

Flatland: Sections 6 - 12

“...is the result of Fog; which prevails during the greater part of the year ... That which is with you in Spaceland an unmixed evil, blotting out the landscape, depressing the spirits, enfeebling the health, is by us recognized as a blessing scarcely inferior to air itself, and and the Nurse of arts and Parent of sciences.”

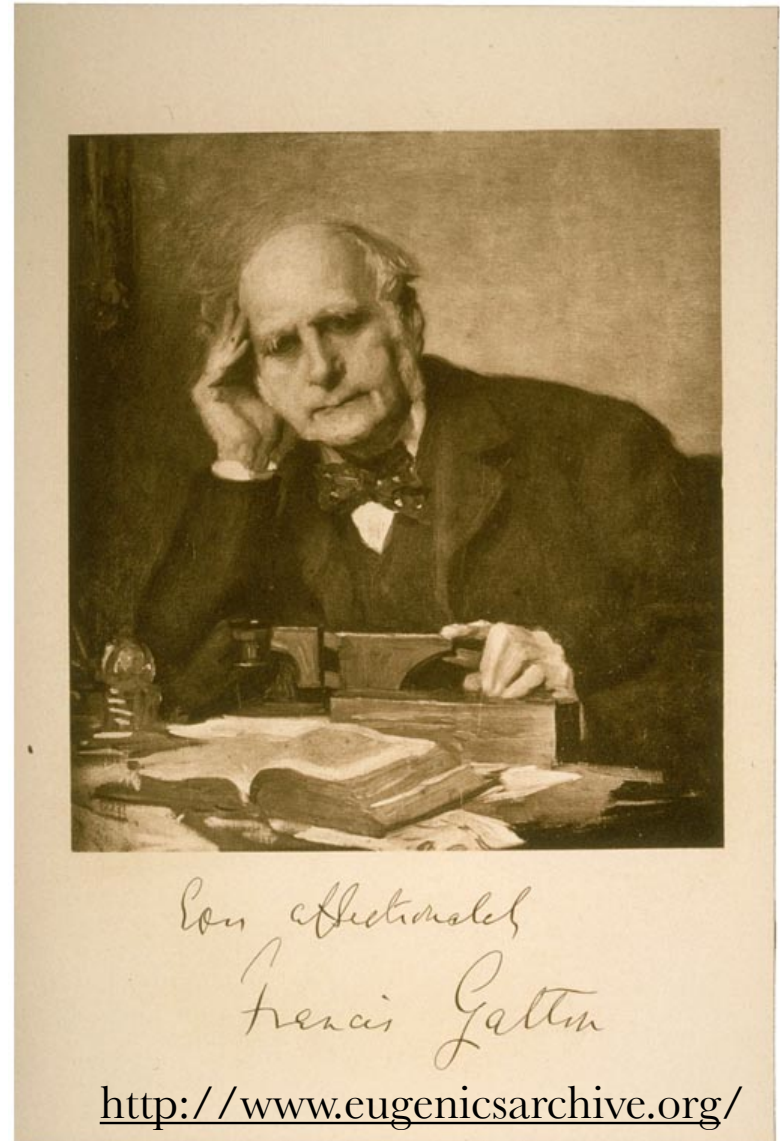
“Yes, it is positively the *last* time that we shall conduct His Honour the Lord Mayor through devious and subterraneous passages to emerge into an apology for daylight and to breathe a substitute for air.” Abbott 1882

Flatland and Greek Culture

- Chromatistes and Pantocyclus
- Selective Breeding
- Infanticide
- Confinement of Women
- Religious Life
- Aristocracy
- Intermarriage
- Physiognomy
- Assemblies
- Gymnasia

Eugenics: Configuration makes the Man

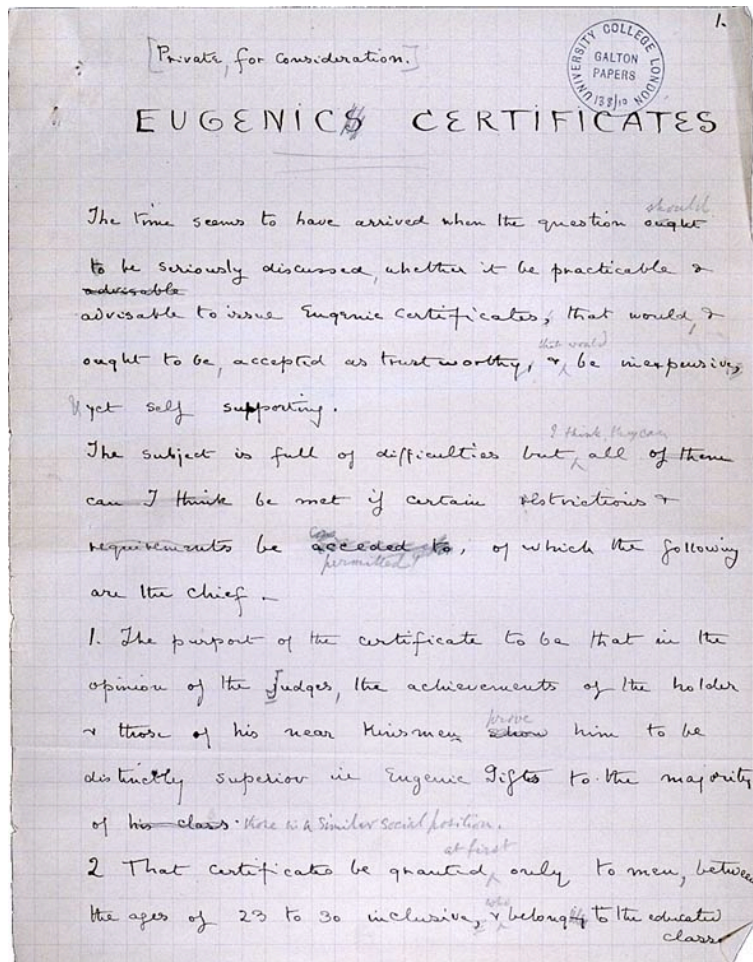
“There is no escape from the conclusion that nature prevails enormously over nurture.” (1875)



