

Pride, Resistance, Joy: Teaching Intersectional LGBTQ+ Stories of California and Beyond

**Lesson Plans for K-12 Teachers
aligned to California's History-Social Science Framework
in implementation of the FAIR Education Act**

Inquiry Question: How has pseudoscience been used to
harm LGBTQ+ people?

8th Grade Science



Pride, Resistance, Joy: Teaching Intersectional LGBTQ+ Stories of California and Beyond



People's Press, "Stop Forced Sterilization/¡Alto a Esterilización Forzada!," 1974.
LGBTQ Poster collection, ONE Archives at the USC Libraries.

Inquiry Question: *How has pseudoscience been used to harm LGBTQ+ people?*

8th Grade Science

How has pseudoscience been used to harm LGBTQ+ people?

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Next Generation Science Standards for California Public Schools, K-12 (2013):

- MS-LS4-4. Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.
- MS-LS4-5. Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.

California Common Core State Standards (2014):

- CCSS.ELA. LITERACY-RH. 6-8.9: Analyze the relationship between a primary and secondary source on the same topic.
- CCSS.ELA. LITERACY-WHIST. 6-8.7: Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

California Ethnic Studies Model Curriculum Connections (2022):

- Cultivate empathy, community actualization, cultural perpetuity, self-worth, self-determination, and the holistic well-being of all participants, especially Native People/s and Black, Indigenous, and People of Color (BIPOC);
- Critique empire-building in history and its relationship to white supremacy, racism, and other forms of power and oppression;
- Connect ourselves to past and contemporary social movements that struggle for social justice and an equitable and democratic society; and conceptualize, imagine, and build new possibilities for a post-racist, post-systemic racism society that promotes collective narratives of transformative resistance, critical hope, and radical healing. (Introduction and Overview, p. 15).
- “Students can investigate the history of the experience of various ethnic groups in the United States, as well as the diversity of these experiences based on race, gender, and sexuality, among other identities” (Instructional Guidance for K-12 Education, p. 54).

Overview of Lesson:

In this lesson, students will work together in small groups to learn about pseudoscience and how it has been used to suppress non-normative traits of gender and sexual orientation throughout the 20th-century United States. Students will read a series of sources in order to define pseudoscience, examine scientific theories around gender and sexual orientation, and identify pseudoscientific medical procedures that were used to suppress traits in people that were considered undesirable by broader society. This lesson is designed to take place over two days or an extended block period.

In small groups of 3-4, students will use primary and secondary sources to help them learn more about pseudoscience and its use to suppress traits in and harm LGBTQ+ people. Students will use their school-provided technology to access primary and secondary sources along with the accompanying slide deck. Groups will read and analyze the different sources and record their findings on the included graphic organizer. The final assessment will be the creation of an informational poster. This lesson can be adapted for the middle or high school classroom and/or for individual or group assignments.

How has pseudoscience been used to harm LGBTQ+ people?

Materials:

- ★ [Slide Deck](#) (p. 9-22)
- ★ Sources 1-10 (p. 23-33)
- ★ [Handout 1](#): Primary Source Graphic Organizer (p. 34-46)
- ★ [Handout 2](#): Background Readings for Uses of Pseudoscience on Marginalized Groups (p. 47)

Sources:

Source 1: Michael D. Gordin, “The Problem with Pseudoscience,” [EMBO Reports](#), Vol. 18, Issue 9, Sep. 2017 (Excerpt).

Source 2: “Science Fiction and Pseudoscience,” 2002. [National Science Foundation](#) (Excerpt).

Source 3: Massimo Pigliucci and Maarten Boudry, “The Dangers of Pseudoscience,” Oct. 10, 2013. [New York Times](#) (Excerpt).

Source 4: Max Gunther, “How Manly Will Your Son Be?,” *Coronet*, Oct. 1961. John Douglas Gillespie letters, ONE Archives at the USC Libraries (Excerpt).

Source 5: Donald Beaulieu, “50 years ago, psychiatrists stopped calling homosexuality a mental illness,” Dec. 15, 2023. [Washington Post](#) (Excerpt).

Source 6: American Psychiatric Association position on conversion therapy, July 2024. “The Lies and Dangers of Efforts to Change Sexual Orientation or Gender Identity,” [Human Rights Campaign Foundation](#).

Source 7: Farrall Instrument Company, Catalog page on “Visually Keyed Shocker,” c. 1970s. ONE Subject Files collection, Conversion therapy, ONE Archives at the USC Libraries.

Source 8: John Blosser, “Simple Injection Will Let Gay Men Turn Straight, Doctors Report,” *National Enquirer*, August 11, 1993. ONE Subject Files collection, Conversion therapy, ONE Archives at the USC Libraries.

Source 9: Robert D. Potter, “Miracles of Brain Surgery,” *Pittsburgh Sun-Telegraph*, May 19, 1946. [Newspapers.com](#) (Excerpt).

Source 10: People’s Press, “Stop Forced Sterilization/¡Alto a Esterilización Forzada!,” 1974. LGBTQ Poster collection, ONE Archives at the USC Libraries.

Procedures:

Pre-Lesson Suggestions: review the videos and readings for additional content and background information on pseudoscience and conversion therapy.

- Video: “SPLC Reports on Role of Pseudoscience in Anti-LGBTQ+ Efforts” from [Southern Poverty Law Center](#)
- Video: “Gay teen describes traumatizing experiences at gay conversion camps” from [ABC News](#)

How has pseudoscience been used to harm LGBTQ+ people?

- Article: Adam Rutherford, “Where science meets fiction: the dark history of eugenics,” June 19, 2022. [The Guardian](#).
- Article: Gregory Herek, “Hating Gays, An Overview of Scientific Studies,” *The Journal of Homosexuality*, Vol. 10, No. 1/2, 1984. [PBS](#).

Day 1 - Pseudoscience and the Harms on Marginalized People

1. Anticipatory Set:

- a. Give students 5 minutes to turn and talk about the flat earth picture, provide prompts to help guide student thinking:
 - i. What do you see?
 - ii. Why do you think this image exists?
 - iii. Who do you think created this image?
- b. Give students 10-15 minutes to read the [article](#) on fighting pseudoscience, and jot down answers for the reflection questions:
 - i. How did the Internet and YouTube contribute to the rise of flat-Earth beliefs?
 - ii. Do you think the distrust in science is justified? Why or why not?
 - iii. Consider the importance of critical thinking and scientific literacy in combating misinformation. How can you apply these skills in your own life to evaluate information and make informed decisions?
- c. Discuss the questions as a whole group or in small groups for 5 minutes.

2. Introduce the Lesson:

- a. Introduce the inquiry question: *How has science been used to justify the harm of marginalized groups throughout U.S. history?* Inform students that the lesson will focus on five distinct instances where science has been used to harm marginalized people: *Lobotomies, Tuskegee Experiments, Phrenology/Craniometry, Eugenics and Sterilization, and Aversion Shock Therapy.*
- b. They will work in groups to look at primary sources and think about the reflection questions:
 - i. Who are the leaders of this scientific movement?
 - ii. What did this science suggest?
 - iii. Who did the science harm?
 - iv. What are the lasting impacts of this science?
 - v. Is there science now that refutes that research?

3. Background Slide Presentation:

- a. Present the [slide deck](#) for students.
- b. As slides are shown, ask students to make a Notice and Wonder T-chart.
 - i. In the "Notice" column, write down facts, details, or things that stand out to you.
 - ii. In the "Wonder" column, write down questions or thoughts you have.
 - iii. Students don't need to write in complete sentences, but thoughts should be clear.
 - iv. After the slide presentation, have students share out with a partner or the class.

