

21A.303J / STS.060J

Anthropology of Biology

Spring 2022

Professor Stefan Helmreich

Course Description

If the twentieth century was the century of physics, the twenty-first has become the century of biology. This subject examines the cultural, political, and economic dimensions of biology in the age of genomics, biotechnological enterprise, biodiversity conservation, pharmaceutical bioprospecting, synthetic biology, global pandemic, and more. Although we examine such social concerns as genetic modification and reproductive rights, this is not a class in bioethics, but rather an anthropological inquiry into how the substances and explanations of biology — increasingly cellular, molecular, genetic, viral, and informatic — are changing, and with them broader ideas about the relationship between “nature” and “culture.” Looking at such scientific forms as cell lines, CRISPR, and epidemiological models, and drawing upon primary sources in biology, social studies of the life sciences, and literary and cinematic materials, we rephrase Erwin Schrödinger’s famous 1944 question, “What Is Life?” to ask, in the 2000s, “What Is Life Becoming?”

BIBLIOTHÈQUE
des
HISTOIRES

Histoire
de la sexualité

1

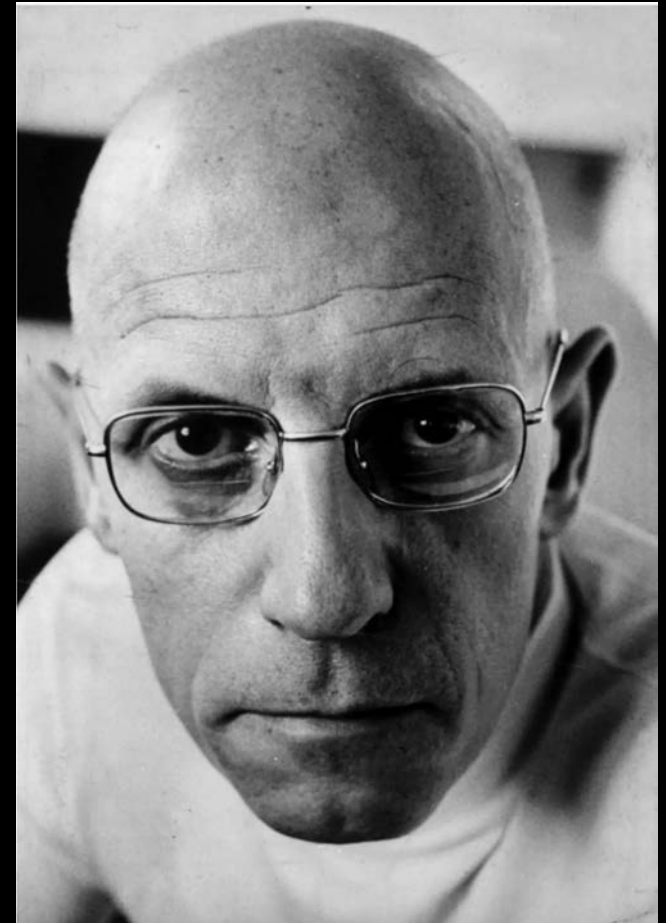
**La volonté
de savoir**

par

MICHEL FOUCAULT

nrf

Éditions Gallimard



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Michel Foucault
(1926-1984)

Foucault, Michel. *Histoire de la sexualité: la volonté de savoir*. Gallimard, 1976. © Gallimard. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