“We may reasonably expect that a time will come when if, for instance, ... an epileptic woman conceals her condition from the man she is marrying it would generally be felt that an offence has been committed serious enough to invalidate the marriage. We must not suppose that lovers would be either willing or competent to investigate each other’s family and medical histories;

but it would be at least as easy and as simple to choose a partner from those persons who had successfully passed the eugenic test ... as it is for an Australian aborigine to select a conjugal partner from one social group rather than from any other.”

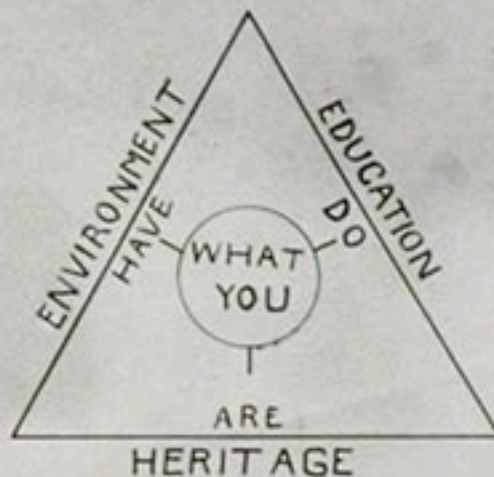
Havelock Ellis, *Eugenics and St. Valentine*
May 1906



UNFIT HUMAN TRAITS

SUCH AS FEEBLEMINDEDNESS
EPILEPSY, CRIMINALITY,
INSANITY, ALCOHOLISM,
PAUPERISM AND MANY OTHERS,
RUN IN FAMILIES AND ARE
INHERITED IN EXACTLY THE
SAME WAY AS COLOR IN
GUINEA-PIGS. IF **ALL**
MARRIAGES WERE **EUGENIC**
WE COULD **BREED OUT**
MOST OF THIS UNFITNESS
IN **THREE GENERATIONS.**

THE TRIANGLE OF LIFE



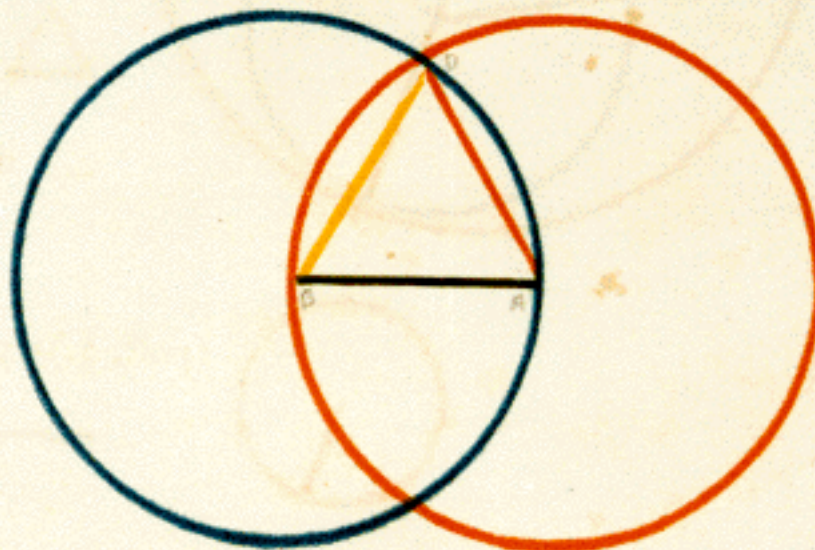
YOU CAN IMPROVE YOUR EDUCATION,
AND EVEN CHANGE YOUR ENVIRONMENT;
BUT WHAT YOU REALLY **ARE** WAS ALL
SETTLED WHEN YOUR PARENTS WERE
BORN.
SELECTED PARENTS WILL HAVE
BETTER CHILDREN **THIS**
IS THE GREAT AIM OF EUGENICS

Euclid.