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4. Reading Jigsaw:

a. Have the students complete a Jigsaw activity using the readings on Handout 1.

i. Form Expert Groups

1. Each group will receive a different reading.
2. Students will be assigned one reading from Handout 1.
 - a. Reading A: Aversion Shock Therapy
 - b. Reading B: Phrenology
 - c. Reading C: Eugenics and Forced Sterilization
 - d. Reading D: The Tuskegee Experiments
3. Students carefully read their assigned text and discuss it with their group.
4. As a group, students complete the Expert Worksheet.

ii. Form Jigsaw Groups

1. After expert groups finish, students move into Jigsaw Groups.
2. Each Jigsaw Group will have one member from each Expert Group (A, B, C, and D).
3. Students take turns teaching their reading to their new group members.
4. Students listen carefully and take notes on the other readings.

iii. Complete the Jigsaw Reflection Sheet

5. Formative Assessment:

a. Whole Group Discussion:

- i. Who did the science harm?
- ii. What beliefs were influencing this science?
- iii. What was the intended outcome of these acts?
- iv. What are the lasting impacts of this science?
- v. What is the connection between these scientists and the idea of heredity, genetics, etc.?
- vi. Is there science now that refutes that research?

b. Writing Prompt: students respond to the following in a short paragraph...

- i. In the past, science was used in ways that hurt people instead of helping them. Choose one example from history that we've learned about (like phrenology, the Tuskegee experiments, eugenics, aversion therapy, or lobotomies). Write a paragraph, explaining who was harmed, what beliefs influenced the science, what the scientists were trying to achieve, and what the long-term effects have been. Also, think about how this connects to ideas like heredity or genetics, and whether modern science agrees or disagrees with what was done in the past.

Day 2 - Pseudoscience and Suppressing LGBTQ+ Traits

1. Anticipatory Set:

- a. Students list 3-5 traits that a scientist may think would "improve" society.
- b. Students share-out their list, and the teacher can write some traits on the board.

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- c. Ask students to consider the following questions:
 - i. Who might be left out or harmed by these choices?
 - ii. What beliefs might be behind these decisions?
 - iii. Is it fair to decide who is “better” based on traits?
2. Introduce the Lesson:
 - a. Review how in the previous lesson, students examined the use of pseudoscience to harm marginalized people. Introduce today’s lesson to students with the inquiry question: *How has pseudoscience been used to harm LGBTQ+ people?*
3. Model Primary Source Analysis:
 - a. Using Source 10, model for students the Observe, Reflect, and Question steps (Handout 2). This can be modeled on a whiteboard or prefilled on a slide for students.
 - i. Observe: the poster is written in Spanish. The poster was made in Puerto Rico in 1974. The headline calls for ending forced sterilization.
 - ii. Reflect: I think the audience for this poster was for people who were being threatened with forced sterilization. I think this poster was made to inform people and try to empower them to resist.
 - iii. Question: What traits were being suppressed? Was this sterilization policy racist, homophobic or both? Explain your reasoning.
4. Check for Understanding:
 - a. Students work independently, each group member looking at one source of information and filling out a graphic organizer (Handout 2) about it. Walk around the room, as you go around and answer questions, clarify information, and observe how students are analyzing the information and providing redirection as necessary, for about 30 minutes.
 - b. For this, have students take notes on important aspects of each source, pulling the most important and interesting information, and fill out Handout 1: Primary Source Graphic Organizer, around 10 minutes.
 - c. Students take turns talking about their individual resources with their group for 15 minutes.
5. Modeling: Review the rubric for the final project, and then have groups decide what project they want to work on. Show examples of what each type of finished product could look like in order to model a finished product. Have students assign roles.
6. Formative Assessment: Give students time to work on their projects. Walk around and provide guidance as students are working, making sure to make reference to the rubric so students are staying focused.
7. Present: Have groups present their learning by sharing their finished product with the class (30 minutes).
8. Extension Activity:
 - a. Students look at all of the projects and return back to the question:

How has pseudoscience been used to harm LGBTQ+ people?

- i. *Consider the importance of critical thinking and scientific literacy in combating misinformation. How can you apply these skills in your own life to evaluate information and make informed decisions?*
- b. Students write a half page reflection about what they have learned and how that knowledge will impact the way they approach scientific analysis.

Summative Assessment:

Assessment:

Students will create an informational poster that educates viewers on how pseudoscience has been used to suppress LGBTQ+ traits and harm LGBTQ+ people. Posters should highlight historical and contemporary examples, explain the impacts on individuals and communities, and emphasize the importance of scientific integrity and human rights.

Directions: Using the Primary Source Graphic Organizer and the resources provided, create a poster that shows the history and impact of pseudoscientific practices used to suppress LGBTQ+ traits.

The poster should include the following sections:

- Title: A clear and engaging title that captures the essence of your poster.
- Introduction: Briefly introduce the topic and its significance.
- Examples: Describe at least two historical or recent examples of pseudoscience used to suppress LGBTQ+ traits and harm them.
- Impacts: Explain the psychological, social, and legal impacts of these pseudoscientific practices on LGBTQ+ individuals and communities.
- Call to Action: Encourage viewers to support scientific integrity and civil rights.

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Assessment Criteria:

Criteria	Expert (4)	Proficient (3)	Apprentice (2)	Novice (1)
Content Accuracy and Depth	Thoroughly and accurately presents historical and contemporary examples, with detailed explanations of impacts.	Adequately presents examples and impacts, with minor gaps in detail.	Presents examples and impacts, but lacks depth and detail.	Incomplete or inaccurate presentation of examples and impacts.
Visual Appeal	Visually engaging, well-organized, and easy to read. Effective use of images and graphics.	Visually appealing and organized, with good use of images and graphics.	Somewhat visually appealing, but may be cluttered or hard to read. Limited use of images and graphics.	Lacks visual appeal and organization. Poor use of images and graphics.
Clarity and Organization	Information is clearly presented and logically organized. Viewer can easily follow the flow of information.	Information is clear and mostly well-organized. Viewer can follow the flow with minimal effort.	Information is somewhat clear but may be disorganized. Viewer may struggle to follow the flow.	Information is unclear and disorganized. Viewer cannot follow the flow.
Citations and References	All sources are accurately cited and referenced. Consistent citation style.	Most sources are accurately cited and referenced. Mostly consistent citation style.	Some sources are cited and referenced. Inconsistent citation style.	Few or no sources are cited and referenced. Inconsistent or missing citation style.

How has pseudoscience been used to harm LGBTQ+ people?

Background Information:

Pseudoscience has historically been used to justify and enforce various forms of discrimination and suppression of traits in people. Throughout history, science and pseudoscience have been misused to harm or suppress LGBTQ+ traits, often under the guise of medical and psychological interventions. Pseudoscientific theories have been employed to pathologize LGBTQ+ identities, framing them as disorders needing treatment. This has led to the development of harmful practices such as conversion therapy, which falsely claims to change an individual's sexual orientation or gender identity. These practices have been widely discredited by mainstream medical and mental health organizations. Conversion therapy often involves a range of techniques, including psychotherapy, behavioral modification, and even religious interventions, all aimed at "curing" LGBTQ+ individuals.

The procedures used in conversion and aversion therapies have been particularly damaging. Aversion therapy, for example, subjects individuals to negative stimuli like electric shocks or nausea-inducing drugs while exposing them to LGBTQ+-related stimuli, hoping to create a negative association. In more extreme cases, medical interventions such as hormone treatments or even surgeries were performed with the intent of altering sexual orientation or gender identity. These methods not only failed to achieve their intended outcomes but also caused significant psychological and physical harm, including depression, anxiety, and suicidal tendencies. The recognition of these harms has led to increasing calls for the ban of such practices.

Key Concepts:

Pseudoscience: A belief or practice that claims to be scientific but does not follow the scientific method or is not supported by real evidence.

Pathologize: To treat or consider something as a disease or problem. For example, saying that being LGBTQ+ is a sickness, which is not true.

Discredit: To show that something is not true or reliable. An example is proving that a rumor or false information is wrong.

Conversion therapy: This is a harmful practice that tries to change a person's sexual orientation or gender identity. It wrongly claims to make LGBTQ+ people straight or cisgender.

Aversion therapy: This is a type of treatment that tries to make someone dislike something by pairing it with something unpleasant. For example, giving someone an electric shock when they think about something they like.