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Michel
Foucault

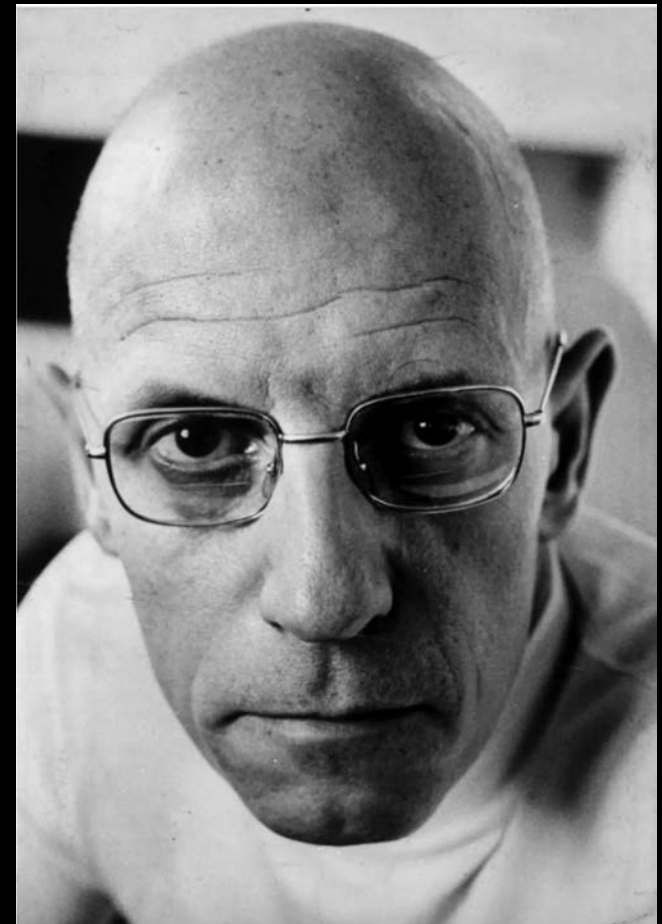
*The History
of Sexuality*

Volume 1: An Introduction



fig. 1

Foucault, Michel. *The History of Sexuality, Vol. 1: An Introduction*. Vintage, 1990. © Vintage. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.



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Michel Foucault
(1926-1984)

Sovereign, governmental power, Foucault argues, used to be exercised primarily **REPRESSIVELY**, in a mode he calls **THE RIGHT OF DEATH**. Governments, mostly kingly, ruled through the threat of force against their subjects. The symbol is the **SWORD**, the tool of execution.

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The execution of Anne Boleyn, on 19 May 1536

In the nineteenth century, with the rise of the modern, secular, nation-state in Europe (think of France), sovereign, governmental power, Foucault argues, came to be exercised **PRODUCTIVELY** in a mode he calls **POWER OVER LIFE** — though the use of the census and of statistics to **CREATE CATEGORIES** of people; and the making of programs of social welfare to cultivate the **GROWTH** of particular parts of a nation's **POPULATION**. The symbol might be **PRUNING SCISSORS**.

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Parish or Township of <i>George Rowan House</i>		Ecclesiastical District of		City or Borough of <i>Westminster</i>		Ward of		Village of		
No. of House	Name of Street, Place, or No. of House	Name and Surname of each Person who abode in the house, on the Night of the 30th March, 1851	Relation to Head of Family	Condition	Age of		Rank, Profession, or Occupation	Where Born		Whether Blind or Deaf and Dumb
					Males	Females				
1	<i>Buckingham Palace</i>	<i>Alfred Prince</i>								
		<i>Victoria Victoria</i>	<i>Wife</i>	<i>Mar</i>	<i>21</i>		<i>The Queen</i>	<i>Windsor Palace</i>		
		<i>H. R. H. Francis Albert</i>					<i>Prince of Wales</i>			
		<i>Charles Emmanuel</i>	<i>Head</i>	<i>Mar</i>	<i>21</i>		<i>Prince of Wales</i>			
		<i>H. R. H. Victoria Albert</i>								
		<i>Princess Louise</i>	<i>Daughter</i>		<i>10</i>		<i>Princess Royal</i>	<i>Buckingham Palace</i>		
		<i>H. R. H. Alfred Edward</i>	<i>Son</i>		<i>9</i>		<i>Prince of Wales</i>	<i>do do</i>		
		<i>H. R. H. Prince George</i>	<i>Daughter</i>		<i>7</i>		<i>Princess</i>	<i>do do</i>		
		<i>H. R. H. Alfred Ernest Albert</i>	<i>Son</i>		<i>6</i>		<i>Prince of Wales</i>	<i>Windsor Castle</i>		
		<i>H. R. H. Prince George Victoria</i>	<i>Daughter</i>		<i>4</i>		<i>Princess</i>	<i>Buckingham Palace</i>		
		<i>H. R. H. Prince Leopold Victoria</i>	<i>do</i>		<i>2</i>		<i>Princess</i>	<i>do do</i>		
		<i>H. R. H. Prince William Albert</i>	<i>Son</i>		<i>11m</i>		<i>Prince of Wales</i>	<i>do do</i>		
		<i>Princess Alice</i>					<i>Princess</i>	<i>do do</i>		
2	<i>Whitechapel</i>	<i>Anna Isabella Berry</i>		<i>W</i>	<i>50</i>		<i>Head of House</i>	<i>West Hampton</i>		
	<i>Palace</i>	<i>Ann Maria Berry</i>		<i>W</i>	<i>28</i>		<i>do</i>	<i>London Whitechapel</i>		
		<i>Mary Berry</i>		<i>W</i>	<i>22</i>		<i>Servant to do</i>	<i>West Hampton</i>		
		<i>Isabella Berry</i>		<i>W</i>	<i>26</i>		<i>Widow</i>	<i>West Hampton</i>		
		<i>John Berry</i>		<i>W</i>	<i>20</i>		<i>Princess Royal</i>	<i>Buckingham Palace</i>		
Total of Houses				Total of Persons						
7				11		10				

