

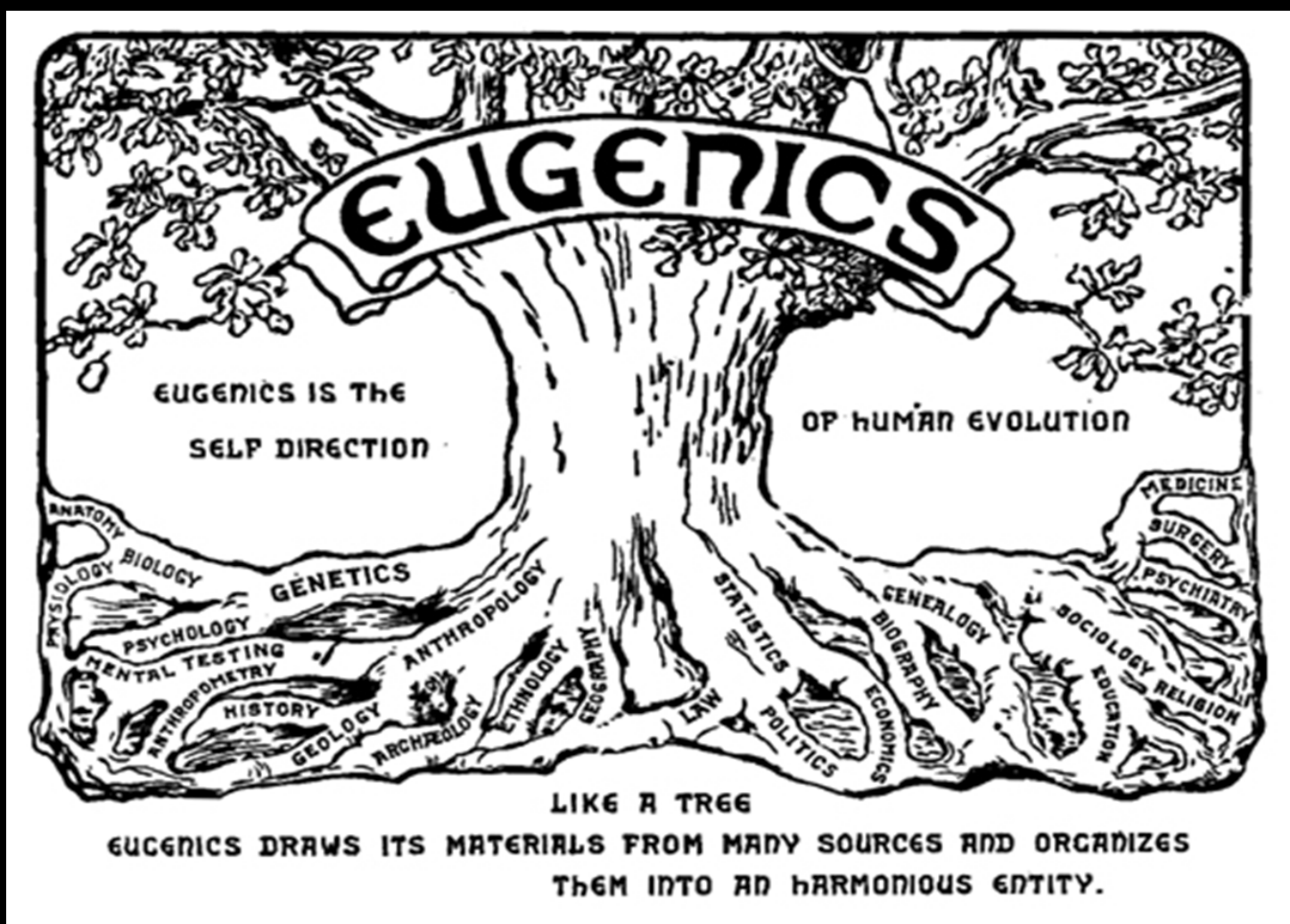


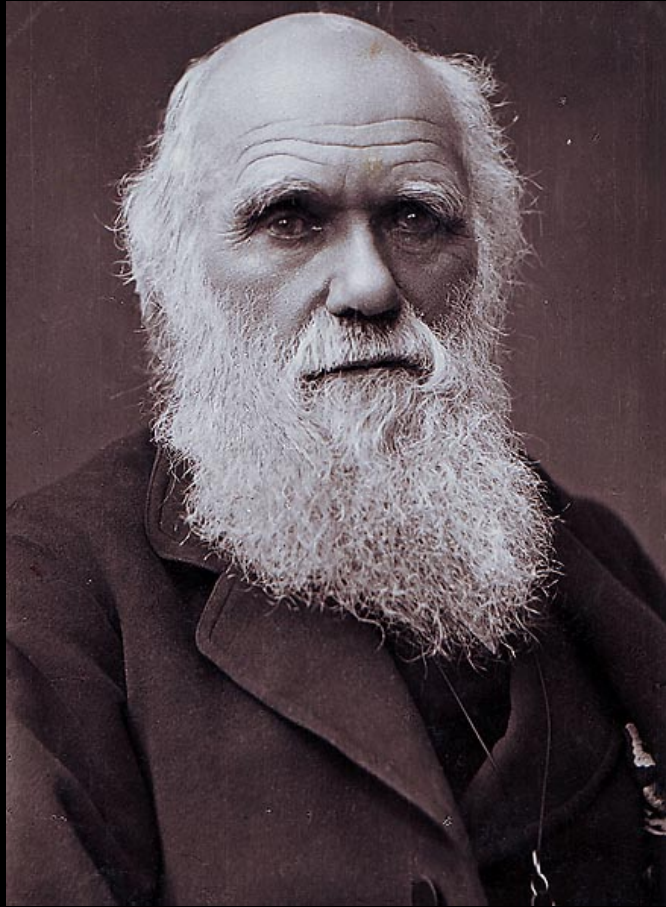
Human Genetics: From Eugenics to the Human Genome Project and Beyond

Dr Tessa Chelouche M.D

Co-director Program Medicine and the Holocaust, Technion Medical School, Haifa, Israel
Co-director Maimonides Institute for Medicine, Ethics and the Holocaust
Primary Care Physician, Clalit Health Services, Israel

18/4/2016

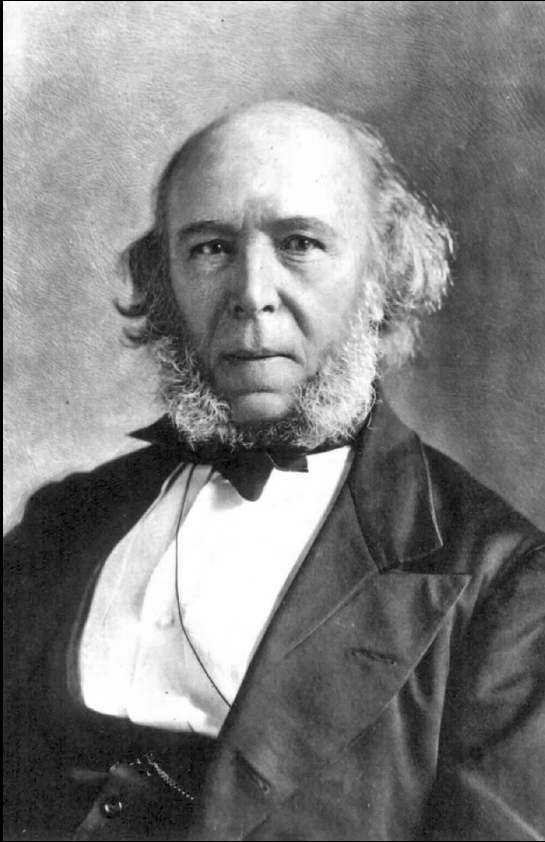




Charles Darwin
1809-1882

“Natural Selection”

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



Herbert Spencer
1829-1903

“Social Darwinism”

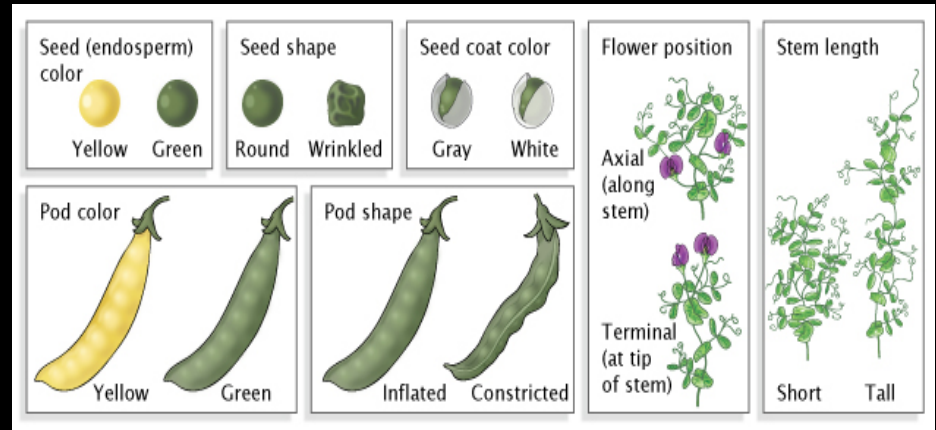
“Survival of the Fittest”

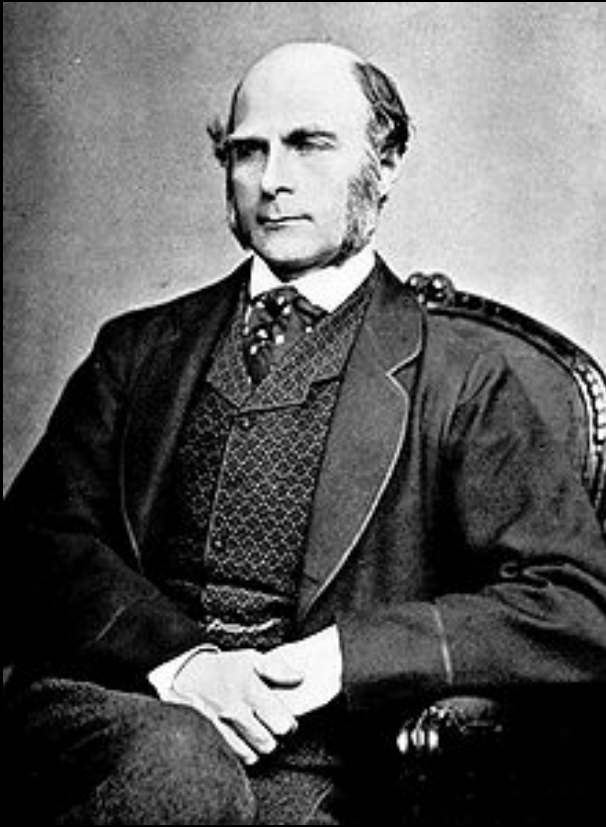
The "fittest" would naturally continue to perfect society and the "unfit" would and should die off.

