
Examination, when Candidates are [examined], by which their order of merit
[according to the] [judgment] of the [examiner] is [accurately]
[expressed], but the faculty of [classifying] is far more [exercised]
and array [might] [be made] in [every real] case where [selection] [has to be] [practiced]
[when] there are many competitors [to a place] and only one or a few vacancies. No
[statesman] doubts the capacity of [so placing] the Men that the [title] men should
be on the [polish] [successfully] [generally] [approved] of
[the] [process] [goes] through in [selecting] a [valet], a [dress], [a] [wine],
a house, a pianoforte & as a rule, whenever a [purchase] has to be made.
It is [each] through [with] care in [selecting] an agent, a governess & other
[employees]. [Ministers] of State, Heads of [Departments] ([Bishops] Judges & [ambassadors]
& other [diplomatic] [agents], [recipients] of honors are all [selected] [always]
with [careful] [consideration] not [seldom] with [anxious] care. [Apportionment] [is]
[money value] of [curios] & objects of art fall under the same [head]. If
we [please] to [take] the [trouble] we may array a class in order of any
[specified] [description] of merit.

I will not [before] [that] to be done for civic worth (a term [that]
I [...] now [skip] to define) and that examples have been [recorded] of the
[qualification] of those who stand at any two [specified] [fractional] [heights] of
the array; conveniently at or about its middle & at and about its
upper fourth. [the] difference between [...] we [take] & not want of civic [worth]
[the] difference will be called [...]. ([describing] [briefly] the [Quality] [difference])

In considering the money value of a select we may be guided by the wages he is likely to earn. If x per cent of the men of his class earn ___ a week, but that same percentage of the then earn shillings, then the excess of the better men, duly capitalised to its value at the time when the calculation is made, represents fairly enough the superior worth of the children of the select to the average worth of the children of the class. The actuarial calculation must be difficult & take many things into account on which we need not now dwell, but the general principle will be intelligible from this outline sketch of it. The point immediately in view is that if $\underline{A}$ be the money worth of a child to the state, it would be good economy to spend any sum less than $\underline{A}$ in procuring & maintaining such a child, and bad economy to spend more than $\underline{A}$. It is clearly important to ascertain the value of A in each particular case.

a How does a better workman obtain better wages & to what extent

1. by becoming a foreman or a higher grade workman

2. by changing of occupation

3. by off-work

4. distribution of wages among the most successful 5%

On the reasonable supposition that the distribution of doses would follow the Gaussian laws, the value of the deviate which corresponds to an L select can be found from my small table in Short Tab. p. in the next larger or [Shephard in Biom. IV.]

Then by the formula of Herschel as then for determining the mean deviation of the will call ν can be found, in its class phase we from the above Table, offspring of Deviates which we (but considering that the fertility decreases, this does not give the mean value of the offspring if L calls above [parents]) as the severity of selection of increases, and that we are as yet ignorant of the rate decrease; also bearing in mind that an inferior limit to the of probable values, is almost as knowable in this argument as the exact value, it will suffice to say that the mean deviate of the offspring of L-selects of all higher than L - selects, exceeds no and their average value ν is determinable. In short it will be good economy to purchase infants whose cost of maintenance &c capitalized to present value did not exceed ν. Some purchases would turn out ill, others good, but taking them all round as in any large business, the rule would [in knowledge as] statistical certainty. This general idea requires elaboration in a criticism by experts of the results reached.

A problem very desirable to solve, is the average value
to state of each child, in any large group of them, who are born
of parents who are exceptionally gifted in the qualities that make for
civic worth. The hereditary element in the problem is already ascertained,
the difficulty lies in appraising the financial value of civic worth.
No one conversant with English history, can doubt that the immigrants
of the highest — we need not stop to define the word — were of immense value
to our country. If we were agreed as to the number of persons worth, in
the whole known the number of immigrants the average worth of each could
be calculated. Then it would be possible, though not easy, to divide that
worth into its components of natural gifts a nurture. Dealing
along with the former if we with its known intensity of transmission
we arrive at the precise value of a highest child. — Call it k
Then it would be a fair financial transaction for the State to buy
such children & to rear & educate them at a total cost of k each.