Further Resources:

- Brody Levesque, "The world-changing decision by psychiatrists that altered gay rights," Dec. 16, 2023. [Los Angeles Blade](#).
- Danielle Torrez, "How did the Biltmore Invasion lead to the de-pathologization of homosexuality?," 2022. [One Institute](#).
- Hugh Ryan, "How eugenics gave rise to modern homophobia: The roots of anti-gay attitudes lay in white supremacy," May 28, 2019. [The Washington Post](#).
- Irving Washington and Hagere Yilma, "Falsehoods about Transgender People and Gender Affirming Care," Oct. 2024. [KFF](#).
- Miguel Covarrubius, "How did Magnus Hirschfeld support and advocate for LGBT people?," 2020. [One Institute and UCLA History-Geography Project](#).
- Ren L[i]u, "Shock the Gay Away: Unpacking the Farrall Instruments Electro-Shock Machine," 2022. [ONE Archives at the USC Libraries](#).

Slide Deck

Turn and Talk

- What do you see?
- Why do you think this image exists?
- Who do you think created this image?



Read the article and then answer the following questions:

Review reading questions:

1. How did the Internet and YouTube contribute to the rise of flat-Earth beliefs?
2. Do you think the distrust in science is justified? Why or why not?
3. Consider the importance of critical thinking and scientific literacy in combating misinformation. How can you apply these skills in your own life to evaluate information and make informed decisions?

Class Discussion:

What do you think are the societal impacts of this type of misinformation surrounding science?

INQUIRY QUESTION:

How has science been used to justify the harm of marginalized groups throughout U.S. history?

Examples of pseudoscience and the misuse of science in U.S. history:

- Phrenology and slavery
- Tuskegee experiments and medical racism
 - Eugenics and sterilization
 - Aversion therapy and homosexuality
- Lobotomies and mental health disorders and disabilities

Notice and Wonder

To help you think deeply about what you observe and what questions you have while learning about this topic, create a Notice and Wonder chart in your notes.

Notice	Wonder
In the "Notice" column, write down facts, details, or things that stand out to you.	In the "Wonder" column, write down questions or thoughts you have.

Be curious! There are no wrong answers. This is about what you see and think.

Aversion Shock Therapy

- **Aversion shock therapy used electrical shocks to try and change someone's sexual orientation by causing pain.**

How has pseudoscience been used to harm LGBTQ+ people?



A patient undergoing electroconvulsive therapy circa 1950s

Carl Purcell/Three Lions/Getty Images

THE WIRELESS SHOCKER

The Wireless Shocker gives clinicians and researchers operative control over situations without the encumbrance of wires. Unhindered by control wires, the patient can now move with unstrained freedom and yet be under control. Another great advantage of this physical isolation of the patient from the therapist is the diminished link between the therapist and the over-verse shock. The patient finds less of the therapist, as a punisher, and associates the shock with the undesired act he is doing.

FOR ALLEVIATING

SELF DESTRUCTIVE BEHAVIOR

PSYCHOSOMATIC PROBLEMS

AGGRESSIVE BEHAVIOR

The Model AR-5 is an improved version of our Model AR-2 which has been in production for over five years. An automatic gain control has been added to the receiver. This greatly increases the reliability by decreasing over-shock problems at close range. The new model also has an increased shock output.

The shocker has a range of around 75 feet indoors and 100 feet outdoors. The long outdoor range makes the unit useful on the playground and in similar situations. The control unit is a small hand-held device. The receiver-shocker is a small unit housed in a leather case and is usually attached to the patient by a belt around the waist. Both units are sufficiently small to permit unobtrusive use in a variety of field or group situations. Thus, behavior modified in the laboratory or office situation may be subject to generalization and discrimination making more closely approximating the situations to which the behavior must be transferred.

FARRALL INSTRUMENTS

SELF-DESTRUCTIVE BEHAVIOR

The effectiveness of this apparatus has been well established in the behavior modification field. It is an effective tool in breaking up the behavior pattern of the autistic child. Head banging, hair pulling and many other self-destructive behaviors have been stopped. Many problems associated with mentally retarded people can be eliminated using operant conditioning with this apparatus.

AGGRESSIVE BEHAVIOR

Aggressive behavior has been controlled using the Wireless Shocker. The portable nature of the equipment makes behavior shaping possible in schools, playground and downtown store settings. The ease with which this equipment fits into the real life situation makes the Wireless Shocker ideal for treating aggressives.

PSYCHOSOMATIC PROBLEMS

Conditioning programs have been used successfully to stop psychosomatic vomiting. In this case shock is applied the instant the patient gives signs of an impending attack. In some cases this has been used to maintain the patient's life until other types of therapy could become effective.

UNIQUE FEATURES

- ✓ ADJUSTABLE SHOCK
- ✓ IMMUNE TO INTERFERENCE
- ✓ NON-BLOCKING AT CLOSE RANGE
- ✓ ROBUST METAL CASE
- ✓ LONG BATTERY LIFE

ADVERSE SHOCK

Shock is adjustable from 0 to 800 volts. The shock is a narrow 1 to 2 millisecond width at a 10 to 20 Hz. rate. Maximum current is 5 milliamperes. This over-verse stimulus can be applied to an arm or leg. An accessory belt (E-AR-3) which has electrodes in the belt can be supplied on special order. This belt, when used with care, can shock the patient's wrist and eliminate the need of electrode wires. Use of the belt reduces the effective range of the apparatus.

AR-5 SPECIFICATIONS

The transmitter uses one of five special medical frequencies in the 27 MHz band. A tuning fork oscillator codes the radio carrier when the shock button is pressed. When a matching tuning fork in the receiver responds to the transmitter fork, a pulse-type shock generator is turned on. The tuning forks are extremely selective and prevent false shocks from radio or noise interference.

TWO PATIENT MODEL

The Model AR-6 is a Wireless Shocker that is identical to the AR-5 except it contains two encoders so that two different shock receivers can be controlled. With this unit and two receiver-shockers, it is possible to work with two patients in the same area at the same time. NOTE: Both patients can not be shocked at the same instant.

AR-6 SPECIFICATIONS

Model AR-6 Receiver-Shocker and Transmitter for remote wireless shocking of humans. Consisting of the following: 1 no. crystal controlled transmitter operating in 27 MHz. band, with audio tuning fork encoder, solid state, 1 no. crystal controlled superheterodyne receiver for transmitter, tuning fork decoder with adjustable shock generator, solid state, 1 no. leather case for receiver, 1 set of batteries for each unit, with electrodes. Transmitter (13" x 2 1/2" x 5 1/2") with 15" antenna, weight 18 oz. Receiver-Shocker (13" x 2 1/2" x 5 1/2") weight 20 oz.

FARRALL INSTRUMENT COMPANY
P.O. BOX 1037
GRAND ISLAND, NEBRASKA 68801

How has pseudoscience been used to harm LGBTQ+ people?

Lobotomy

- A surgery that damaged parts of the brain to treat mental illness.
- It often caused more harm than good and was used without proper understanding.



How has pseudoscience been used to harm LGBTQ+ people?



How has pseudoscience been used to harm LGBTQ+ people?



FIG. 5.—Case 1, June, 1945. Catatonic schizophrenic who was maintained for over years by periodic electroshock therapy.





FIG. 6.—Case 1, November, 1948, 8 d after transorbital lobotomy. She has continued well for 6 months.


ARE YOU DEPRESSED?
DO YOU SUFFER FROM ANXIETY AND MIGRAINES?
YOU MAY NEED A LOBOTOMY

- *SCHIZOPHRENIA
- *PANIC DISORDER
- *OCD
- *CHRONIC PAIN
- *VIOLENT OUTBURSTS

BEFORE



AFTER



ONLY TAKES 10 MINUTES!