Mendel's Laws on Heredity



Gregor Mendel
1822-1884



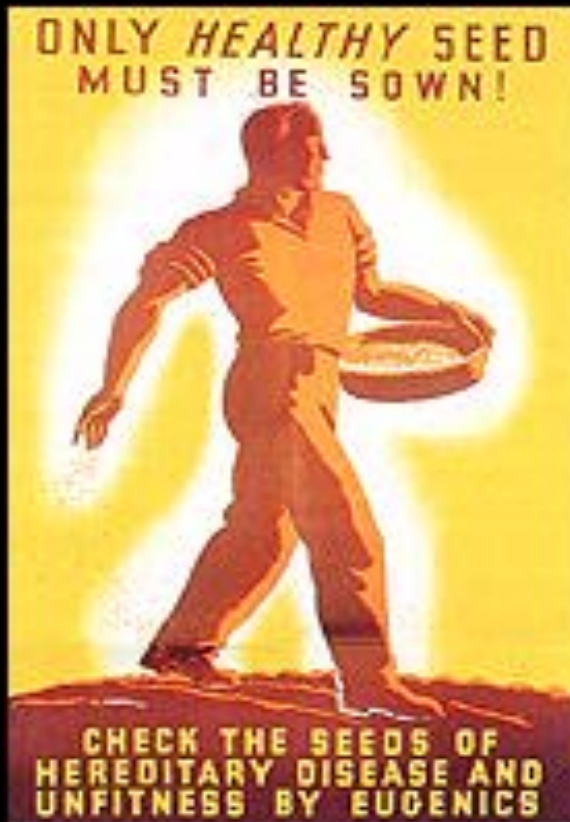


Francis Galton
1822-1911

“Eugenics”

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

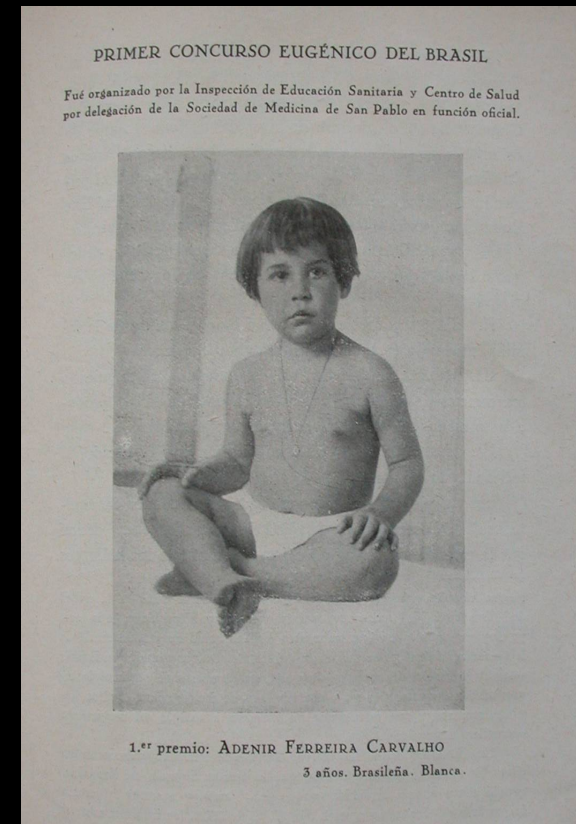
World Eugenics Movement



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.

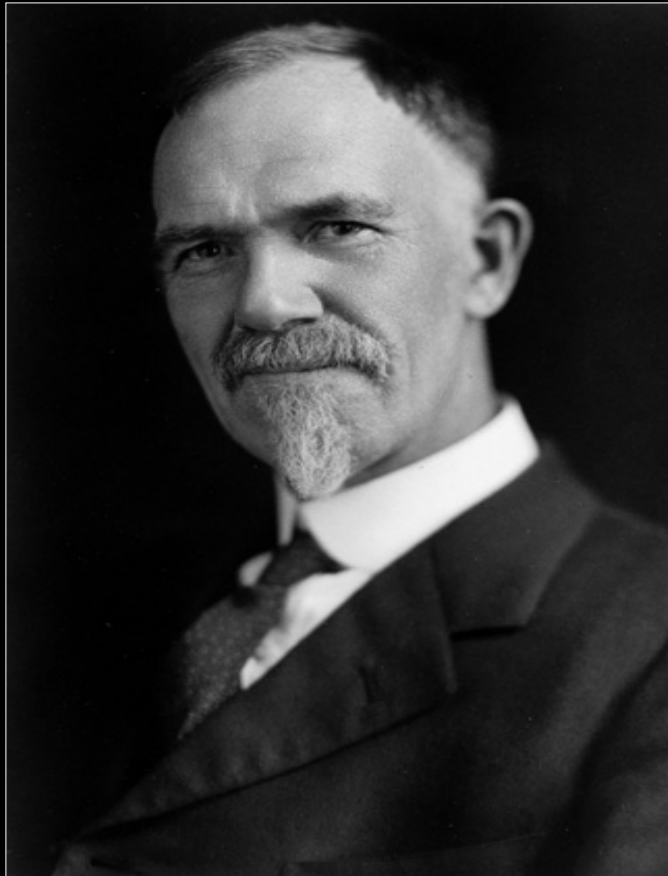
“The Jukes.” : Heredity vs Environment?

Richard Dugdale



Dept. of Genetics, Carnegie Institute of Washington, 1934

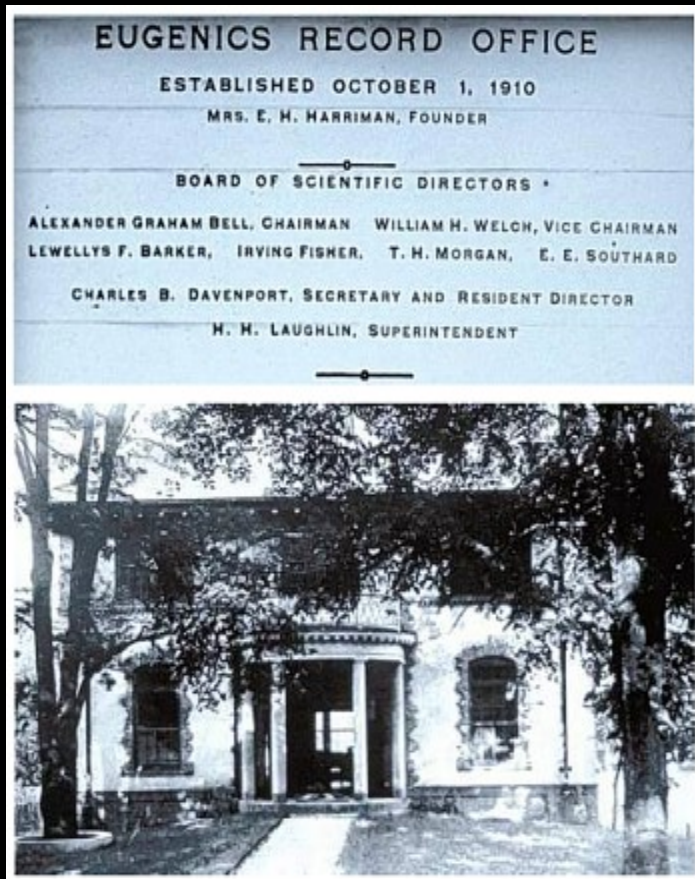




Charles Davenport
1866-1944



Biological Experiment Station
Cold Spring Harbor, 1904



Eugenics Record Office 1910

54

Popular Science Monthly

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

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



The Eugenics Building at the Kansas Free Fair, where families are judged and registered. Seated in the center is a "fitter family" surrounded by examiners



Dr. Florence B. Sherbon,
University of Kansas

member of a family. Another sheet of the record shows the results of the intelligence test, and an examination by a psychiatric 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

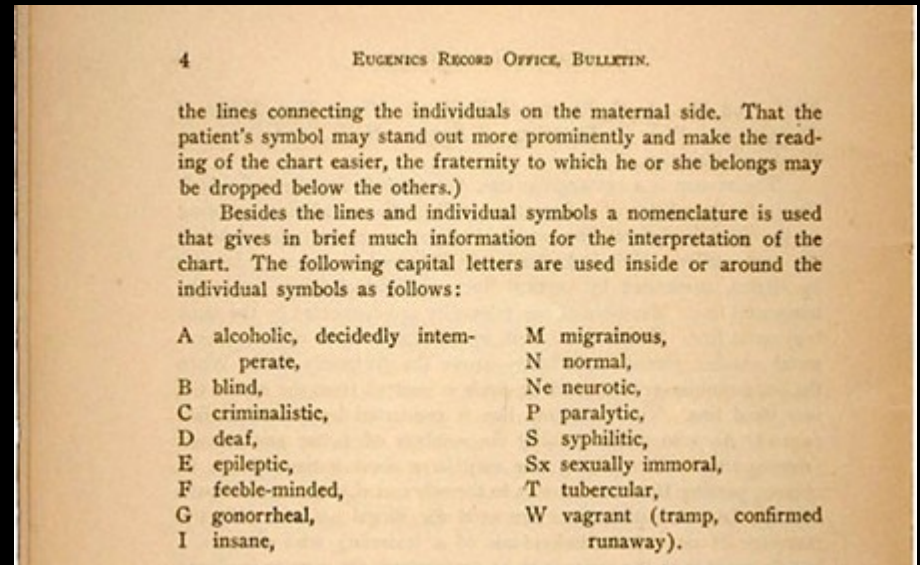
Family history records at the Eugenics Record Office



Cold Spring Harbor Laboratory. Noncommercial, educational use only.

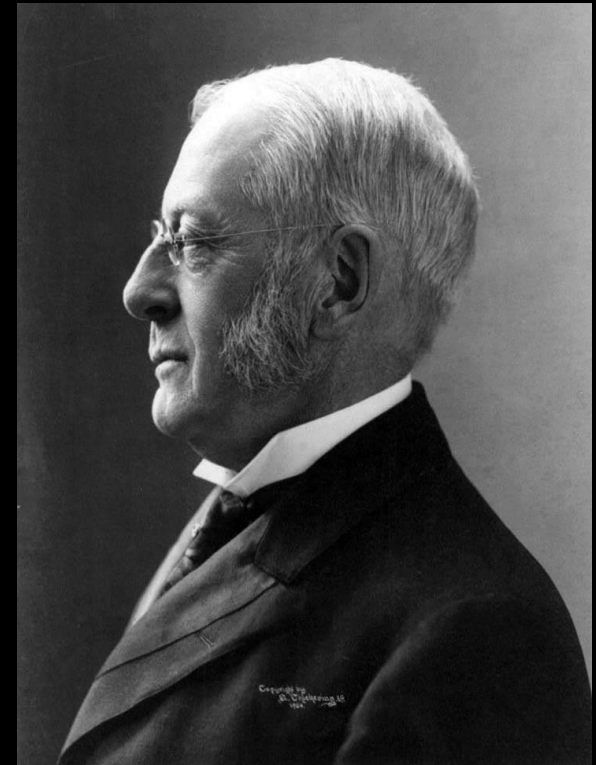
Categories of the “unfit”

- Feeble-minded
- 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





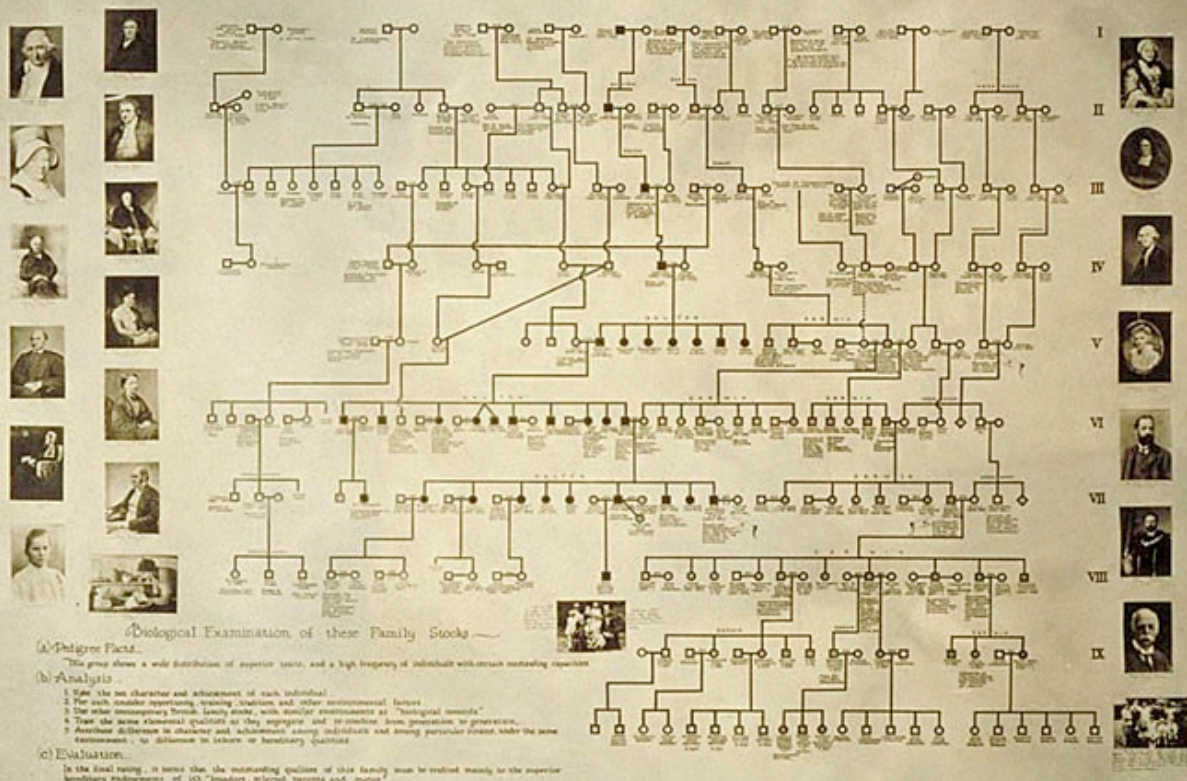
Harvard's Eugenics Era,
Adam Cohen, Harvard Magazine, March April 2016