In default of other data we must try to get some idea of an
its value in indirect ways, as by comparing the wages of picked men with
those of the average. The crews of Arctic exploring ships are all picked
men who are attracted to the work largely no doubt by a thirst of
adventure, but to a considerable degree by increased pay. Wherever the attraction
is greater, whether in pay or otherwise, there will be more applicants
than places for them. So selection comes into play of various degrees
of rigour.

Children $\frac{1}{n}$ of all parents couples to be Wards of Gov $n = say\ 10$

every 4th a parent? n^i of children to be provided to 4 pr by $\frac{1}{10} \times pop$

total child $\frac{n^o}{}$ if parents on scale of upper artizan families — 5/ a week

(b) at 5/ per week to 13 a year

$\frac{2/5}{}$ — £6. 10

Free from other expenses up to — years

looked after without interfering with parents resp. unless grave fault of management

Started in life. $\frac{20/}{52} = 2$ £10 a ye

Computing insurances of never children partly when adults to repay at age — in head $\frac{1}{n}$ of of expenses

Marriages — per thous of pop.

(a) 4 times as many children, $\frac{1}{10}$ take of multiply marriages by 0.4

5/ a week = $5 \times 52 = 260$ th = £13 a year

to be continued to 15 years $13 \times 15 = £195$ say £200 total for each child

in a pop of 1000, 20 in marriages a year on a yearly capital to be fully of £4000

2/5 £4 per head? Avrg cost? a head

then in 4 times too much to be reasonable

make $n = 20$ to halve it

$\lambda =$

(4 chil. to 1 mar.)

If 20 mar per thous = 1 in 20 takes that on 4 per thous annual of ... to receive

income compd a trust the donation on for creating than allowance to it

then at 4/ a head = £40 annual, capitalised = $40 \times 15 = 600$ total per 1000

£10 annually = $\frac{200}{52}$ shillings per week = 4/ about weekly

Deviation Grade from Filled Parabola mean Filial
in units top value of selection worth
1 upper Quartile (0° = 100°) and half the grades
+ 3·0 2° best in 50 best per 11
+ 2·5 5° best in 20 best per 9
+ 2·0 9° best in 11 best per 5
+ 1·5 15·0 best in 7 best per 4
+ 1·0 25·0 best in 4

8/3 25 = 16·6   13
8/3 20 = 13   19

Deviations measured in units of Q	Corresponding Grade from top of scale 0° — 100°	Upper fraction of a class, cut off by that Grade (Mid Parentage)	One half of its Offspring will fall within the upper —
+ 3·0	2°	50th	11th
+ 2·5	5°	20th	9th
+ 2·0	9°	11th	5th
+ 1·5	15° 16	8th	4th
+ 1·0	25°	4th	about the half 3rd

Most parental A (scale value)   mean Filial = 2/3 A

Deviation (2/3 × A) Deviation
units of SD per millimd units of SD

		Grade per 100	units of SD		per mille	units of SD	Grade per mill mille	
I	3·0	0·2	2·0 2·2	I	0·2 1	1·3 4·5	0·89	II
II	2·5	0·5	1·6 8·5		0·4 6	1·2 2	1·3 1	
III	2·0	0·9	4·3 4·8		0·8 9	8·9	1·8 4	
IV	1·5	1·5	1·0 1·1		1·5 6	6·7 2	2·5 1	
V	1·0	2·5	0·6 7·4		2·5 0	4·4 9	3·2 7	

(Centesimal) Scale Reading, Degree
(") Class Place

Worth estimated either by Class Place or by Scale value
and their mutual convertibility

Ministers of State, Heads of Departments, Bishops, Judges, Commanders
and admirals in Chief, Governors of Colonies and other appointments. Foreign
ambassadors, ministers and other diplomats

Choice out of many applicants as Secretary, Clerk, superior servant

Choice of candidates for M.P.s, Guardians and other municipal offices.

Choice of a Doctor, a lawyer, an agent, a tour, a means of conveyance

Selection of a House, a dress, a book or any other purchase — hotel, a dog, a horse

Classification by marks in exams. Schools, Colleges, Competition Gov' Services.