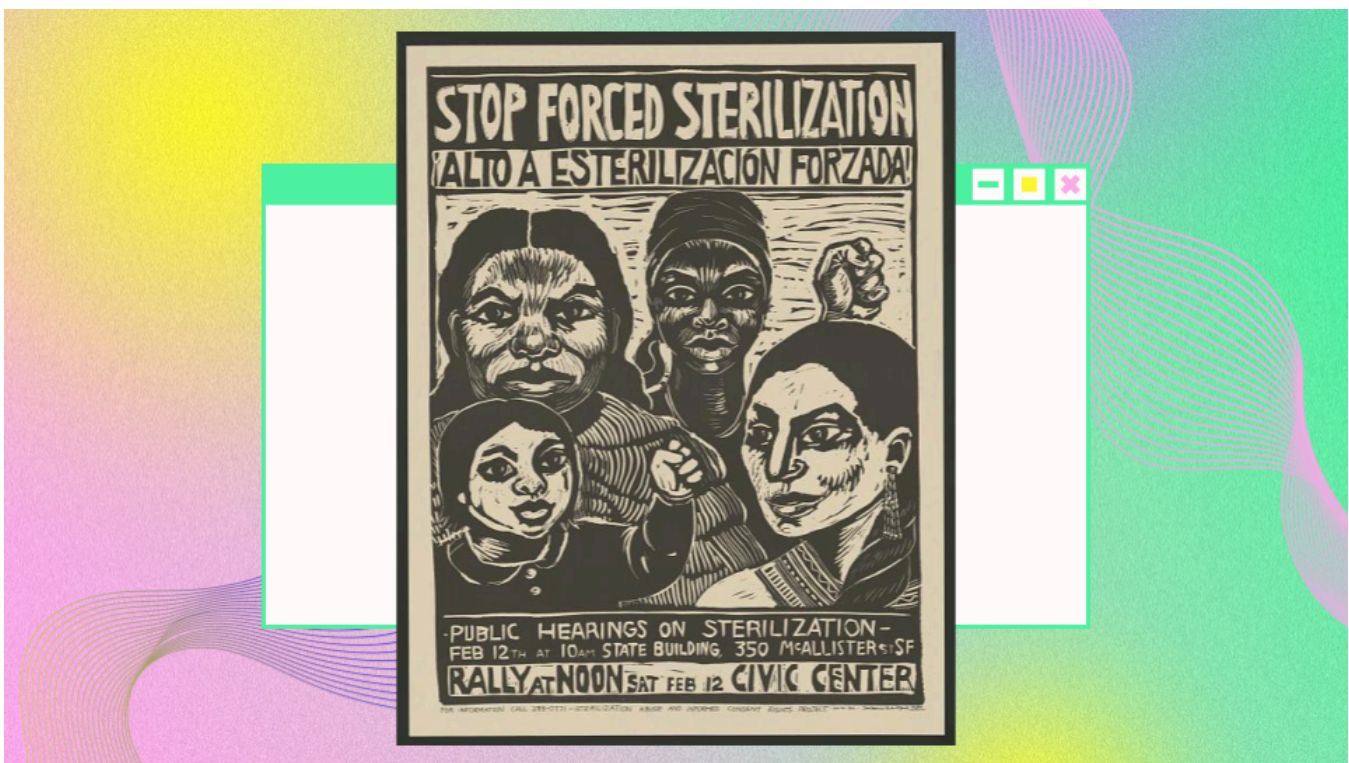
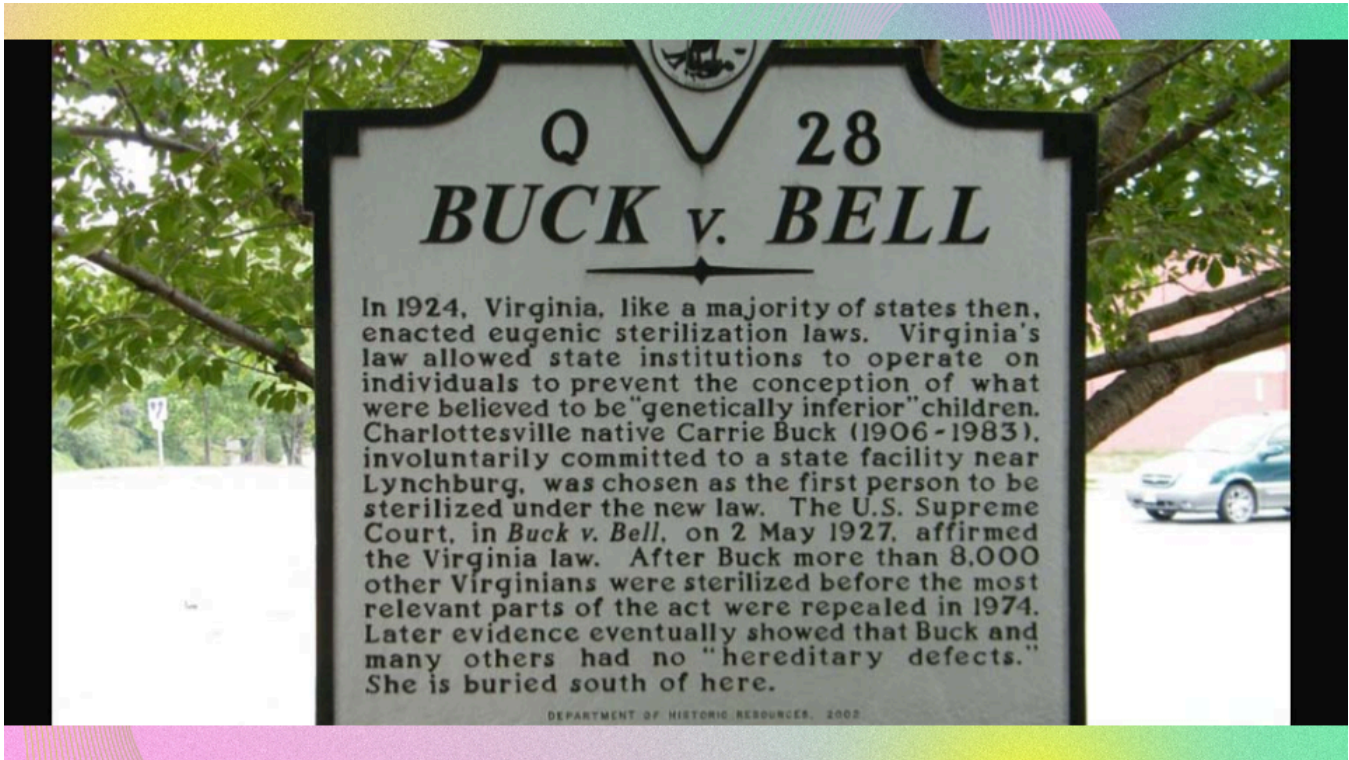
LOBOTOMY SPECIALIST
WALTER FREEMAN MD

Eugenics and Forced Sterilization

- Eugenics is the belief that some people are “better” than others based on traits like race or disability.
- Forced sterilization is when people were forced to have surgeries so they couldn’t have children.