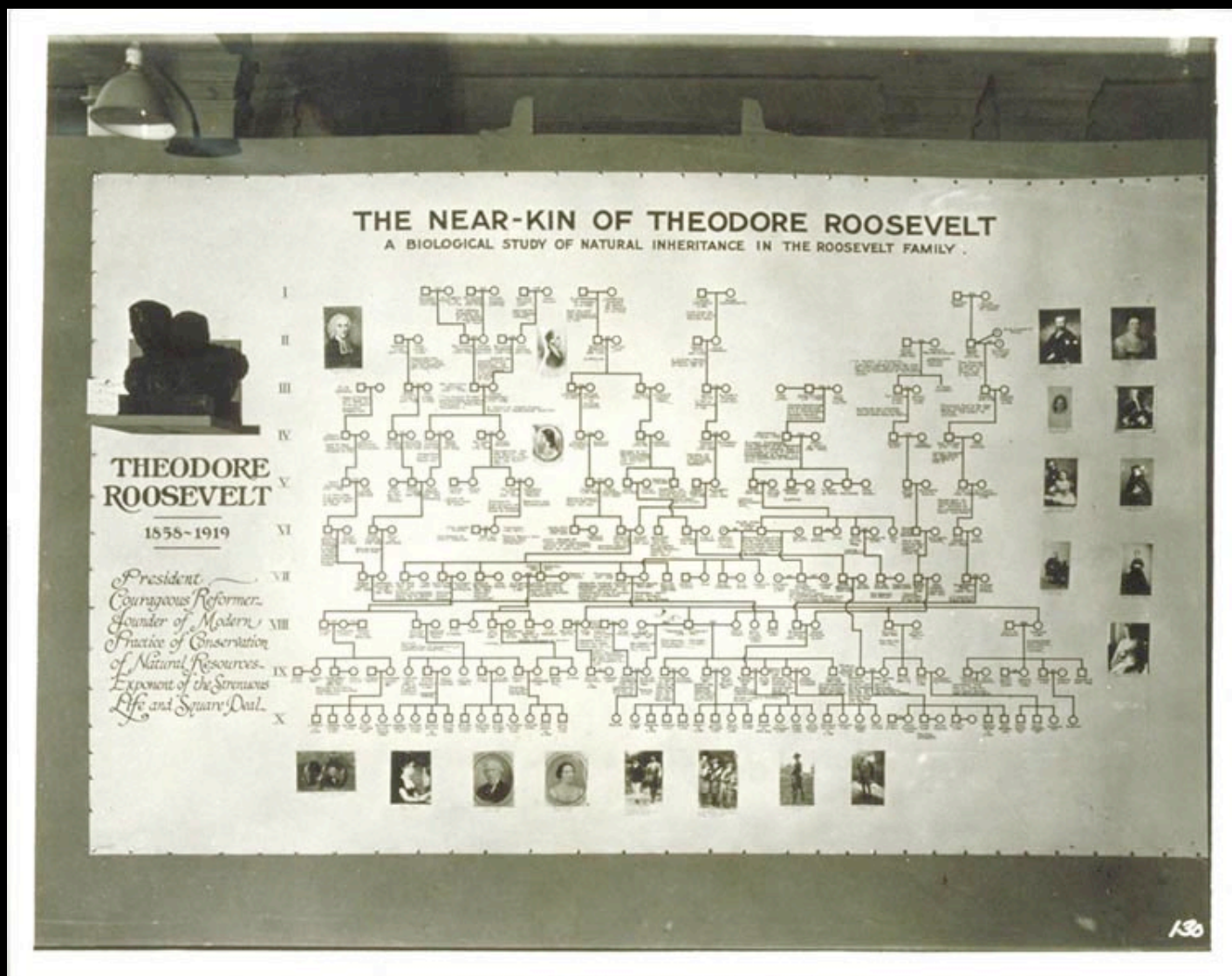
Harvard president
Charles William Eliot,
1853 - 1909

PEDIGREE OF THE GALTON-DARWIN-WEDGWOOD FAMILY.

A GROUP OF CLOSELY RELATED FAMILY-STOCKS CHARACTERIZED BY OUTSTANDING CAPACITIES IN PHILOSOPHY, SCIENCE AND ART.

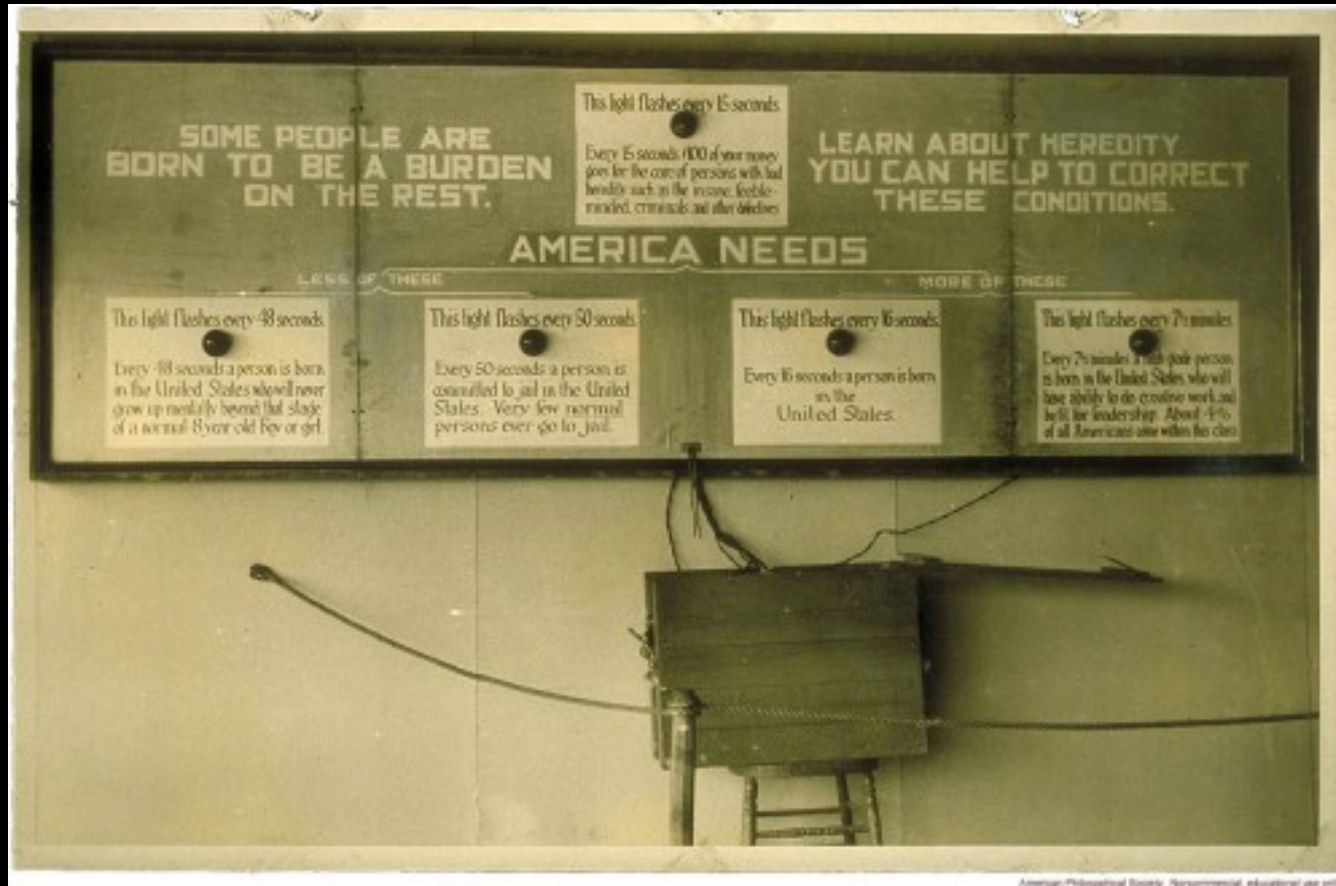


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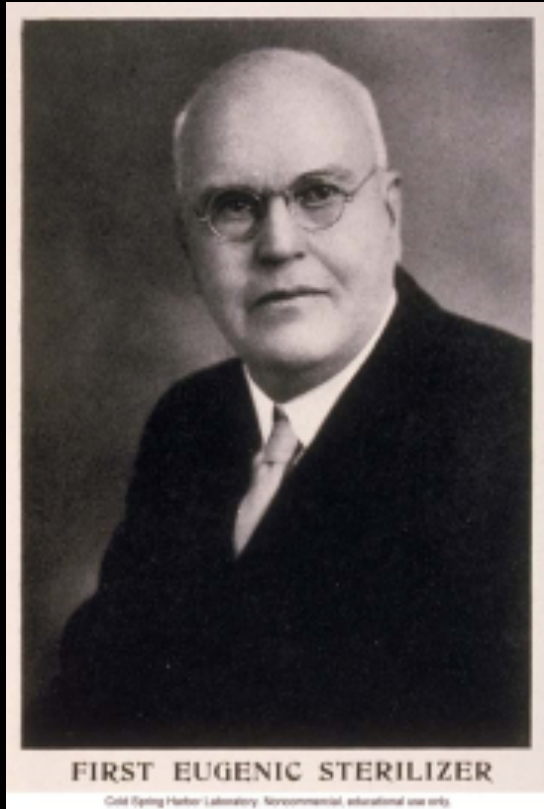




Fitter Family Contests



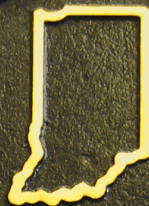
Eugenic Sterilization



Dr. Harry C. Sharp



Jeffersonville State Reformatory



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.

INSTALLED 2007 INDIANA HISTORICAL BUREAU, INDIANA UNIVERSITY,
AND INDIANA UNIVERSITY FOUNDATION

Eugenic laws for Sterilization passed in California, 1909



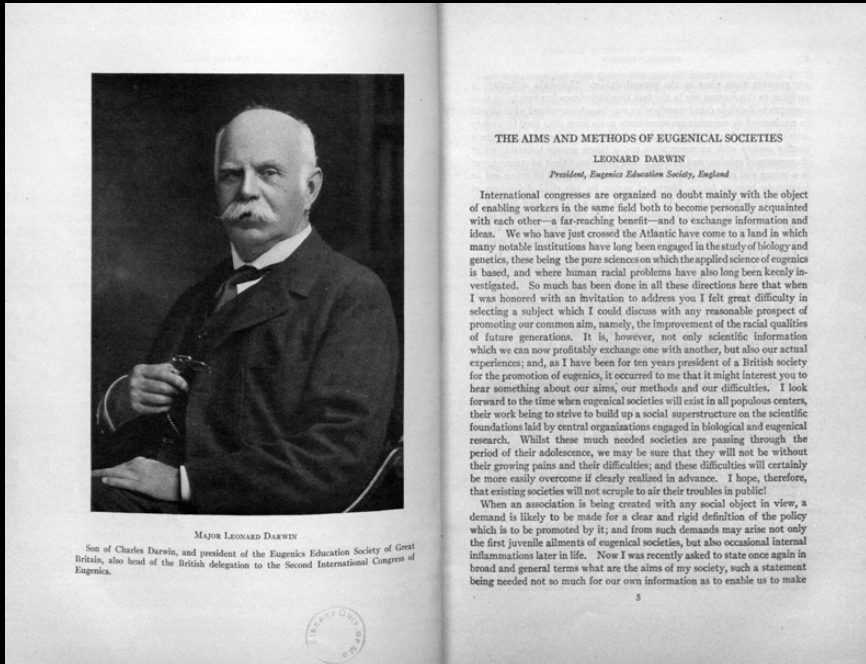
Stockton state hospital , one of the state institutions where sterilizations were performed in California