A page from the 1851 census. This page, from the enumeration books, shows part of the head count at Buckingham Palace (catalogue reference HO 107/1478):

<https://www.nationalarchives.gov.uk/help-with-your-research/research-guides/census-records/>

In the nineteenth century, with the rise of the modern, secular, nation-state in Europe (think of France), sovereign, governmental power, Foucault argues, came to be exercised **PRODUCTIVELY** in a mode he calls **POWER OVER LIFE** — though the use of the census and of statistics to **CREATE CATEGORIES** of people; and the making of programs of social welfare to cultivate the **GROWTH** of particular parts of a nation's **POPULATION**. The symbol might be **PRUNING SCISSORS**.

This is **BIOPOWER**,

“a power bent on generating forces, making them grow, and ordering them, rather than one dedicated to impeding them, making them submit, or destroying them” (136).

“a power that exerts a positive influence on LIFE, that endeavors to administer, organize, and multiply it, subjecting it to precise controls and regulations” (137)

Foucault, Michel. *The History of Sexuality, Vol. 1: An Introduction*. Vintage, 1990. © Vintage. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

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This is **BIOPOWER**,

that which “brought life and its mechanisms into the realm of explicit calculations and made knowledge-power an agent of transformation of human life” (143).

Foucault, Michel. *The History of Sexuality, Vol. 1: An Introduction*. Vintage, 1990. © Vintage. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

In concrete terms, starting in the seventeenth century, this power over life evolved in two basic forms; these forms were not antithetical, however; they constituted rather two poles of development linked together by a whole intermediary cluster of relations. One of these poles—the first to be formed, it seems—centered on the body as a machine: its disciplining, the optimization of its capabilities, the extortion of its forces, the parallel increase of its usefulness and its docility, its integration into systems of efficient and economic controls, all this was ensured by the procedures of power that characterized the *disciplines*: an *anatomo-politics of the human body*. The second, formed somewhat later, focused on the species body, the body imbued with the mechanics of life and serving as the basis of the biological processes: propagation, births and mortality, the level of health, life expectancy and longevity, with all the conditions that can cause these to vary. Their supervision was effected through an entire series of interventions and *regulatory controls*: a *bio-politics of the population*. The disciplines of the body and the regulations of the population constituted the two poles around which the organization of power over life was deployed. The setting up, in the course of the classical age, of this great bipolar technology—*anatomic and biological, individualizing and specifying, directed toward the performances of the body, with attention to the processes of life*—characterized a power whose highest function was perhaps no longer to kill, but to invest life through and through.