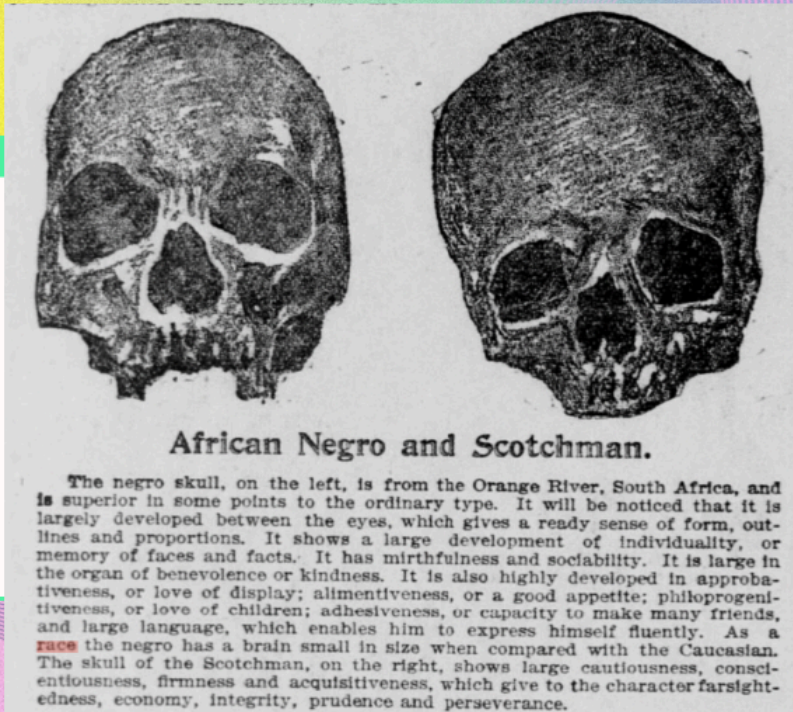


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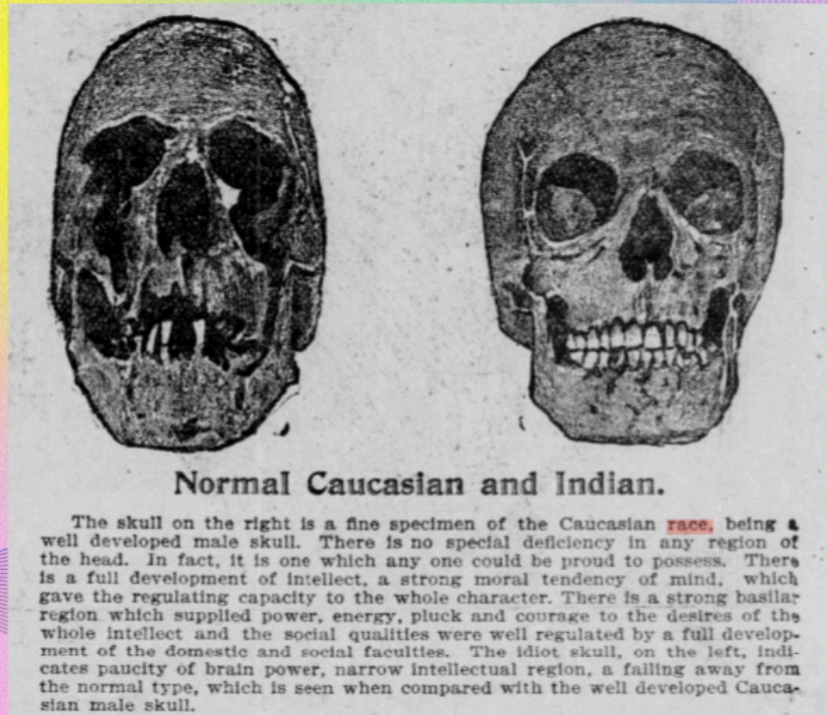


Phrenology

- A fake science from the 1800s that claimed you could tell a person's personality by the shape of their skull.
- It was used to claim that certain races were inferior.



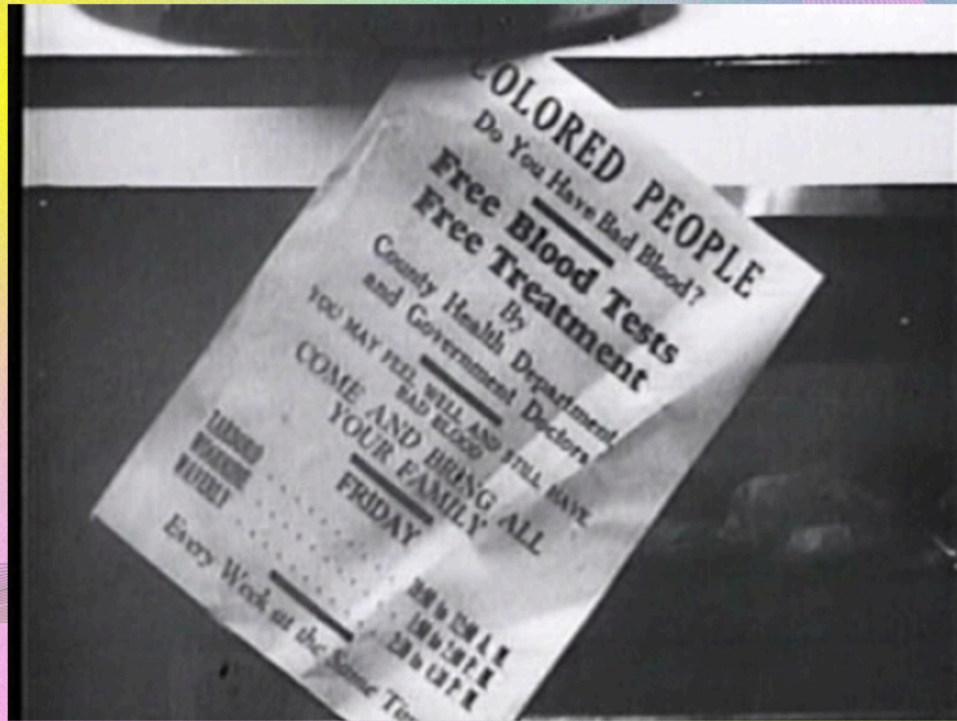
How has pseudoscience been used to harm LGBTQ+ people?



Tuskegee Experiments

- From 1932–1972, Black men with syphilis were studied without being told they had the disease or given treatment.
- These men were lied to and denied treatment for medical research.

How has pseudoscience been used to harm LGBTQ+ people?



A participant in the Tuskegee Study in the 1930s. A lingering mistrust of the medical system among many Black people is rooted in the infamous study.

National Archives



Question to Consider

- Who did the science harm?
- What beliefs were influencing this science?
- What was the intended outcome of these acts?
- What are the lasting impacts of this science?
- What is the connection between these scientists and the idea of heredity, genetics, etc.?
- Is there science now that refutes that research?



Assessment

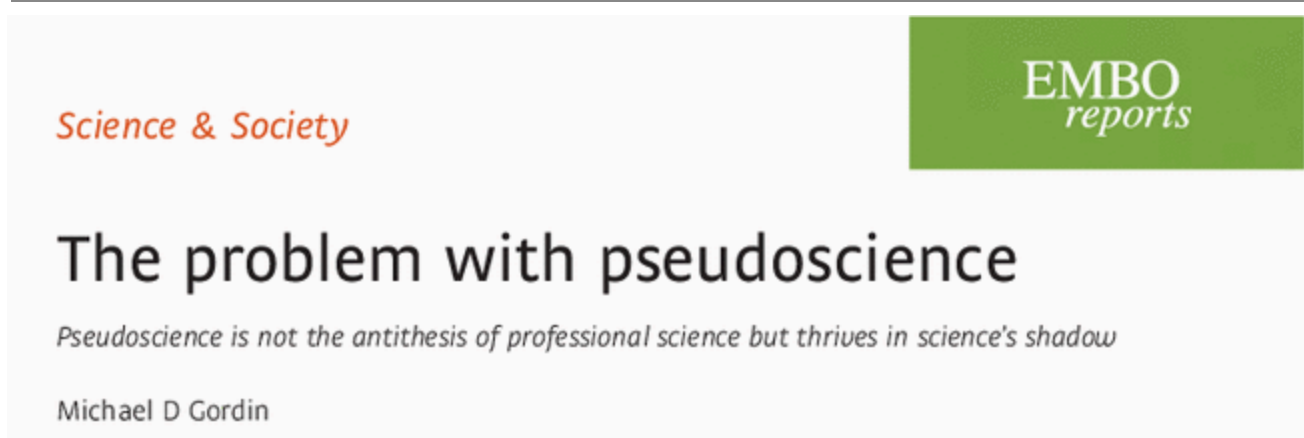


Writing Prompt

In the past, science was used in ways that hurt people instead of helping them. Choose one example from history that we've learned about (like phrenology, the Tuskegee experiments, eugenics, aversion therapy, or lobotomies). Write a paragraph, explaining who was harmed, what beliefs influenced the science, what the scientists were trying to achieve, and what the long-term effects have been. Also, think about how this connects to ideas like heredity or genetics, and whether modern science agrees or disagrees with what was done in the past.

How has pseudoscience been used to harm LGBTQ+ people?

Source 1: Michael D. Gordin, “The Problem with Pseudoscience,” [EMBO Reports](#), Vol. 18, Issue 9, Sep. 2017 (Excerpt).



Pseudoscience is science’s shadow. Specifically, it is the shadow of professional science, and just as a shadow cannot exist without the object casting it, so does every object necessarily cast shadows...

Every time you have a core, you necessarily have a fringe—it might be a source of ideas the core considers misguided or even dangerous...

This is easier to see by extending the shadow metaphor a little: The brighter the light, the sharper the shadow. There have been periodic upticks in the visibility of various fringe doctrines, and right now we live in one of those moments (AIDS-HIV skepticism, anti-GMO movements, and so on); the 1970s (ESP, von Da’niken), the early 1950s (UFOs, Lysenkoism), the 1870s (spiritualism), and the 1820s (phrenology) were other such prominent hotspots... The more attractive science is, the more people with unorthodox ideas want to model themselves upon it, and the greater the public appetite for doctrines with the appearance of science.