APPENDIX VI

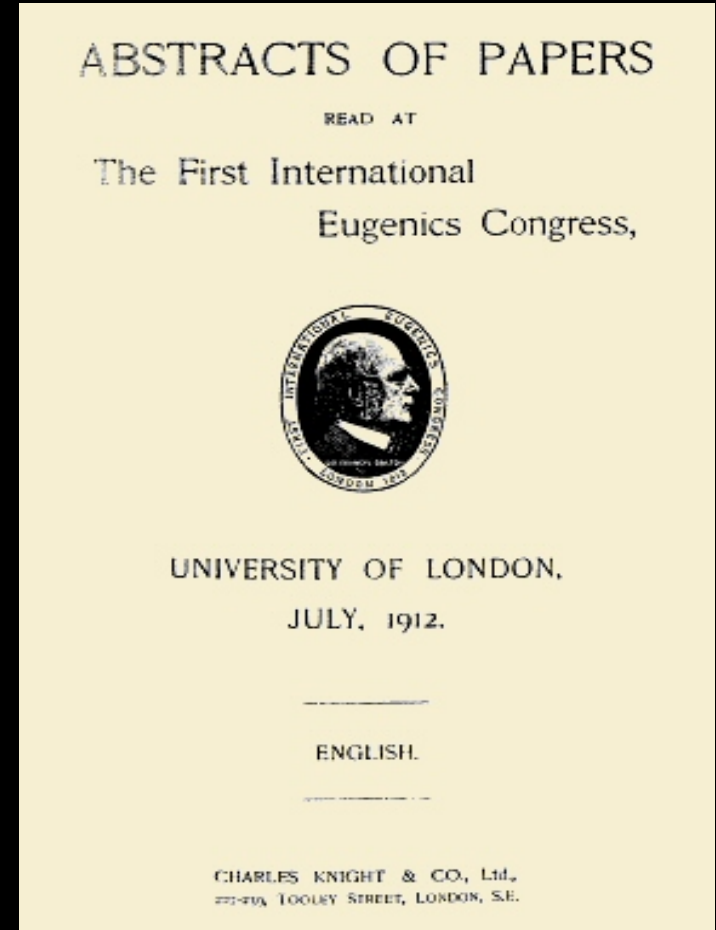
OPERATIONS FOR EUGENIC STERILIZATION PERFORMED IN THE CALIFORNIA STATE INSTITUTIONS UP TO JANUARY 1, 1929.

<i>Institution</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
So. Cal. State Hospital (Patton)	1,257	544	1,801
Stockton State Hospital.....	979	532	1,511
Napa State Hospital.....	174	427	601
Norwalk State Hospital.....	306	221	527
Mendocino State Hospital.....	123	58	181
Agnews State Hospital.....	10	136	146
Sonoma State Home for Feeble-minded	579	909	1,488
	<u>3,428</u>	<u>2,827</u>	<u>6,255</u>

First International Eugenics Conference, London, 1912



Conference President,
Major Leonard Darwin



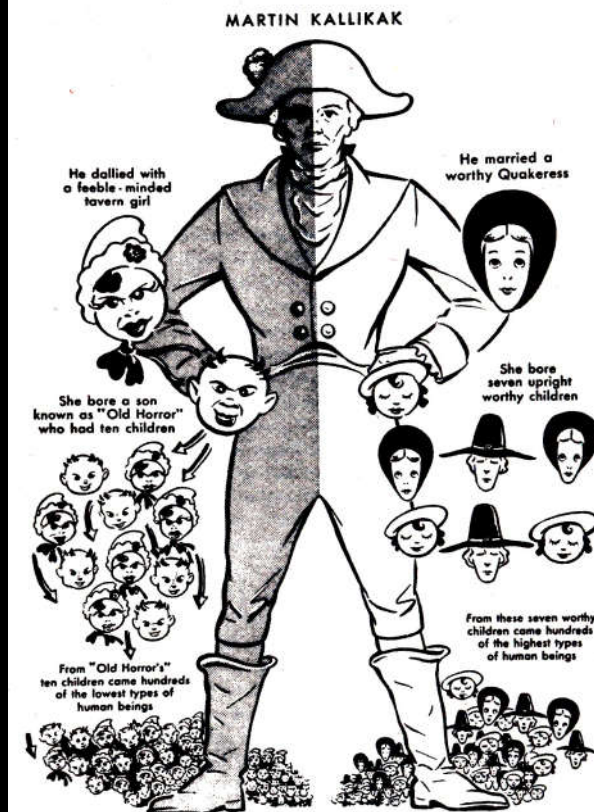
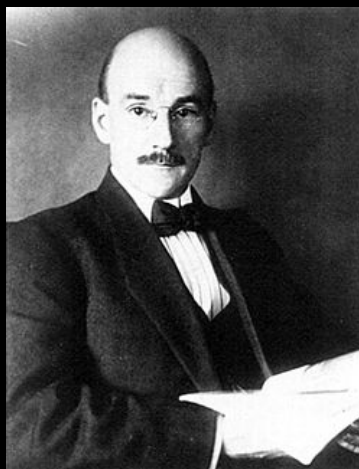
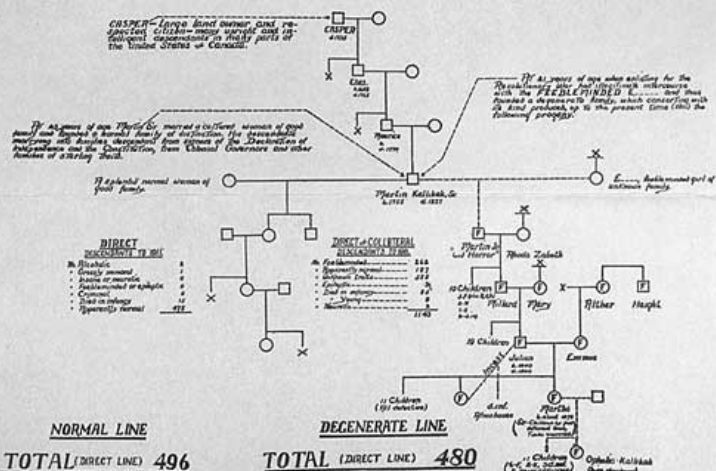
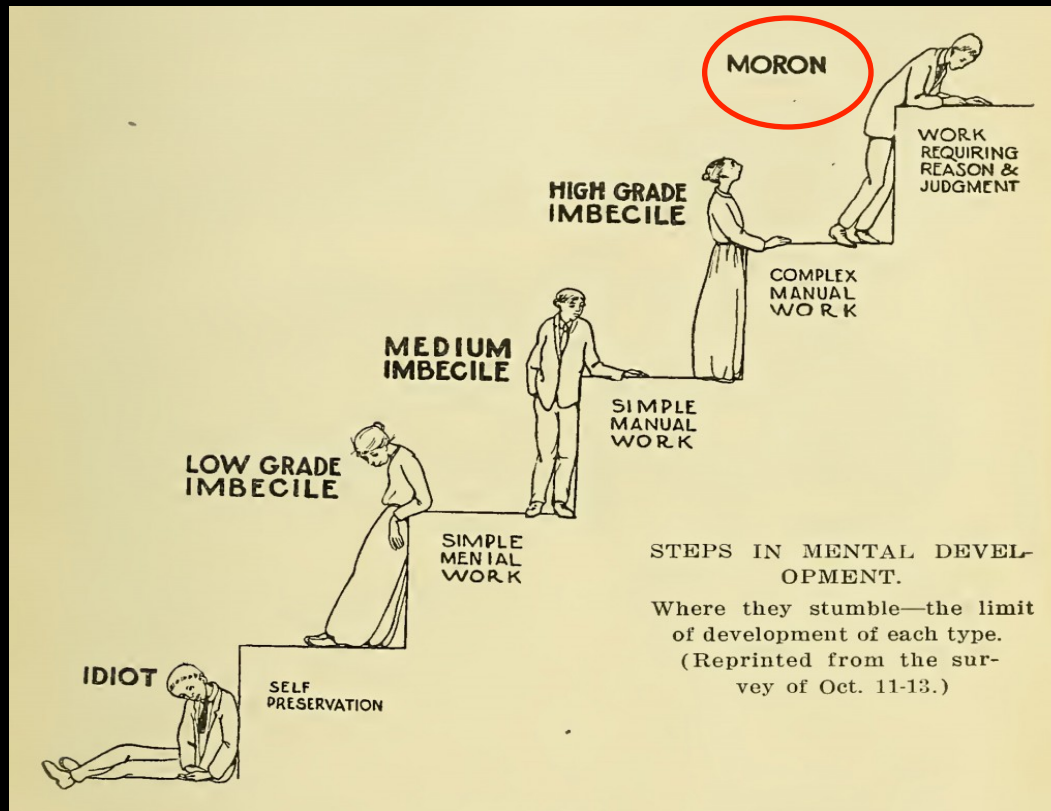


Figure 13.4
The “effects” of good and bad heredity on the descendants of Martin Kallikak

The Kallikak Family: A Study in the Heredity of Feeble-mindedness, 1913

Henry Goddard

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



United States (1903) says, "The best estimates of the total immigration into the United States prior to the official count put the total number of arrivals at not to exceed 250,000 in the entire period between 1776 and 1820."

THE MORON.

Dr. J. E. W. Wallin discusses the moron in the Training School Bulletin, May, 1920. He concludes that the term feeble-minded should be used only in the sense of social or economic dependency due to congenital or early acquired intellectual deficiency. What other coexistent defects or anomalies may be found are secondary to the primary defect of intelligence. The degree of intelligence deficiency necessary to constitute feeble-mindedness must be such that the individual on attaining his maturity will not exceed an intelligence of IX years. But we cannot assume that the IX year level always connotes feeble-mindedness. A IX year individual who is not subject to temperamental, emotional or volitional abnormalities may be able to support himself and to live in conformity with the laws and customs of his environment. It may, however, be inadvisable to permit the persons of this degree of abnormality to marry and beget children. The terms "middle-grade morons," "high-grade morons" should be discarded, because they have been universally used as synonymous with feeble-minded individuals. The term moron should be restricted to feeble-minded individuals who do not develop beyond the VIII and IX year level.

all comes at a well known place learned quickly years.

Justice John Court of New York that a male child been damaged by a parent sustained his birth, should be ages from the mother's age.

A soldier writes April 21, urging bonus the nation be financially able the next generation harps back to the ambition is strong instinct, and the woman they may bring. These are

A recent bulletin U. S. Department attention to the bud mutations varieties of the of these mutations ferior fruit and of them constitute over the through the isolation of the valuable advance has been

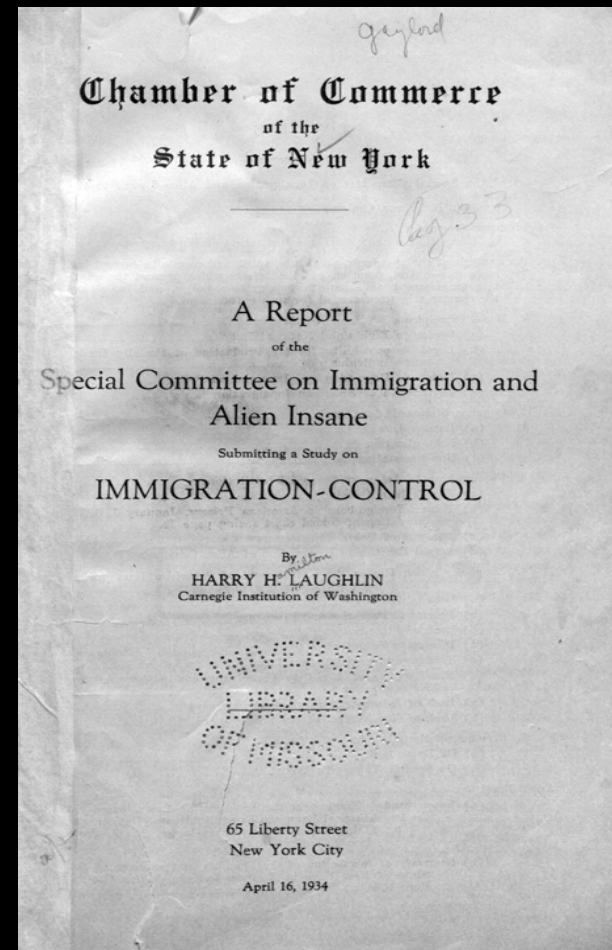
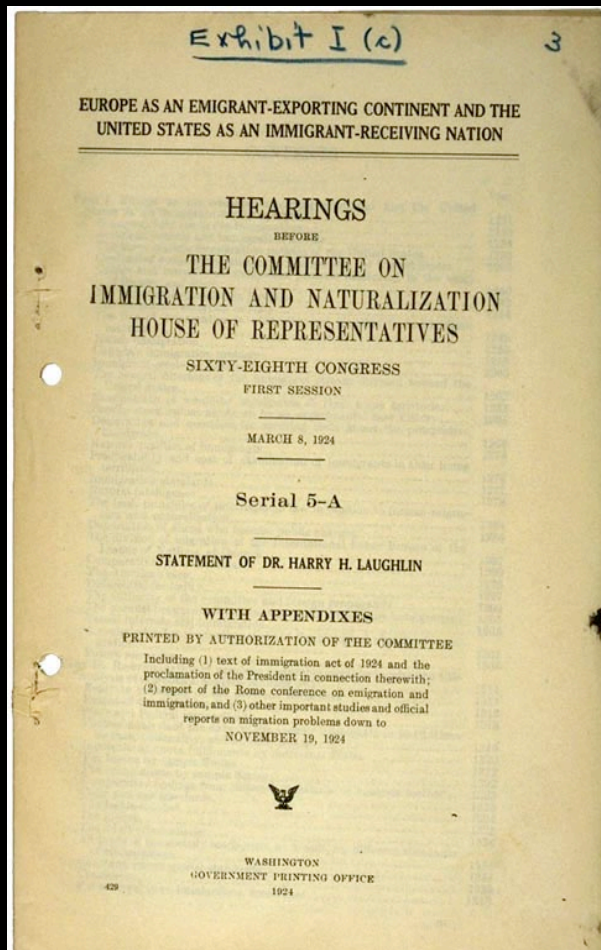
The Anthropologist Louis, with its Avenue and K has recently been Terry, professor of ton Medical School Dr. C. H. Danford

