Human Genetics: From Eugenics to the Human Genome Project and Beyond

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EUGENICS IS THE SELF DIRECTION OF HUMAN EVOLUTION

LIKE A TREE EUGENICS DRAWS ITS MATERIALS FROM MANY SOURCES AND ORGANIZES THEM INTO AN HARMONIOUS ENTITY.
“Natural Selection”

“Natural selection was the survival process governing most living things in a world of limited resources and changing environments.”

Charles Darwin
1809-1882
“Social Darwinism”

“Survival of the Fittest”

The "fittest" would naturally continue to perfect society and the "unfit" would and should die off.

Herbert Spencer
1829-1903
Mendel’s Laws on Heredity

Gregor Mendel
1822-1884

“Eugenics”

“The study of all agencies which can improve or impair the racial quality of future generations.”

Francis Galton
1822-1911
World Eugenics Movement

English Eugenics Society, 1930

"The Racial Characters of the Swedish Nation", 1926

Brazil eugenics contest, 1933
“Types of Aliens Awaiting Admission at Ellis Island Station,” 1915.
“The Jukes.” : Heredity vs Environment?
Richard Dugdale

Dept. of Genetics,
Carnegie Institute of Washington, 1934
Charles Davenport
1866-1944

Biological Experiment Station
Cold Spring Harbor, 1904
Registering Human Pedigrees

How Kansas Develops Fitter Families; A Remarkable Experiment in Eugenics

By Arthur Capper, U. S. Senator from Kansas

Mrs. Mary T. Watts, Audubon, Iowa

Dr. Florence H. Sherborn, University of Kansas

The average American family of today is the result of haphazard mating. Men and women marry with little scientific thought as to their physical and mental fitness for bearing and rearing children. When the children come they too often are brought up in the same haphazard fashion in which their parents chose each other. Is it any wonder that the number of mentally and physically unfit increases?

For years, American farmers and breeders

member of a family. Another short of the record shows the results of the intelligence test, and an examination by a psychiatrict, specialist of the nerve reflexes, emotional and intellectual responses. A thorough structural examination is made, including strength tests and measurements. The medical record gives the results of a complete physical and organic examination, with blood pressure, hemoglobin blood test and the Wasserman blood test. Every member of the family is examined.
Family history records at the Eugenics Record Office
Categories of the “unfit”

- Feebleminded
- pauper class
- inebriate class or alcoholic
- criminals of all descriptions
- epileptics
- insane
- constitutionally weak class
- predisposed to certain diseases
- deformed
- defective sense organs-deaf, blind and mute
Harvard’s Eugenics Era,

Harvard president
Charles William Eliot,
1853 - 1909

http://harvardmagazine.com/2016/03/harvards-eugenics-era
Fitter Family Contests
Eugenic Sterilization

Dr. Harry C. Sharp

Jeffersonville State Reformatory

Photo origin: Mary Washington College, Department of History and American Studies; http://www.umw.edu/hisa/resources/
1907 Indiana Eugenics Law

(Continued from other side)

Indiana Supreme Court ruled 1907 law unconstitutional 1921, citing denial of due process under Fourteenth Amendment. 1927 law reinstated sterilization, adding court appeals. Approximately 2,500 total in state custody were sterilized. Governor Otis R. Bowen approved repeal of all sterilization laws 1974; by 1977, related restrictive marriage laws repealed.
Eugenic laws for Sterilization passed in California, 1909

Stockton state hospital, one of the state institutions where sterilizations were performed in California

First International Eugenics Conference, London, 1912

Conference President,
Major Leonard Darwin

The Kallikak Family: A Study in the Heredity of Feeblemindedness, 1913

Henry Goddard

Eugenicists rapidly employed IQ or other intelligence tests to compare different racial and ethnic groups.

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Intelligence Testing at Ellis Island

Howard Knox (creator of intelligence test puzzle questions) examines an immigrant at Ellis Island, Cold Harbor Laboratory Archive
Eugenic Influence on the 1924 Immigration Restriction Act
Sterilization is legalized

Harry H. Laughlin
1880-1943

https://repository.library.georgetown.edu/bitstream/handle/10822/556984/EugenicalSterilizationInTheUS.pdf?sequence=1
Eugenic Sterilization Test Case
Buck vs Bell 1927

Carrie Buck and her mother, Emma
Virginia, USA
"It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. The principle that sustains compulsory vaccination is broad enough to cover cutting the fallopian tubes.

Three generations of imbeciles are enough."

Supreme Court Justice Oliver Wendell Holmes, Jr.
in *Buck v. Bell*, 1927
Germany honors American eugenicists
By the 1960s around 64,000 men and women had been sterilized
A decade of progress in eugenics.
"Mental disorders in twins"
USA

Kaiser Wilhelm Institute twin study
Germany
Racial Hygiene

Alfred Ploetz (1860 - 1940)
Founder of German Eugenics
German educational slide explaining the Kallikak family, 1924
German Racial Hygiene is modelled on American Eugenics

Eugene Fischer
1874-1967
Director of the Kaiser Wilhelm Institute for Anthropology, Eugenics, and Human Heredity
Hitler, greatly influenced by the Racial hygienists, includes the eugenic racist theories in *Mein Kampf*.
Hitler praises the American Sterilization Program

https://archive.org/stream/caseforsteriliza00whitrich/caseforsteriliza00whitrich_djvu.txt
German Catalogue of family profiles

Dr Ernst Rudin

Ernst Rüdin: distinguished scientist, radical racial hygienist, *Nervenarzt*. 2012 Mar;83(3):303-10. [Article in German]
Charles Davenport, 1925, and Eugen Fischer, director of the Kaiser Wilhelm Institute for Anthropology, Human Genetics and Eugenics, the German equivalent of the Eugenics Record Office, about 1938.
Premarital Eugenic Counselling

The Eugenic marriage policy
USA

"Don't Go Blindly into Marriage!"
Germany 1924
KWI for Anthropology, Human Heredity and Eugenics

Nazi flags flying on the Kaiser Wilhelm Institute of Anthropology, Human Heredity and Eugenics, 1930s.