How has pseudoscience been used to harm LGBTQ+ people?

Source 2: "Science Fiction and Pseudoscience," 2002. [National Science Foundation](#) (Excerpt).



Pseudoscience is defined here as "claims presented so that they appear [to be] scientific even though they lack supporting evidence and plausibility" (Shermer 1997, p. 33). In contrast, science is "a set of methods designed to describe and interpret observed and inferred phenomena, past or present, and aimed at building a testable body of knowledge open to rejection or confirmation" (Shermer 1997, p. 17). According to one group studying such phenomena, pseudoscience topics include yogi flying, therapeutic touch, astrology, fire walking, voodoo magical thinking, Uri Gellar, alternative medicine, channeling, Carlos hoax, psychic hotlines and detectives, near-death experiences, Unidentified Flying Objects (UFOs), the Bermuda Triangle, homeopathy, faith healing, and reincarnation (Committee for the Scientific Investigation of Claims of the Paranormal <<http://www.csicop.org/>>).

Shermer, M. 1997. *Why People Believe Weird Things: Pseudoscience, Superstition, and Other Confusions of Our Time*. New York: W.H. Freeman and Company.

Source 3: Massimo Pigliucci and Maarten Boudry, “The Dangers of Pseudoscience,” Oct. 10, 2013.
[New York Times](#) (Excerpt).

The New York Times Opinion

The Dangers of Pseudoscience

By Massimo Pigliucci and Maarten Boudry | October 10, 2013

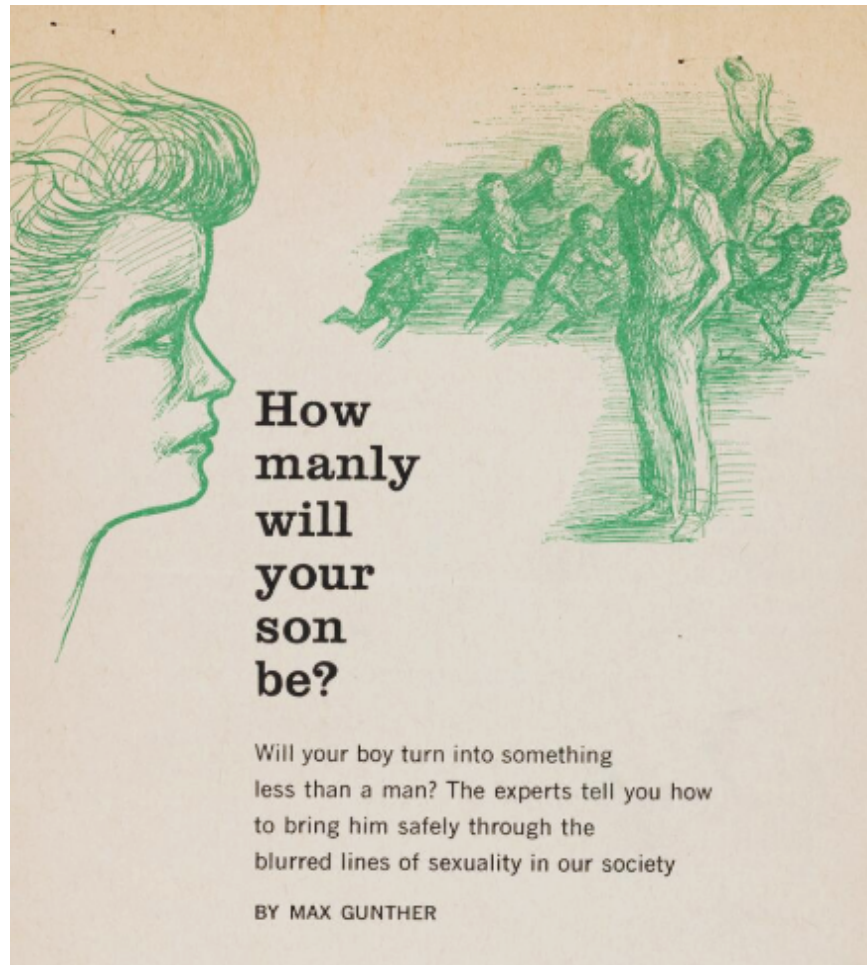
Pseudoscience is not — contrary to popular belief — merely a harmless pastime of the gullible; it often threatens people’s welfare, sometimes fatally so. For instance, millions of people worldwide have died of AIDS because they (or, in some cases, their governments) refuse to accept basic scientific findings about the disease, entrusting their fates to folk remedies and “snake oil” therapies. It is precisely in the area of medical treatments that the science-pseudoscience divide is most critical.... This is a standard *modus operandi* of pseudoscience: it adopts the external trappings of science, but without the substance.... And all pseudoscientists do it, from parapsychologists to creationists and 9/11 Truthers.

Indulging in a bit of pseudoscience in some instances may be relatively innocuous, but the problem is that doing so lowers your defenses against more dangerous delusions that are based on similar confusions and fallacies. For instance, you may expose yourself and your loved ones to harm because your pseudoscientific proclivities lead you to accept notions that have been scientifically disproved, like the increasingly (and worryingly) popular idea that vaccines cause autism.

The borderlines between genuine science and pseudoscience may be fuzzy, but this should be even more of a call for careful distinctions, based on systematic facts and sound reasoning.

How has pseudoscience been used to harm LGBTQ+ people?

Source 4: Max Gunther, "How Manly Will Your Son Be?," *Coronet*, Oct. 1961. John Douglas Gillespie letters, ONE Archives at the USC Libraries (Excerpt).



Excerpt: Most doctors feel that the critical period lies between about ages three to 12 or 14.

What is masculinity? This is a tricky question. Dr. Bernice Neugarten of the University of Chicago points out: "Every society formulates its own notions of what behavior is appropriate for men and for women."

In some societies, men do most of the cooking and sewing, and women do the fighting, hunting and dangerous work. Even among Western people, there are differences. In France, for instance, it's acceptable for a man to weep. In America, a man is supposed to have greater control over his emotions (he doesn't shriek and gasp at horror movies, for instance). He should be more aggressive than a woman, more interested in sports, more adept at carpentry and mechanics, less interested in domestic matters.

Such traits aren't inborn; a boy must learn these things by observing, listening, copying. If he isn't taught the masculine way of acting and thinking, he may grow up effeminate by society's standards or homosexual. A book published this year, *The Sixth Man*, gets its title from the estimate that one out of every six American men today is homosexual.

Modern American society— life as we live it in our cities and suburbs— puts many roadblocks on a boy's route to manhood. It is boys not girls who most often have trouble "belonging" among others of their sex and need psychological counseling or therapy.

Source 5: Donald Beaulieu, “50 years ago, psychiatrists stopped calling homosexuality a mental illness,” Dec. 15, 2023. [Washington Post](#) (Excerpt).

The Washington Post

50 years ago, psychiatrists stopped calling homosexuality a mental illness

By Donald Beaulieu | December 15, 2023

Fifty years ago Friday, on Dec. 15, 1973, the board of trustees of the American Psychiatric Association voted to remove homosexuality from its diagnostic manual of mental illnesses. Newspaper stories the next day mostly treated it as a technical change rather than a seismic shift that would transform the lives of gay people. The activists who fought for the change knew otherwise.

“When the diagnosis existed,” said Jack Drescher, a psychiatry professor at Columbia University and author of “Psychoanalytic Therapy and the Gay Man,” “military groups, religious groups, education groups, medical groups could use that diagnosis as an excuse for discrimination. When the diagnosis was finally removed, a major rationalization for discrimination was taken away.”

He added, “Nothing happened overnight — it took a long time. But it was a world-changing event.”

The treatment of homosexuality as a mental disorder in the mid-20th century had its roots in Freudian psychoanalysis. “The Freudians had a great deal invested in the idea that homosexuality was the result of arrested development, and a form of mental illness,” said Andrew Scull, a sociology professor at the University of California in San Diego.