Cold Spring Harbor Laboratory. Noncommercial, educational use only.

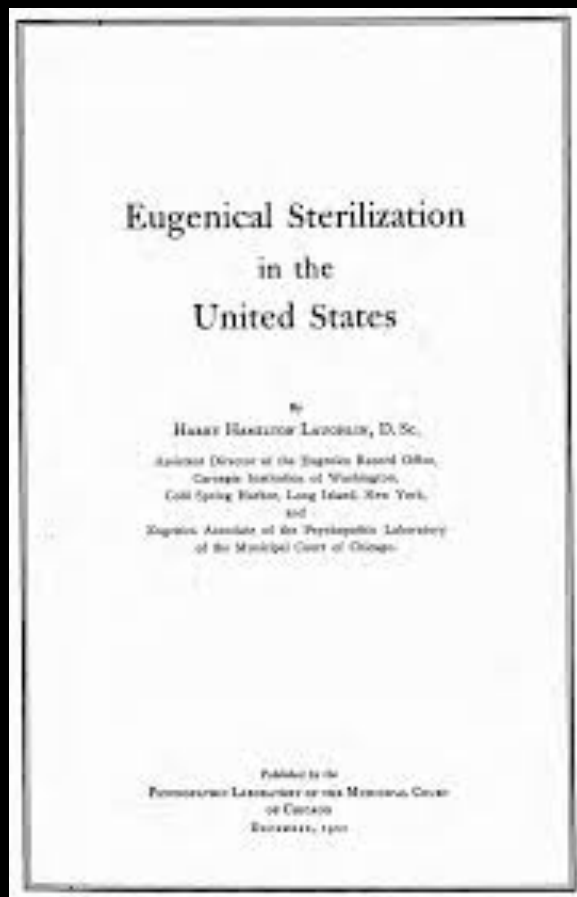
Intelligence Testing at Ellis Island



Eugenic Influence on the 1924 Immigration Restriction Act



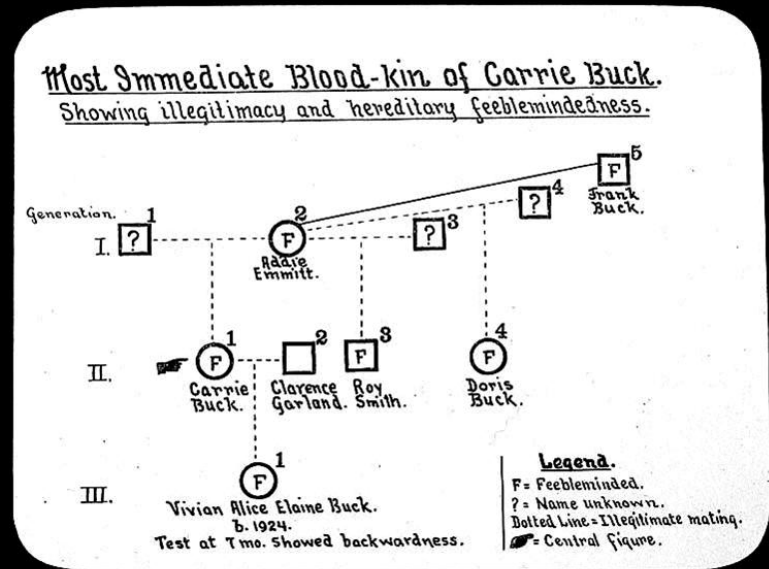
Sterilization is legalized



Harry H. Laughlin
1880-1943

Eugenic Sterilization Test Case

Buck vs Bell 1927



Carrie Buck and her mother, Emma
 Virginia, USA

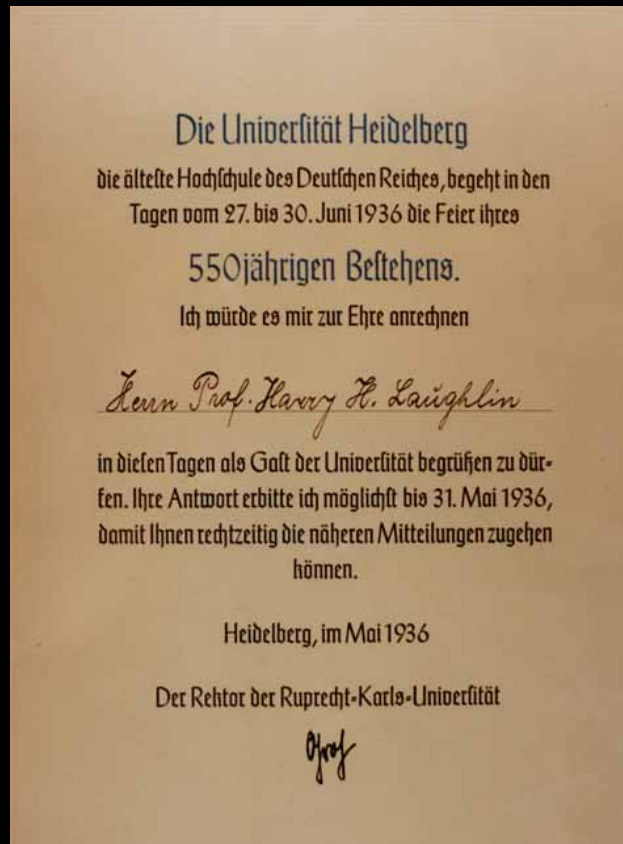
"It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. The principle that sustains compulsory vaccination is broad enough to cover cutting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

Three generations of imbeciles are enough."

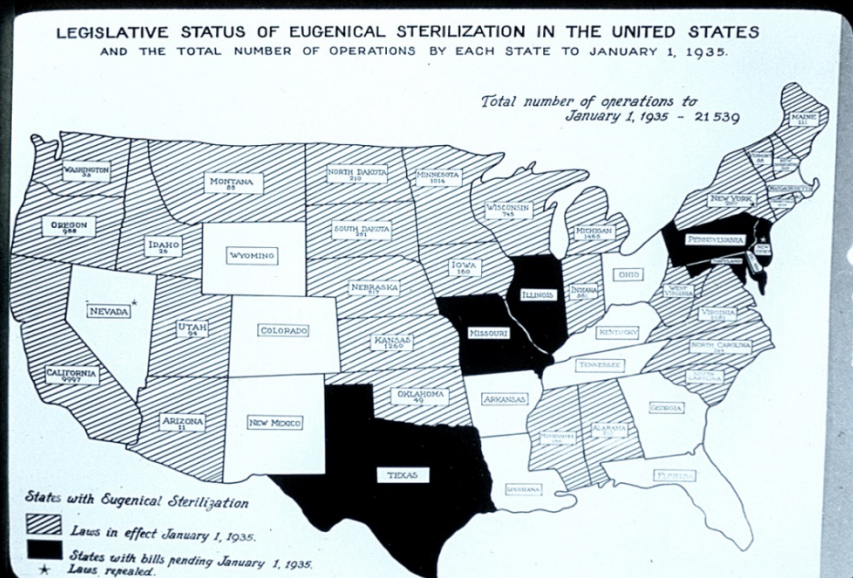


Supreme Court Justice Oliver Wendell Holmes, Jr.
in *Buck v. Bell*, 1927

Germany honors American eugenicists



Sterilization in the USA



LEGISLATIVE STATUS OF EUGENICAL STERILIZATION IN THE SEVERAL STATES OF THE UNITED STATES, JANUARY 1935

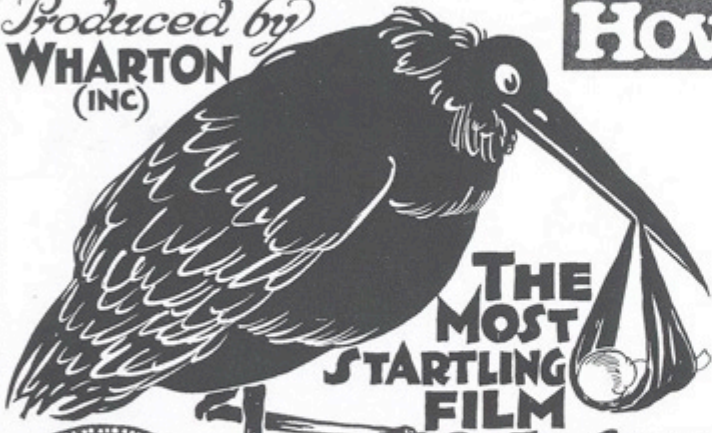
STATES WITH STERILIZATION LAWS NOW IN EFFECT - 1935	STATES WITH BILLS NOW PENDING	BILLS VETOED SINCE 1907	STATES IN WHICH BILLS HAVE NEVER BEEN INTRODUCED	AMENDMENTS NOW PENDING	AMENDMENTS PASSED WITHIN ONE YEAR	AMENDMENTS KILLED WITHIN ONE YEAR
28	7	7	6	4	2	3
Alabama Arizona California Connecticut Delaware Idaho Indiana Iowa Kansas Maine Michigan Minnesota Mississippi Montana Nebraska New Hampshire North Carolina North Dakota Oklahoma Oregon *South Carolina South Dakota Utah Vermont Virginia Washington West Virginia Wisconsin	Illinois Maryland Missouri New Jersey New York Pennsylvania Texas	Georgia Kentucky Massachusetts Nevada Ohio Tennessee Arkansas	Colorado Florida Louisiana New Mexico Rhode Island Wyoming	Iowa Nebraska Oklahoma West Virginia	Indiana South Dakota	Kansas Washington Wisconsin

* Effective May 15, 1935

By the 1960s around 64,000 men and women had been sterilized


The Black

Produced by
WHARTON
(INC)



THE MOST STARTLING FILM ON THE SUBJECT OF "BIRTH" EVER GIVEN TO THE PUBLIC

REVOLUTIONARY! ASTOUNDING!
THE INNER SECRETS OF THE REPRODUCTION OF THE HUMAN RACE EXPOSED!
MANY NEWSPAPERS WILL ATTACK IT
MANY WILL PRAISE IT



JACK LAIT
Author of "The Black Stork," and also of "Help Wanted," one of the greatest theatrical successes of the year in 1917.

How

The Whole World Will Talk About It!

Stork


Unfit Humans Breed

Should Doctors Let Defective and Deformed Babies Die?