Archiv zur Geschichte der Max-Planck-Gesellschaft

Otmar von Verschuer, 1933

Eugen Fischer, 1927
"You, you National Socialist doctors, I cannot do without you for a single day, not a single hour. If not for you, if you fail me, then all is lost."

Adolf Hitler
Nazi Sterilization Law

1933

- Congenital feeblemindedness
- Schizophrenia
- Manic Depression
- Hereditary Epilepsy
- Hereditary Blindness
- Hereditary Deafness
- Huntington’s Chorea
- Severe hereditary physical deformity
- Severe Alcoholism
- Asocial/criminality
Heredity Courts rule over the sterilization cases
Doctor – Patient Confidentiality
400,000 Germans were sterilized

Religious prejudice was quantified into science

Nuremberg Law for the Protection of German Blood and German Honor, September 15, 1935

**Die Nürnberger Gesetze**

- **Deutschblütiger**
- **Mischling 1. Grades**
- **Mischling 2. Grades**
- **Jude**

**Explanatory note**

**Beiderlei Heidentum vom 15. 9. 1935**

- **Religion**
- **Mischlinge und Juden**

**The War Against the Weak, Eugenics and America’s Campaign to Create a Master Race** (2003)
Reich Leader Bouhler and Dr. Brandt are charged with the responsibility to extend the powers of specific doctors in such a way that, after the most careful assessment of their condition, those suffering from illnesses deemed to be incurable may be granted a mercy death.

--Adolf Hitler

1st Sept 1939
5,000 children and 200,000 adults were murdered in the Nazi “Euthanasia” program.
The ultimate decision to gas the Jews emerged from the fact that the technical apparatus already existed in the hospitals that were used to kill the mentally and physically ill in Germany in the "euthanasia" program.
"Sexual Sterilization ..."
Judgment at Nuremberg 1961
The Eugenics Record Office was closed in 1939 and renamed The Genetic Record Office.
Thousands of American (and others) citizens continued to be coercively sterilized until the 1970s.
Victims of forced sterilization to receive $10 million from North Carolina

By Stacey Naggiar, NBC News

In a landmark move by the state of North Carolina Wednesday, lawmakers passed a budget that includes $10 million to compensate the state’s victims of forced sterilization.

“There were challenges, we had to better educate our members -- and then of course we had to work through the fiscal challenges -- but at the end of the day, what we’ve done is something truly historic,” state House Speaker Thom Tillis, a Republican, told NBC News.
James D. Watson
Director and President
"Nobody's perfect, but we're working on it."

"The genetic engineers gave him that birthmark as part of a sponsorship deal."

"I'm sorry, Jerome. Instead of marriage and having kids, I've decided just to have myself cloned."
Is the new genetics the old eugenics?
• In 1978 Louise Brown became the world's first test tube baby.
• Today IVF is common practice worldwide.

• In 1997 Dolly was the first cloned sheep and stirred acrimonious debate across the world.

• DNA banks are rapidly proliferating.

• In 1983 the first genetic disease was mapped on DNA – Huntington's chorea; 1989 CF; 1990 BRCA

• 2003 Human Genome Project completed

• Genetic screening, genetic therapies, PGD, gene modification therapies.

• Stem cell research

• ...

The American and Nazi Eugenic programs involved coercion and abrogation of reproductive freedom, state control, discrimination, racism, denigration and stigmatization of the disabled and deprivation of life.

Eugenics was based on poor research and immoral value judgments and was a conduit for prejudices and an opportunity for social engineering.
The history of eugenics provides some important parameters for comparison to and understanding of the genetic claims that abound today and suggest how current claims are being made or might be used.

Nowhere is this history more dramatic and disturbingly relevant than in the case of Nazi Germany, where genetics and its associated eugenic claims became the center piece of an economic and a racial ideology that ultimately led to the Holocaust and the deaths of millions of people.

It was eugenic principles, both developed in Germany and borrowed from the Unites States that gave the Holocaust its scientific legitimacy.

Allen E. Garland
Mission: explore the ethical implications of the medical transgressions that took place during the Holocaust for modern scientific theory, medical practice, healthcare policy, and human rights endeavors

www.mimeh.org
Take home message

There are important lessons to be learned from the study of how eugenics transformed from public health initiative to scientific racism.

Physicians possess the knowledge and skills to provide a realistic assessment of the quality of a patient's life or in some cases, of his or her genetic makeup.

However, the ultimate evaluation of quality of life should be made only by the individual patient and nothing should be done anywhere by anyone to exclude, infringe, repress or harm an individual based on his or her genetic makeup.
Recommended Reading

Edwin Black. *War Against the Weak. Eugenics and America’s Campaign to Create a Master Race*, 2003


*Deadly Medicine. Creating the Master Race*. USHMM, 2004


Online DNA Learning Center. https://www.dnalc.org/search?q=eugenics
Thank you for participating in our webinar!

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