The manual that catalogues every psychiatric illness recognized by the APA is called the Diagnostic and Statistical Manual of Mental Disorders, or the DSM. When it was first published in 1952, the DSM defined homosexuality as a “sociopathic personality disorder,” and inadequate parenting was commonly deemed the cause. “The psychoanalytic stereotype of the family that created a homosexual,” Drescher said, “was an overbearing mother and a distant or hostile father.”

How has pseudoscience been used to harm LGBTQ+ people?

Source 6: American Psychiatric Association position on conversion therapy, July 2024. “The Lies and Dangers of Efforts to Change Sexual Orientation or Gender Identity,” [Human Rights Campaign Foundation](#).

In 1997, APA produced a fact sheet on homosexual and bisexual issues, which states that “there is no published scientific evidence supporting the efficacy of “reparative therapy” as a treatment to change one’s sexual orientation.”

The potential risks of “reparative therapy” are great and include depression, anxiety, and self-destructive behavior, since therapist alignment with societal prejudices against homosexuality may reinforce self-hatred already experienced by the patient. Many patients who have undergone “reparative therapy” relate that they were inaccurately told that homosexuals are lonely, unhappy individuals who never achieve acceptance or satisfaction. The possibility that the person might achieve happiness and satisfying interpersonal relationships as a gay man or lesbian are not presented, nor are alternative approaches to dealing with the effects of societal stigmatization discussed...

Therefore, APA opposes any psychiatric treatment, such as “reparative” or “conversion” therapy, that is based on the assumption that homosexuality per se is a mental disorder or is based on the a priori assumption that the patient should change his or her homosexual orientation.

How has pseudoscience been used to harm LGBTQ+ people?

Source 7: Farrall Instrument Company, Catalog page on “Visually Keyed Shocker,” c. 1970s. ONE Subject Files collection, Conversion therapy, ONE Archives at the USC Libraries.

Context: *The Farrall Instrument Company of Grand Island, Nebraska— or Farrall Instruments— designed, publicized, and sold a line of devices to assist in medical conversion treatments. Marketed as “the world’s most advanced [collection] of behavior modification equipment for the treatment of compulsions, addictions, phobias and learning difficulties[,]” Farrall offered behavior modification devices such as the “Visually Keyed Shocker,” which cost between \$600 and \$1400 per unit. The device was advertised as follows:*

[F]ully automated system [that] uses standard 35MM slides for stimulus and neutral cues... [S]timulus slides are shown to the patient intermixed with neutral slides. Shock is delivered with stimulus scenes but not with neutral scenes. In reinforcing heterosexual preference in latent male homosexuals, male slides give a shock [sometimes directly to the genitalia] while the stimulus relief slides of females do not give shock.

VISUALLY KEYED SHOCKER

The Visually Keyed Shocker is a fully automated conditioning device. Now the doctor can be freed of the time consuming part of reinforcement of behavior conditioning. Once the patient has received supportive therapy and a successful conditioning technique is established, most patients can reinforce themselves with little or no supervision. Thus the outpatient can come to the hospital or office as needed. The doctor's time is required only for the usual counseling session and not needed to continue the conditioning therapy.



EFFECTIVENESS

The effectiveness of the paired visual stimulus and shock in converting homosexuals to heterosexual activity and in behavior modification of sex deviates is well documented in the bibliography on the front of this page. Basic psychological research and theory indicates the technique should be effective in many types of behavior modification. Promising results have been obtained in treating alcoholism, addictions and compulsions but much further research is needed in these areas. The major application problem remaining thus seems to be in developing the most effective treatment paradigm.

AUTOMATED BEHAVIOR CONDITIONING

FOR

ADDICTION

MASOCHISM

ALCOHOLISM

AGGRESSION

TRANVESTISM

EXHIBITIONISM

SEXUAL PREFERENCE



HOW IT WORKS

A slide projector is attached to a special aversive shock generator. The edges of the shock slides are marked with ink. Neutral slides do not have marked edges. The slides are automatically advanced. When a shock slide is shown a photo-transistor reads the mark and triggers the shock. The patient is automatically conditioned by the visual stimulus paired with the aversive shock. In the case of some problems it is possible to use escape and/or avoidance conditioning. Conditioning here is done by giving the patient a hand button with which he can escape or avoid shock by a proper response.

How has pseudoscience been used to harm LGBTQ+ people?

Source 8: John Blosser, "Simple Injection Will Let Gay Men Turn Straight, Doctors Report," *National Enquirer*, August 11, 1993. ONE Subject Files collection, Conversion therapy, ONE Archives at the USC Libraries (Excerpt).

Context: *The National Enquirer is a tabloid newspaper that prints over-the-top new stories that are often factually inaccurate. The content of the story sensationalizes a 1993 report from the National Institutes of Health that found evidence that some gay men have inherited one or more genes that predisposed them to be gay. A 2019 [study](#) found that, "human DNA cannot predict who is gay or heterosexual."*

Article Transcription:

SIMPLE INJECTION WILL LET WILL LET GAY MEN TURN STRAIGHT, DOCTORS REPORT

Homosexual men may be able to go straight within 10 years by visiting a doctor for a simple injection, say experts.

Scientists are now searching for genes they believe could be responsible for homosexuality. If the "gay genes" are located, researchers say they'll be able to turn them into "straight genes."

"The National Cancer Institute is already looking for the gene or group of genes associated with homosexuality an NCI spokesman told The ENQUIRER. "If they are identified, we will have the technology to alter them.

"It won't happen overnight, but it will be possible to develop genetic therapies to turn homo sexuals straight."

Added Dr. L. James McElroy, an assistant professor of microbiology at Penn State University, "If a gene for homosexuality is located and an adult homosexual decides he doesn't want be gay, he could have this tested and corrected."

Biologists foresee these astounding developments as a result of new National Cancer Institute research. Scientists discovered that most homosexual brothers they studied share certain genetic material inherited from the mother.

Researchers also found that gay men had far more homosexual cousins and uncles than normal on their mother's side.

This adds to a growing body of evidence that male homosexuality may come from a gene or genes passed down from mothers.

While researchers think the gene-altering technique will work for men, it may also prove effective for women who are lesbians. The National Cancer Institute is now doing a study to find out if lesbians have a different gene than straight women.

"Once scientists find the gay gene, they will be able to come up with a method of changing homosexuals," declared Dr. Thomas Easton, associate professor of theoretical biology at Thomas College. "It's a very simple process and actually in use today."

CULES

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"In some patients, doctors are genetically correcting the gene that causes cystic fibrosis."

"A modified cold virus, containing a corrected version of the defective gene, is inhaled from an aerosol spray."

The virus carries this good



Incredible new treatment to be available in 10 years

GAY OPTIONS: Some homosexual leaders are concerned society will attempt to eliminate gays, but researchers say sexual preference will be a matter of choice.

gene to the defective gene. Then the good gene binds to the defective gene, giving the patient relief, Dr. Easton told The ENQUIRER.

"In homosexuals, you would use an injection which would

change them into permanent straights until — or unless — they want to change back."

Dr. McElroy added, "It would likely be feasible for us to do this in 10 years."

Scientists say the gene re-

search will provide information that could be used to battle some 1,300 genetic disorders.

In addition to treating adult homosexuals, researchers envision the creation of a simple blood test for prospective mothers to find out if they're carrying a gay gene that could be passed to their children.

If they carry the homosexual genetic makeup, they can get it changed or leave it alone, said Dr. Easton.

Many gays object to the gene studies.

"A better use of people's research dollars would be to look into the causes of homophobia," declared Ellen Carton, a spokeswoman for the Gay & Lesbian Alliance Against Defamation.

"I am dubious that anything called a 'gay gene' actually can be isolated."

What's more, gays fear that potentially homosexual fetuses would be aborted.

"It is a concern in the gay

community that society will attempt to eliminate homosexuals," Carton said.

Dr. Easton feels it's a matter of having choices.

"A baby could be injected in the womb so it will not be born homosexual," he said. "Parents who don't care if their child grows up homosexual will just ignore the tests."

"The new technology would give gay people options for complete control over their sexual identities. This will be the most wonderful news of their lives!"