Sorting fruit etc into classes differently priced

Appraisement in money value pictures, curios, horses, actors and actresses

Pondering before choosing (Scotchman)

Arrays — Class place and Scale value/degree. Their convertibility into Centes: values.
always feasible equivalent by intercomparison

It is well deserving ... measured in ... ... which ... ...
... ... familiar to modern statisticians
It has now become a ... practical ... ... the distribution
of nearly all faculties among the members of an ... ... of ... ... q
approximates ... the very ... ... theoretical law with which
the name of the mathematician Gauss is associated. It is ... ... based
... the hypothesis that all variation is due to ... ... combination
of a large number of small & independent elements. But be ... ...,
... ... what it may, the Gaussian law is found to be an
excellent approximation ... fact in a multitude of cases, many of
them ... ... the ... ... of which we are speaking.
Assuming it applicable here & having determined ... ... we
can walk ... in a ... ...

I ... a brief table in which ... value in ... class
... ...
... can be determined, by adding them to (M) ... ... refer
... a ... scale (0° to 100) placed alongside the array of
class places ... described by the 'serial' numbers of 1st 2nd 3rd ... 100th
and correspond to the partition that separate the class places of
the same name ... the scale value ... ... (75)
... ... upper 25 percent or one quarter of the class places. That
of 50° ... ...

Scale 0° to 1000

				Corresponding deviation in units of q		q	x 1.674		
21	21	1/476	1/50th	3.0		3.0	2.02	622	12
46	46	1/217	1/20	2.5		2.5	1.68	046	5
89	89	1/112	1/10	2.0		2.0	1.35	088	9
156	156	1/64	1/6	1.5		1.5	1.01	155	16
250	250	1/40	1/4	1.0		1.0	0.674	249	25

					σ = .666				
21		1/476	1/50	-3.0		2.02	1345	0.33	9
46		1/217	1/20	2.5		1.68	1118	132	13
89		1/112	1/11	2.0		1.35	899	184	18
156		1/64	1/6	1.5		1.01	679	248	25
250		1/40	1/4	1.0		0.67	449	327	33

Mean in Scale of distribution
horizon in ... scale 0°...100°...

Mid Afternoon deviation in units of q	corresponding places on scale 0°...100°	deviation in A (2/3)	Mean ... deviation corresponding degree in class scale 0-100
A		B	
3.0	2 = 1 in 50	2.0	0.9 = 1 in 11
2.5	5 " 20	1.7	1.3 ... 7
2.0	9 " 11	1.3	1.8 ... 5½
1.5	16 " 6	1.0	2.5 ... 4
1.0	25 " 4	0.3	3.3 ... 3

Mid-Prandial deviation in units of q	Places of A in class scale 0°—100°	Mean Prandial deviation = 2/3 A in units of q	Places of B in class scale 0°—100°
A	separating ...	B	separation ... part of class ...
3·0	2 = 50th past	2.0	9 = 11th ...
2·5	5 " 20th past	1.7	13 7th
2·0	9 " 11th "	1.3	18 5½th
1·5	16 " 6th "	1.0	25 4th
1·0	25 " 4th "	0.3	33 3rd

1 in 20 families of 4 each   or 1 in 5 children

in pop of 1000   20 more per annum   child of one selected ie 4 children are
4ª a week = 200ª a year = £10/ß say roughly £10 +5ª u 10 years
total of £10 per child for 15 years = 150   per 4 children £600 money.
if 1 in 4 die   3 children £450 money
however might apply (in time roughly compensated in time part losses say £300

or £3 annually to be expended for each 1000 of pop.
       = £3 out of 10 = 66ª = £3/3/1 per head

14. mill. for 45ª say £1 to doing 3 per above = £3 per head
15ª

Selection
   1 in 20 families   hardest expenses family large.
total 5 in each family of whom (1 dies going out count money to early death)
       5 to be allowed from
4ª a week for 52 weeks = £10/8ª a year say £10
to be continued £ 15 years = £150 each child
                          = £750 to each family of 5 children

I in a pop of 1000 = say 20 or 1 in 50 which a produce the 5 children
out in
therefore the annual cost per head per thou of pop. of 1000 would be £0.75 = 15ª per head
                                                        = per head

14 millions (a more could be had) so say 15 millions are expended annually in voluntary charity
   = £1 to each 3 persons = 7ª a head about, or half the above

what will be the money worth to the nation of each person selected at rate of 1a ?