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BIOPOWER operates thru two poles:

anatomo-politics of the human body

bio-politics of the population

*these often met in the domain of sex
— as behavior, as reproduction, as
identity*

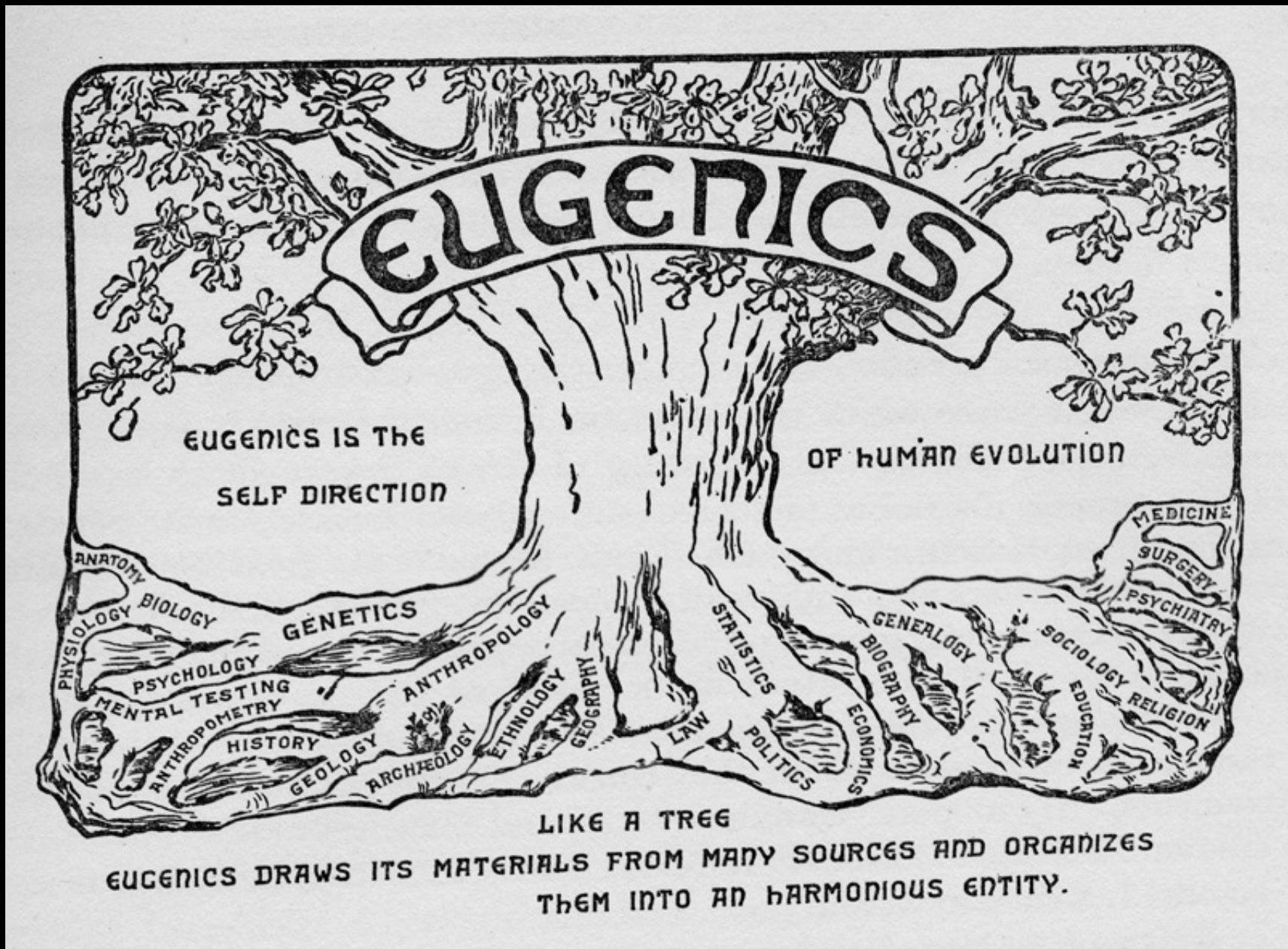
BIOPOWER often operates
through

THE CREATION OF NEW
CATEGORIES OF PEOPLE

THE NATURALIZATION OF THESE