Dr. H. J. Haiselden, the noted Chicago physician, *refused to operate on a defective baby* because she was deformed and would grow up a cripple, possibly an imbecile. He **LET HER DIE**, when an operation would have **SAVED HER LIFE**. Every newspaper in the land has commented on it. Hundreds of editorials have been written. *Did Dr. Haiselden do right?* **THIS GREAT, STARTLING FILM GIVES THE ANSWER.**

DR. HASELDEN HIMSELF TAKES THE LEADING PART IN THIS PLAY

This play is written by Jack Lait, with such heart throbs as only Jack Lait's pen can give. It pictures the primal passions of men and women as only Jack Lait can do—the passions of Society's great and the passions of tenement starvelings—the highest beauty and joy of life and its blackest drags.



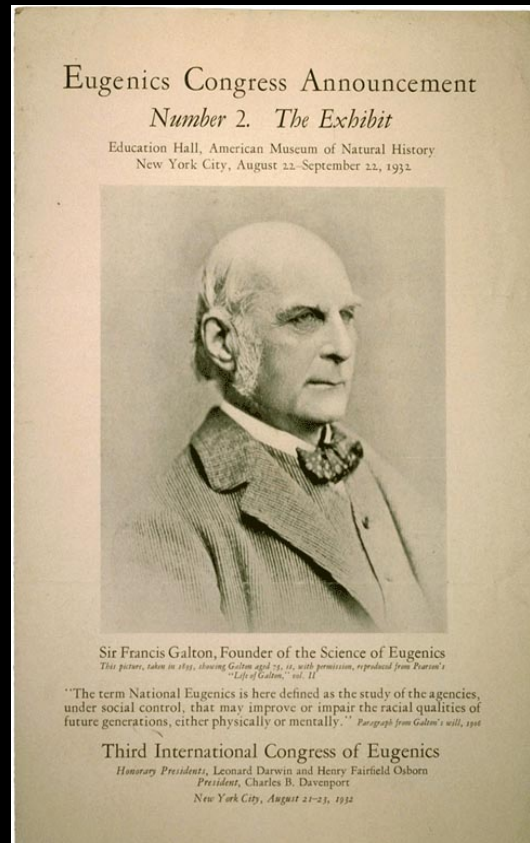
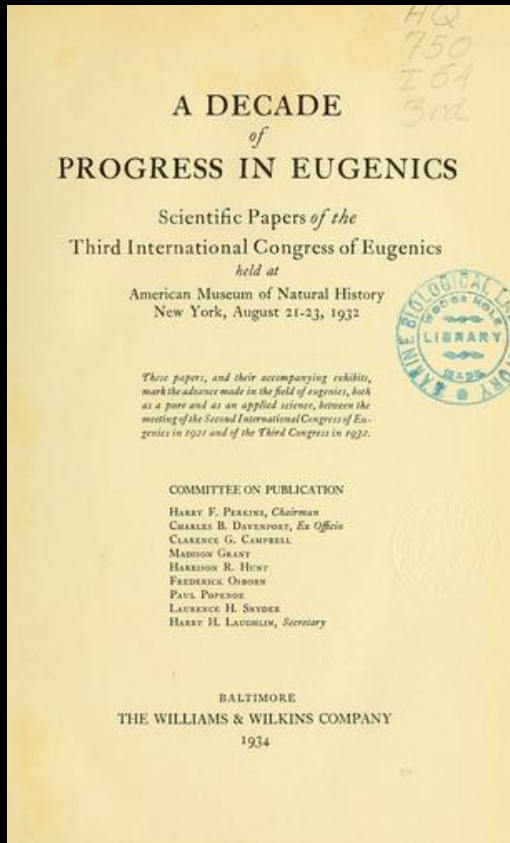
DR. H. J. HASELDEN
The famous Chicago Physician who let a defective die, when he could have saved her life by operating.

EVERY MOTHER IN AMERICA AND EVERY WOMAN WHO EXPECTS TO BE A MOTHER WILL FIGHT TO SEE THIS PLAY
IT WILL BE THE MOST TALKED OF PLAY OF THE YEAR

ALL STAR CAST INCLUDES—
Dr. H. J. Haiselden
Hamilton Revelle
Henry Bergman
John T. Milern
Edgar L. Davenport
Allan Murane
Jane Fernley
Elsie Esmond

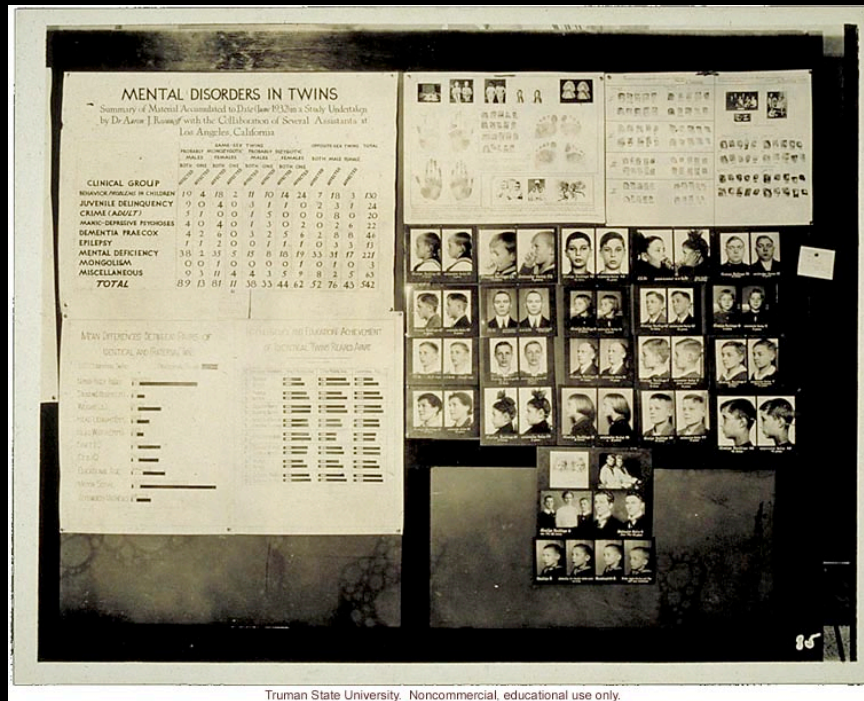
Produced by **WHARTON, Inc.**
State Rights Now Selling by
SHERIOTT PICTURES CORPORATION
218 West 42nd Street New York City

Third International Eugenics Conference, New York, 1932

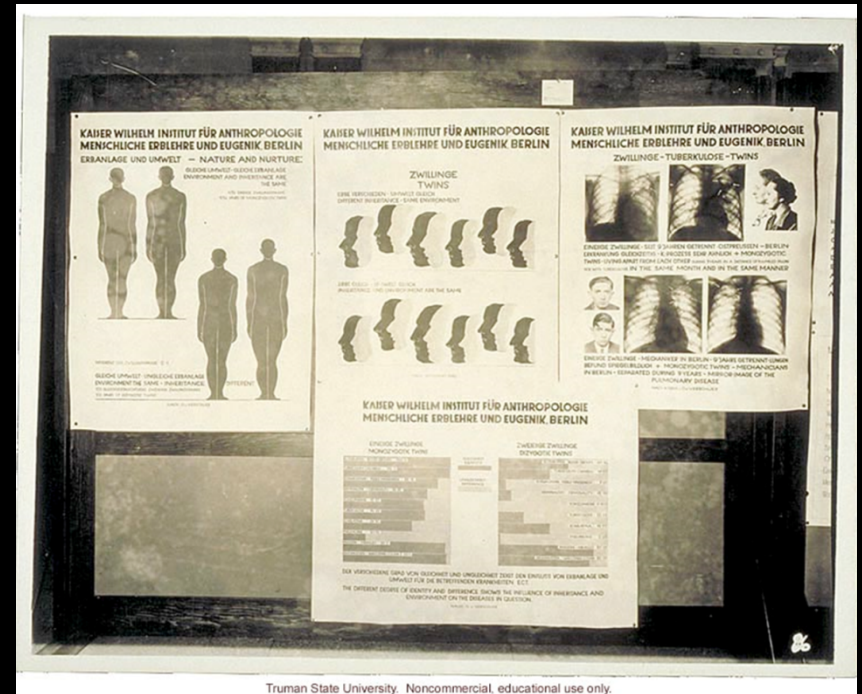


Truman State University. Noncommercial, educational use only.

Third International Eugenics Conference, New York, 1932



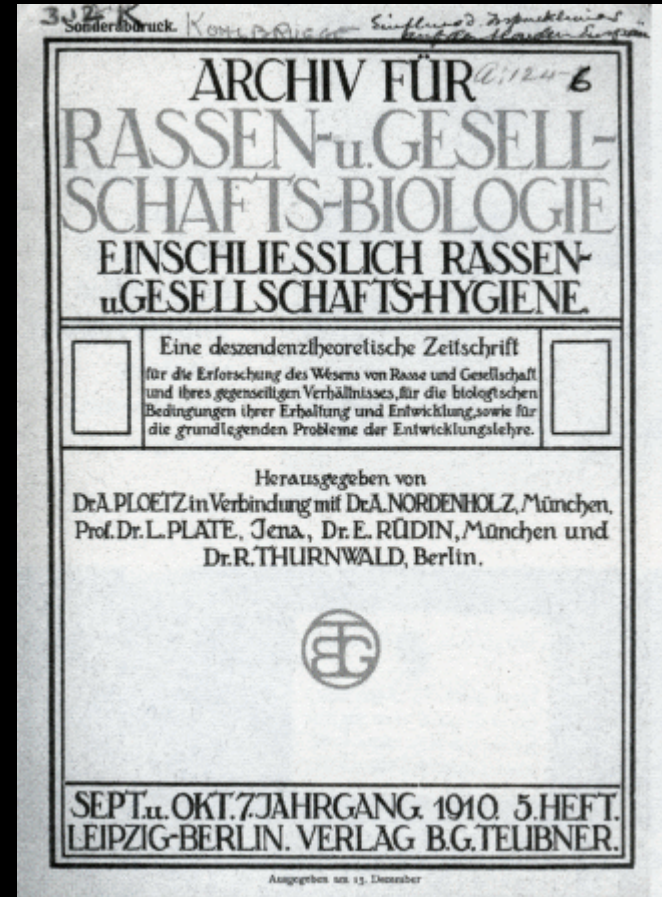
"Mental disorders in twins"
USA



Racial Hygiene



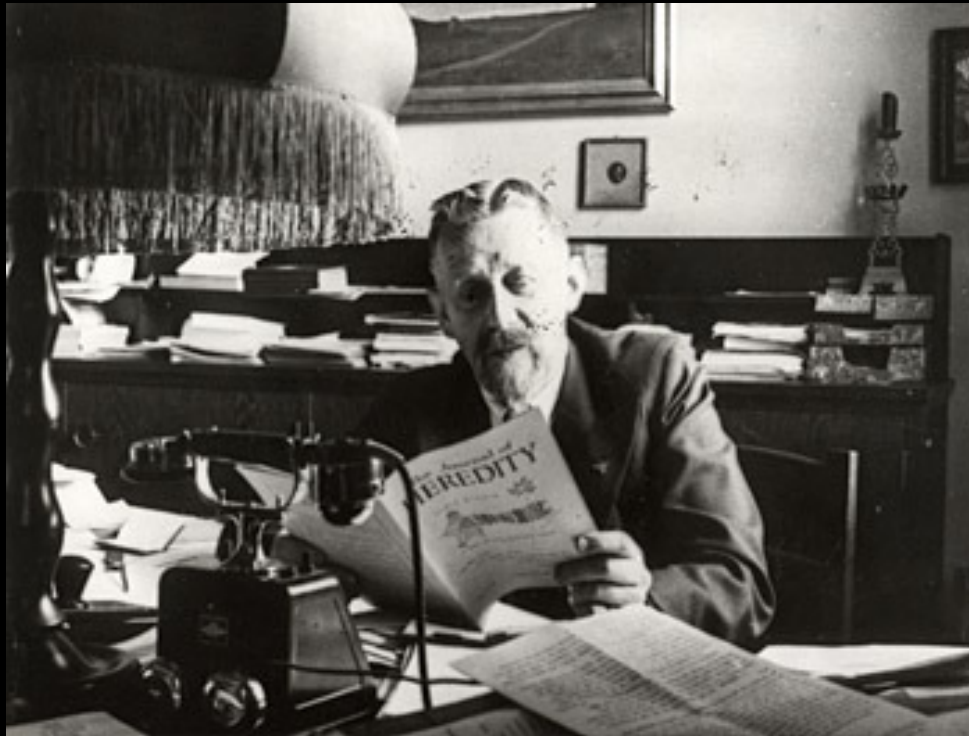
Alfred Ploetz (1860 - 1940)
Founder of German Eugenics