BOOK I.


PROPOSITION I. PROBLEM.

QUONIAM in a given finite straight line (—) to describe an equilateral triangle.



Describe  and


 (postulate 3.); draw  and  (post. 1.).

then will  be equilateral.

For  =  (def. 15.);

and  =  (def. 15.),

∴  =  (axiom. 1.);

and therefore  is the equilateral triangle required.

Q. E. D.

Byrne (1847)

19th c. Philosophy of Science

Philosophical Nativists

True knowledge of the natural world is in some essentially innate

Empiricists

True knowledge of the natural world is drawn from experience

How do humans come to exact knowledge of absolute truth?

Philosophical Nativists

William Whewell (1794-1866):

- Math is descriptive
- Best for developing reasoning skills
- Math definitions tied to objects being described, not arbitrary
- Science proceeds by induction: successive generalization and testing

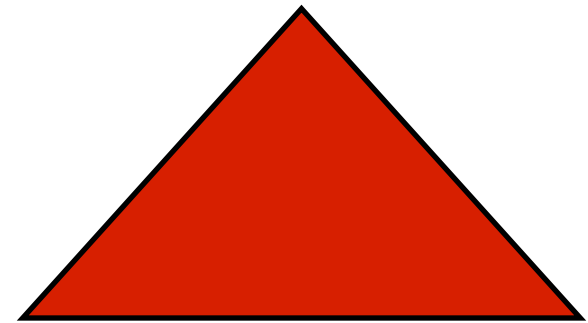


Philosophical Nativists

William Whewell (1794-1866):

There are:

- contingent truths:
summaries of
observed phenomena
- necessary truths: those
whose opposites are
inconceivable

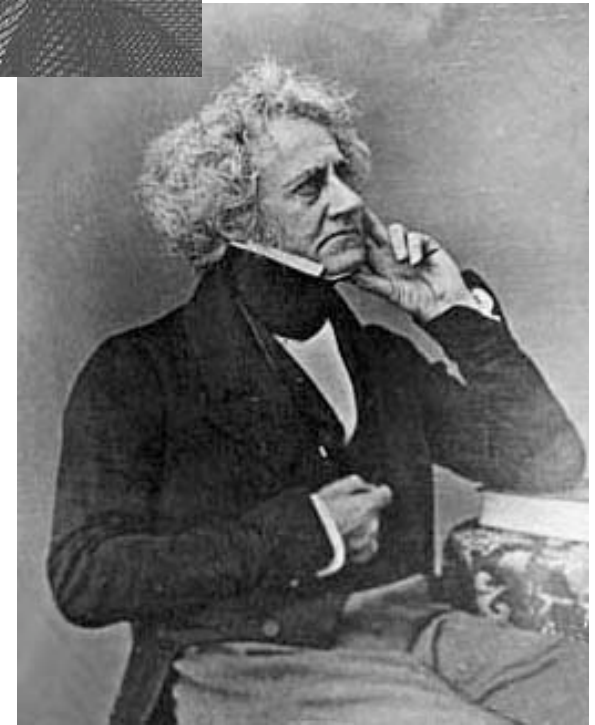
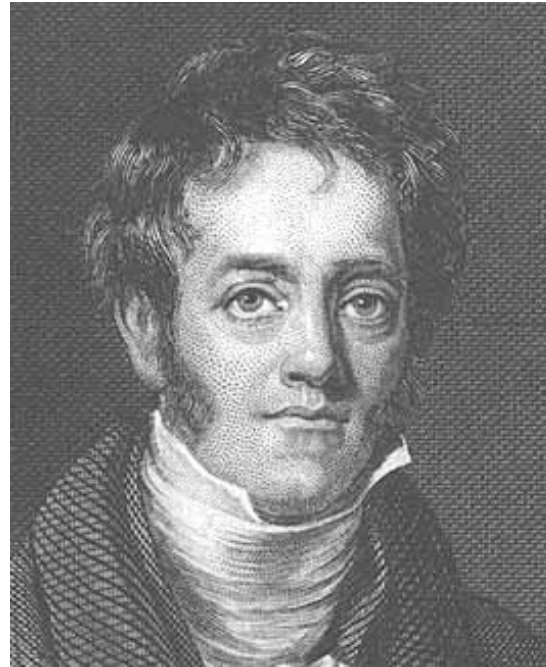


angle sum is 180°

Empiricists

John Herschel (1792-1871):

- Mind draws ideas from experience
- Mathematics describes external reality: space, number are objective facts.
- Induction in mathematics is natural and easy.



Empiricists

John Stuart Mill (1792-1871):

- Scientific reasoning about objective facts of nature
- Definitions neither true/false - more/less acceptable descriptions
- Mathematics built upon definitions
- Rejects necessity of truth but agrees with descriptive view of mathematics



<http://www.iep.utm.edu/m/milljs.htm>