CATEGORIES, SOMETIMES
THROUGH BIOLOGY

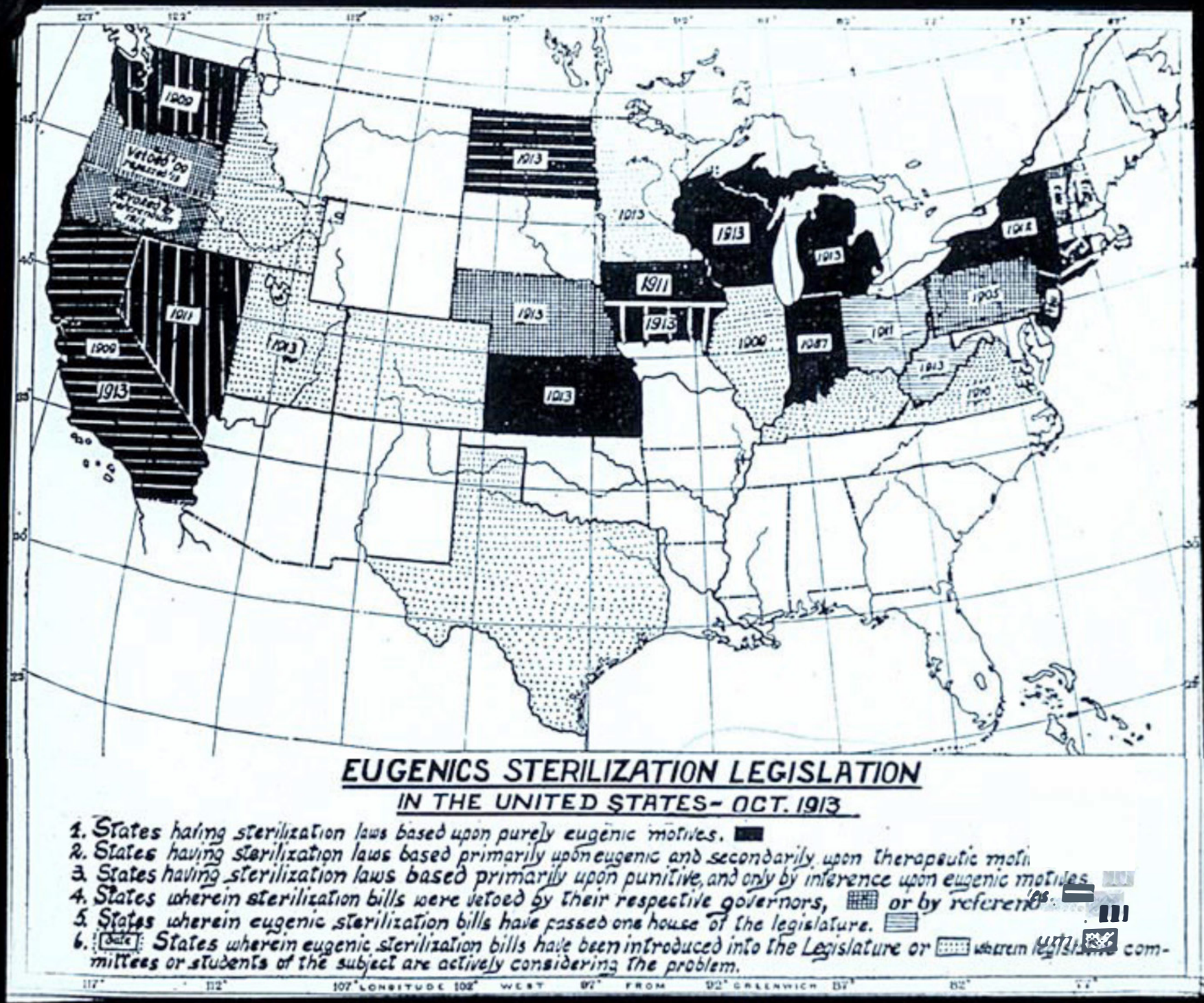
THE IDEA OF THE
POPULATION/STATE/NATION

PROMOTING THE LIVES OF SOME
MEMBERS OF THE POPULATION
AND NOT OTHERS



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Logo from the Second International Eugenics Congress, held at American Museum of Natural History, New York 1921