German educational slide explaining the Kallikak family, 1924

German Racial Hygiene is modelled on American Eugenics

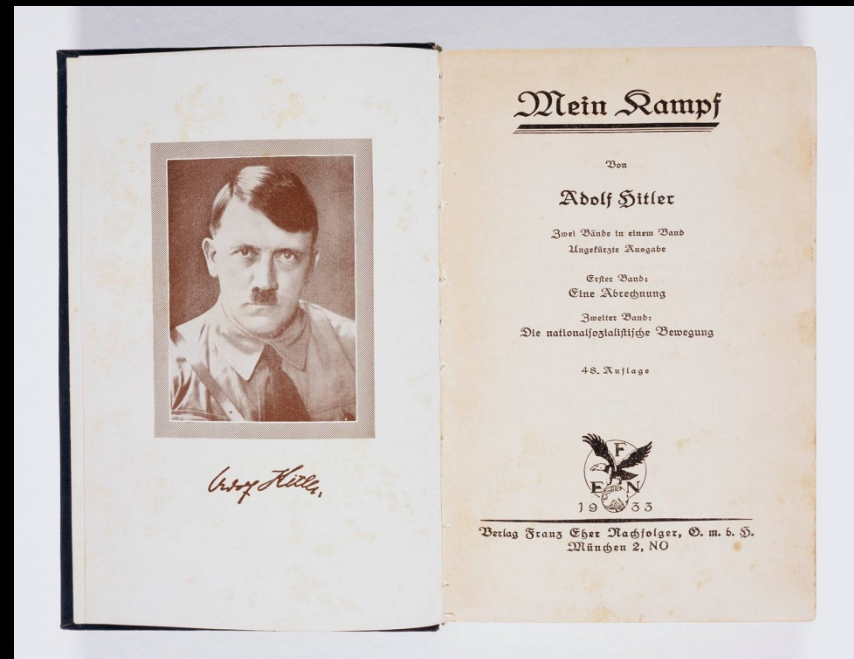
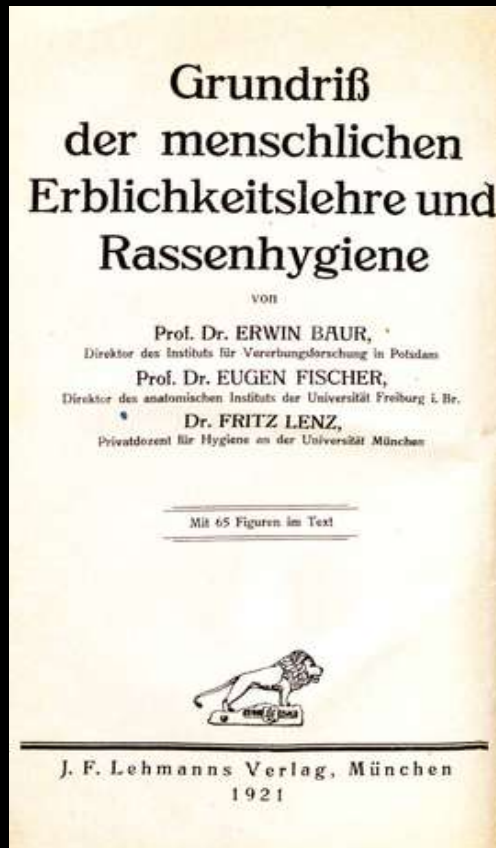


Eugene Fischer
1874-1967

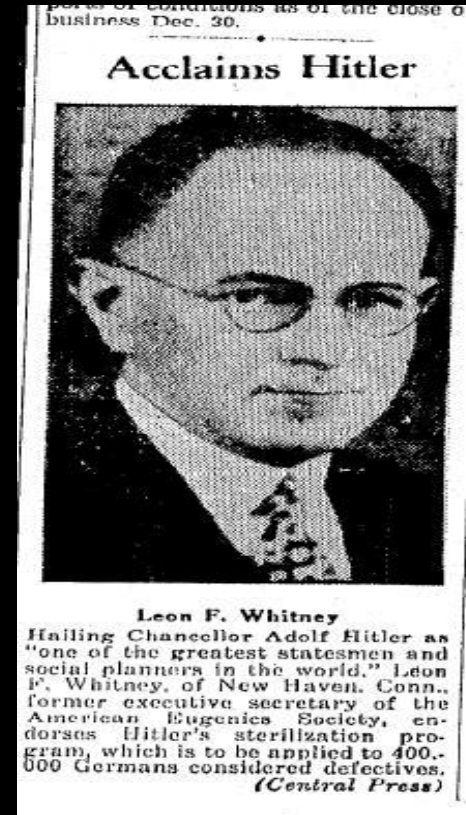
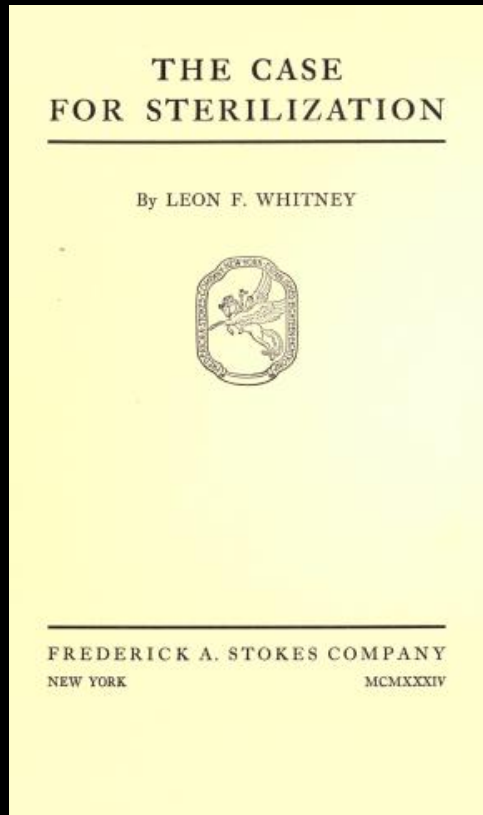
Director of the Kaiser Wilhelm Institute for Anthropology, Eugenics, and Human Heredity



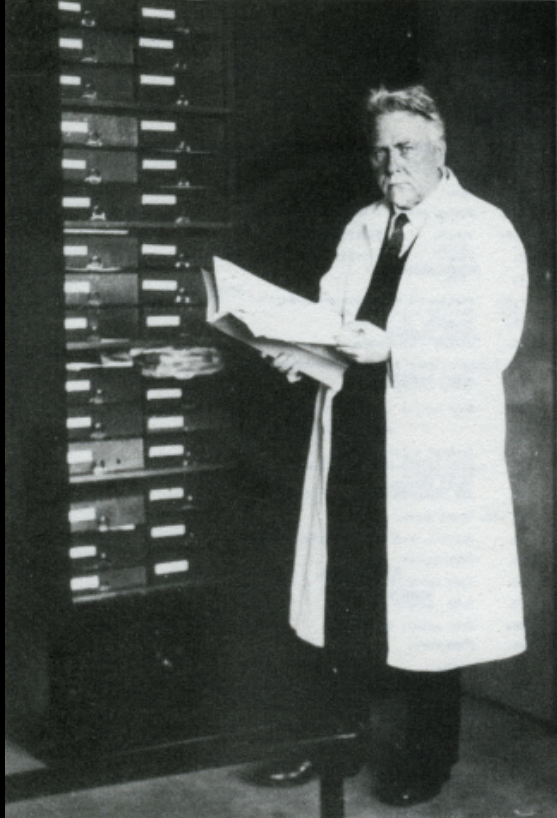
Hitler, greatly influenced by the Racial hygienists, includes the eugenic racist theories in *Mein Kampf*



Hitler praises the American Sterilization Program



German Catalogue of family profiles



Dr Ernst Rudin

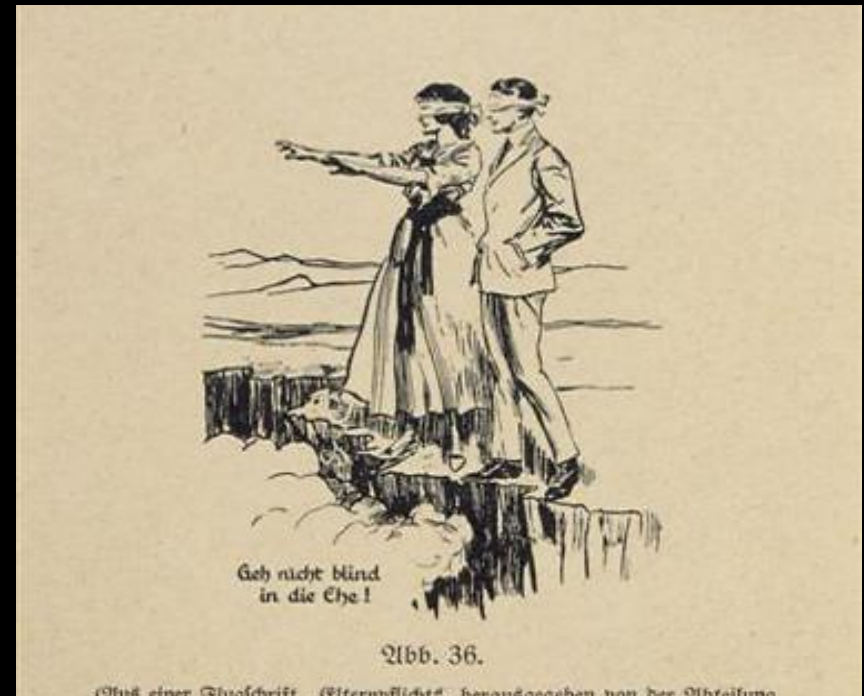


Charles Davenport, 1925, and Eugen Fischer, director of the Kaiser Wilhelm Institute for Anthropology, Human Genetics and Eugenics, the German equivalent of the Eugenics Record Office, about 1938.

Premarital Eugenic Counselling



The Eugenic marriage policy
USA



"Don't Go Blindly into Marriage!"
Germany 1924

KWI for Anthropology, Human Heredity and Eugenics



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 feeble-mindedness
- 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



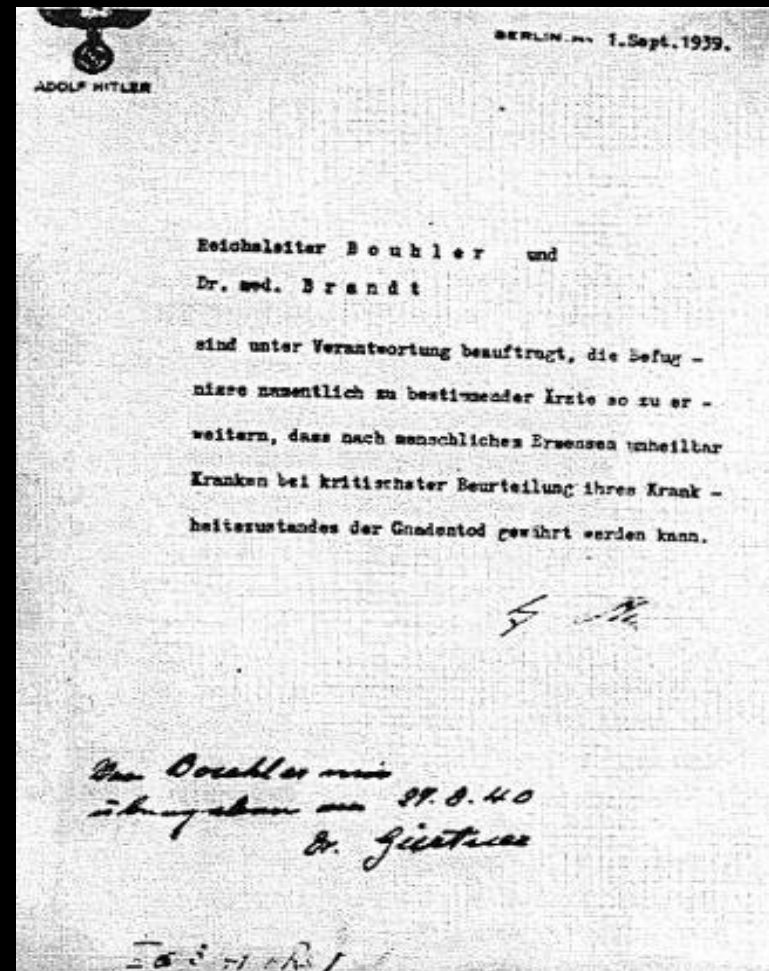
“Euthanasia”

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.