EUGENICS STERILIZATION LEGISLATION
IN THE UNITED STATES - OCT. 1913

1. States having sterilization laws based upon purely eugenic motives. ■
2. States having sterilization laws based primarily upon eugenic and secondarily upon therapeutic motives. ▨
3. States having sterilization laws based primarily upon punitive, and only by inference upon eugenic motives. ▩
4. States wherein sterilization bills were vetoed by their respective governors, ▧ or by referendum. ▦
5. States wherein eugenic sterilization bills have passed one house of the legislature. ▤
6. States wherein eugenic sterilization bills have been introduced into the Legislature or where legislative committees or students of the subject are actively considering the problem. ▥

Chapter 3

Flexible Eugenics

Technologies of the Self in the Age of Genetics

Karen-Sue Taussig, Rayna Rapp, and Deborah Heath


In other words, our essence is ours to choose, depending on how we direct our selves with all our baggage, DNA included.

DAVID BARASH, "DNA and Destiny," 1998

"We all live inside a world saturated by genetic discourses. Yet the consequences of dwelling inside these geneticized perspectives and practices are highly differentiated" (60).

BIOSOCIALITY: "when people align themselves in terms of genetic narratives and practices" (60)

Taussig, Karen-Sue, Rayna Rapp, and Deborah Heath. "Flexible Eugenics: Technologies of Self in the Age of Eugenics." Chapter 3 in *Genetic Nature/Culture: Anthropology and Science beyond the Two-Culture Divide*. Edited by Alan H. Goodman, Deborah Heath, and M. Susan Lindee. University of California Press, 2003. © University of California Press. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.




lpa LITTLE PEOPLE OF AMERICA
Empowerment • Awareness • Community

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Little People of America (LPA) is a nonprofit organization that provides support and information to people of short stature and their families. LPA is only able to continue our work with support from members, friends, and family. Please consider making a donation today.

Benefits of Membership

Membership is available to individuals with a medical diagnosis of dwarfism or form of short stature, as well as their families, grandparents, relatives, and all medical professionals. Benefits of membership include: peer, parent, and medical support at the chapter, regional and national level; discounted rates at the National conference; advocacy; LPA Today quarterly magazine; monthly eNewsletter, college scholarships and support; adoption and conference attendance grants; friendship and connections; referrals to medical care by dwarfism specialists; and general support for the dwarfism community.



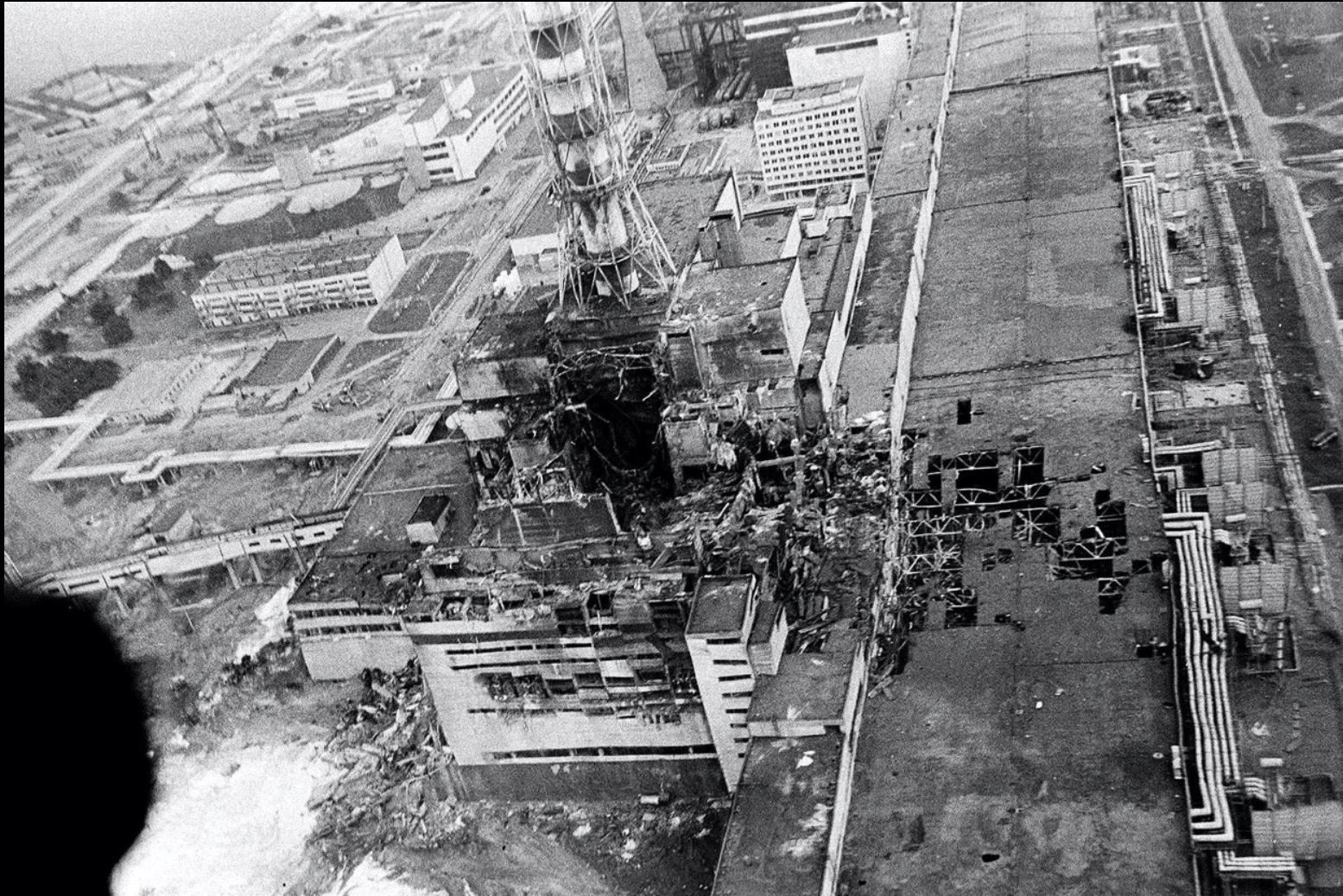
LPA Members were asked, "What does LPA mean to you?" This word cloud was created from the responses. Words are scaled in accordance with how many times they were mentioned. [The full results of our membership survey can be seen here.](#)

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A surrogate mother poses at Surrogacy Centre India clinic in New Delhi.
Photograph: Sajjad Hussain/AFP/Getty Images

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The remains of the Chernobyl nuclear power plant after the explosion.

Life Exposed: *Biological Citizens after Chernobyl*

Adriana Petryna

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On April 26, 1986, Unit Four of the Chernobyl nuclear reactor exploded in then Soviet Ukraine. More than 3.5 million people in Ukraine alone, not to mention many citizens of surrounding countries, are still suffering the effects. *Life Exposed* is the first book to comprehensively examine the vexed political, scientific, and social circumstances that followed the disaster. Tracing the story from an initial lack of disclosure to post-Soviet democratizing attempts to compensate sufferers, Adriana Petryna uses anthropological tools to take us into a world whose social realities are far more immediate and stark than those described by policymakers and scientists. She asks: What happens to politics when state officials fail to inform their fellow citizens of real threats to life? What are the moral and political consequences of remedies available in the wake of technological disasters?

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ADRIANA
PETRYNA

Life Exposed

Biological Citizens
after Chernobyl

With a new introduction by the author



Petryna, Adriana. *Life Exposed: Biological Citizens after Chernobyl*. Princeton University Press, 2013. © Princeton University Press. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.



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Soviet military medal awarded to "Chernobyl liquidators"

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