Killing center, Bernberg

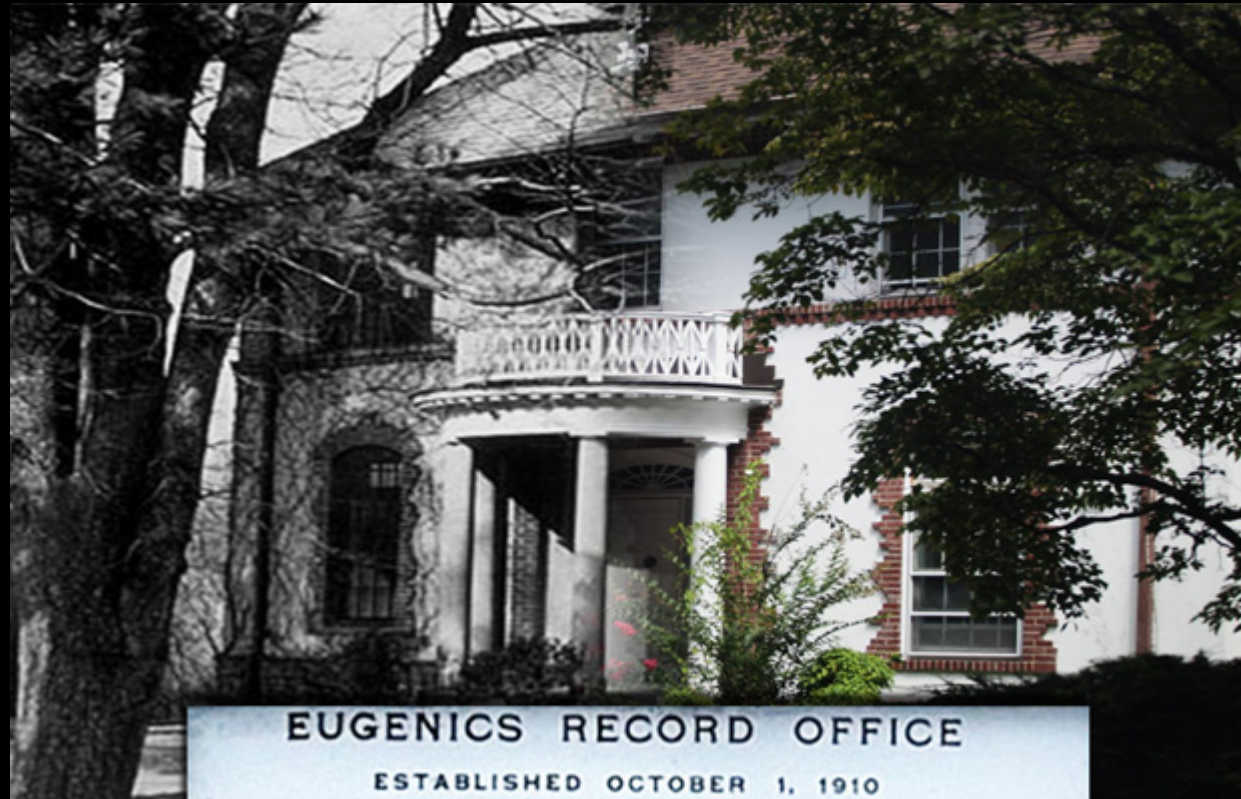


Auschwitz

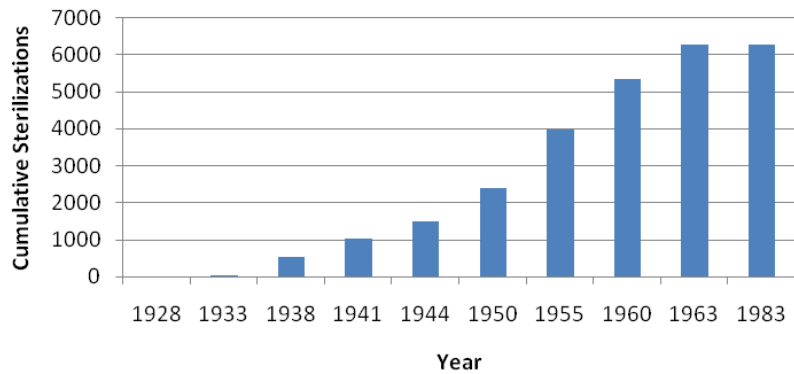


"Sexual Sterilization ..."
Judgment at Nuremberg 1961

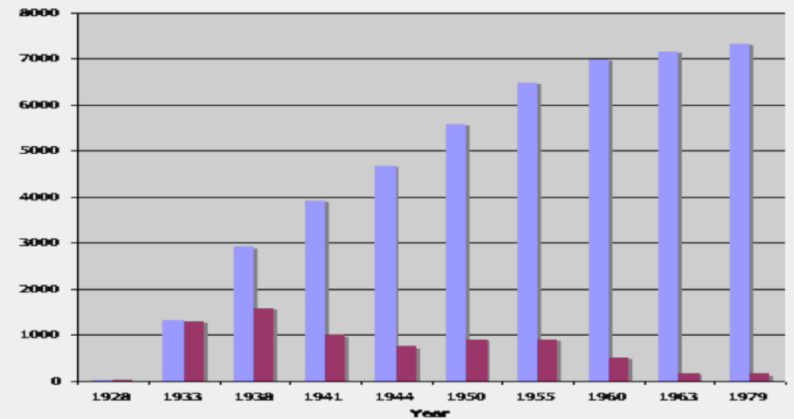
The Eugenics Record Office was closed in 1939 and renamed The Genetic Record Office



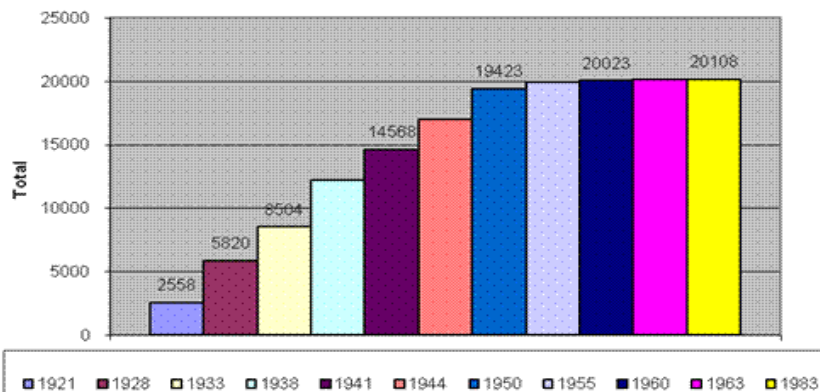
North Carolina Sterilizations



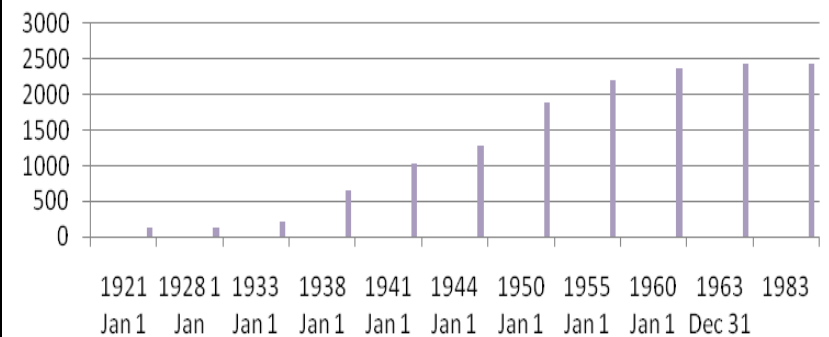
Sterilization in Virginia: 1924-1979



Sterilizations in California



Indiana Sterilizations



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

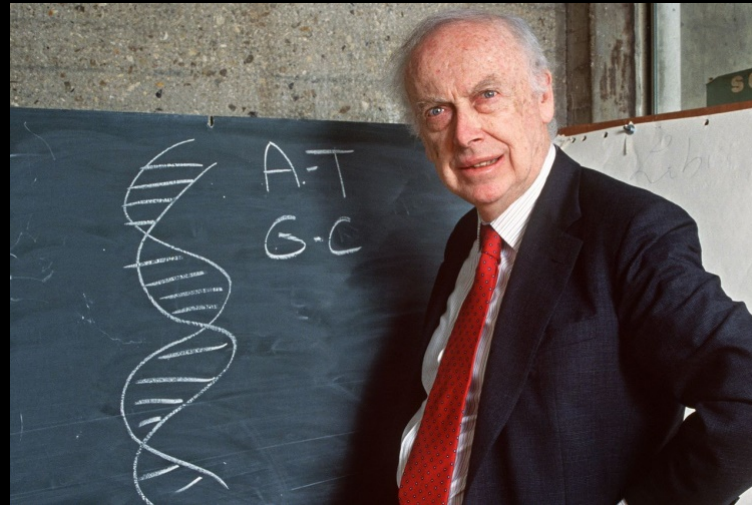
By Stacey Naggier, NBC News

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.



Cold
Spring
Harbor
Laboratory

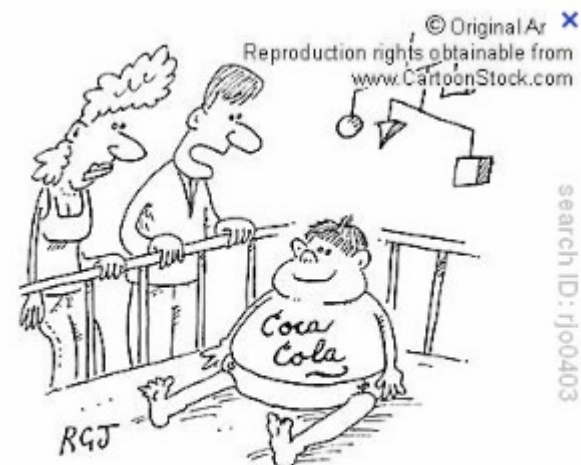


James D. Watson
Director and President

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"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."

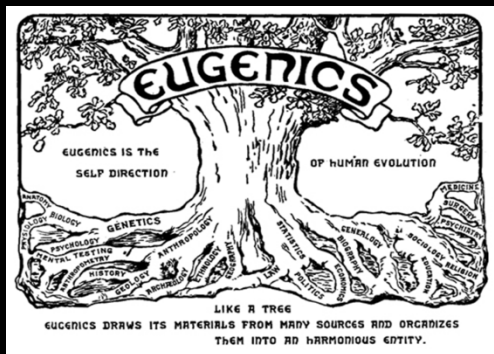
Is the new genetics the old eugenics?



- 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.

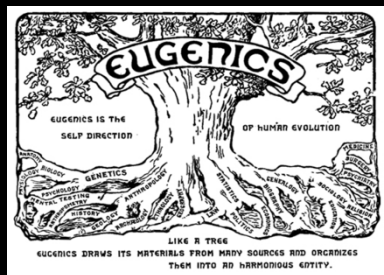


The history of eugenics provides some important parameters for comparison to and understanding of the genetic claims that abound today and suggest how current claims are being made or might be used.

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 United States that gave the Holocaust its scientific legitimacy.

Allen E. Garland



Maimonides Institute for Medicine, Ethics and the Holocaust



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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

Adam Cohen. *Imbeciles. The Supreme Court, American Eugenics and the Sterilization of Carrie Buck*, 2016

Robert Proctor. *Racial Hygiene: Medicine under the Nazis*, 1988

Deadly Medicine. Creating the Master Race. USHMM, 2004

Tessa Chelouche, Geoffrey Brahmner, Susan Benedict. *Casebook on Bioethics and the Holocaust*. UNESCO Chair of Bioethics.

<http://www.unesco-chair-bioethics.org/wp-content/uploads/2015/09/Casebook-on-Bioethics-and-the-Holocaust.pdf>

Online DNA Learning Center. <https://www.dnalc.org/search?q=eugenics>



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