— JOHN BLOSSER

8-10-93
NATIONAL ENQUIRER

How has pseudoscience been used to harm LGBTQ+ people?

Source 9: Robert D. Potter, "Miracles of Brain Surgery," *Pittsburgh Sun-Telegraph*, May 19, 1946. Newspapers.com (Excerpt).

"Miracles of Brain Surgery"

By Robert D. Potter
Science Editor

MEDICINE has a new role for lobotomy, the brain operation that severs nerves painlessly to cure many types of insanity. In the hands of its discoverers, Drs. James W. Watts and Walter Freeman of Washington, D. C., lobotomy is now used in some cases as a relief for excruciating pain.

Ordinary pain—the pain of a toothache or a pain in the chest—is often one of the most reliable first-warning, diagnostic signals of medicine. But that is not the pain in which the surgeons are interested.

Rather they are concerned with patients who have terminal cancer, spinal cord inflammation and other ills in which pain is so great it cannot be relieved with morphine and other narcotics. Such patients are being aided by lobotomy, according to the reports of Drs. Watts and Freeman to the U. S. Chapter of the International College of Surgeons.

In the lobotomy operation tiny holes are drilled in each side of the skull in the region of the temples. Into the holes are inserted cutting wires that sever nerve connections to the brain's frontal lobes.

Severing the frontal lobes from the rest of the mind brings great mental changes, for these forward areas are the site of the brain's conscience. Lobotomy, in many cases, helps cure insanity in those persons whose guilt complexes, real or fancied, have made them mentally unbalanced. Their return to sanity is accompanied by marked personality changes. They lose their irrational fears and phobias, are carefree, often jovial, without a worry in the world.

In one case, a shy, timid little bookkeeper became a gregarious hall-fellow-well-met salesman. After his operation he could sell anything to anybody and became president of his company.

It is just 10 years ago that Drs. Watts and Freeman did their pioneer lobotomy operation. They have been at it ever since. Their technique has been adopted widely.

Among their mental patients, Drs. Watts and Freeman occasionally ran into cases where the victim of insanity also suffered from painful diseases; inflammation of the nerve cells of the spine, terminal cancer and similar afflictions. Although these patients screamed for narcotic drugs to relieve their pain, their torture was so severe that they obtained no relief from the drugs.

After the lobotomy operation was performed, the patients benefited in two ways. They became more rational and the pain abated.

Many of them said the pain was still present but they could stand it

The Shy, Mousy Little Bookkeeper, the Kind That Is the Bane of All Office Presidents, Underwent a Lobotomy. The Painless Brain Operation...

And Turned Into a Gregarious Hall-Fellow-Well-Met Type, Who Could Sell Anything to Anybody. He Became President of His Company.

Doctors labeled her a case of dementia praecox. She was really the product of dictatorial parents. An only child, she had been shielded from infancy. Her parents discouraged all her outside interests, defied her to dare be seen with a boy friend. As a result, the girl grew up in a world of her own.

One day the police found her lying unconscious in a subway station. Taken to a city hospital, she was later removed to an institution.

Her parents were finally persuaded to subject her to lobotomy.

Following the operation, the girl's old habits persisted for a few days. She cried, shied away from people, slept poorly and ate sparingly. As the days passed, gradually her new personality developed.

She no longer worried over "every little thing." She became self-confident. She began to seek people.

As pointed out by some physicians the mentally ill are commonly tortured by self-recrimination and a sense of guilt, with the result that some "literally tear themselves to pieces emotionally." Consequently, he believes that lobotomy may owe some of its success to the fact that the operation relieves the mind of emotional pressure.

Lobotomy is no cure-all for insanity, state physicians, and sometimes the personality changes are overemphasized in the patient.

Too much sense of well-being is a frequent result, as well as procrastination, laziness and increased appetite.

Lobotomy has been performed with success on numerous types of mental illnesses.

Now it can aid normal persons, too, by relieving unbearable pain.

subject in surgical circles. Proponents of the operation say that when used on the right kind of mental patients it returns 65 per cent of these people to good mental health. Opponents challenge these figures and claim they are overenthusiastic.

Despite this argument over statistics and per cent of cures, there is no question that remarkable results are achieved in specific cases.

Here is what happened to Miss ABC, an attractive girl of 19 years, who had been in a mental hospital for over two years.

Illustrated by ARTHUR GROSS

May 19, 1946

THE AMERICAN WEEKLY 11

Excerpt: In the lobotomy operation, tiny holes are drilled in each side of the skull in the region of the temples. Into the holes are inserted cutting wires that sever nerve connections to the brain's frontal lobes.

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How has pseudoscience been used to harm LGBTQ+ people?

Source 10: People's Press, "Stop Forced Sterilization/¡Alto a Esterilización Forzada!," 1974. LGBTQ Poster collection, ONE Archives at the USC Libraries.



Poster Text:

En Puerto Rico, 1/3 de las mujeres menores de 35 años — esterilizadas. En los E.U. 20% de las mujeres negras casadas—esterilizadas. En India, la ley manda que se esterilicen hombres y mujeres. El problema no es que hay demasiada gente; seres humanos son nuestro recurso más preciado. Sin embargo, billones de dólares de los EU se gastan para el control de la población, al mismo tiempo que se disminuyen los fondos para comida, atención médica y guarderías infantiles. El imperialismo de los EU es el problema: saquea los terrenos; destruye los recursos de la tierra; roba y destruye las vidas de la gente para sus intereses lucrativos. Resistencia!

In Puerto Rico, 1/3 of the women of child-bearing age — sterilized. In the U.S., 20% of Black married women—sterilized. In India, men and women sterilized by law. Too many people is not the problem; people are our most precious resource. Yet billions of U.S. dollars are spent on population control while funds are cut for food, health care and child care. U.S. Imperialism is the problem. It steals the land; tears resources from the earth; robs and destroys the lives of the people for profit. Resist!!!

Order from People's Press, P.O. 4013G, S.F., Calif., 94110

How has pseudoscience been used to harm LGBTQ+ people?

Handout 1: Background Readings for Uses of Pseudoscience on Marginalized Groups

Reading A: Aversion Shock Therapy

Source: Stephen Vider and David S. Byers, “A Half-Century of Conflict Over Attempts to ‘Cure’ Gay People,” Feb. 12, 2015. [TIME](#) (Edited/Abridged).

Expert Worksheet - Reading A

Question	Reading Notes
1. Who is Samuel Hadden? How did he and other psychiatric professionals treat homosexuality in the 1960s?	
2. How did LGBT activists and radical social workers respond to therapies that claimed to “cure” homosexuality?	
3. How did gay activists contribute to redefining homosexuality in the 1970s? What problems persisted?	
4. How have state governments and courts shaped current debates over therapies for homosexuality?	

TIME

A Half-Century of Conflict Over Attempts to ‘Cure’ Gay People

By Stephen Vider and David S. Byers | February 12, 2015

Fifty years ago today, *TIME* ran a short article under the headline, “Homosexuals Can Be Cured.” The article reported that male homosexuals responded well to group psychotherapy, under the care of 64-year-old University of Pennsylvania professor and psychiatrist Samuel Hadden. Over the course of four to eight years, Hadden explained, patients shared and interpreted each other’s dreams, cast aside their “flamboyant” clothes and manners, worked through their hostilities and neuroses, and began dating women. Marriages were saved and made.

Hadden was not the only—or most prominent—psychiatrist to claim homosexuality was a curable mental illness, but he was representative. Throughout the 1960s, psychiatrists Irving Bieber and Charles Socarides were regularly quoted in newspapers and magazines, arguing that homosexual desire was a form of psychosocial maladjustment, resulting from childhood [...] [Sigmund] Freud [...] had explicitly stated by 1935 that homosexuality was not an illness and strongly discouraged attempts to treat it; nevertheless, by the 1950s, his theories were widely mis[used] by conservative [...] psychiatrists vested in reaffirming the heterosexual, breadwinner-homemaker household in the wake of World War II. With the popularization of behavioral therapies in the 1960s and ’70s also came new attempts to treat homosexuality, in the form of “aversion” therapies, including electric shocks.

Even while many people took medical authorities at their word, LGBT activists alongside radical social workers and psychotherapists pushed back. But as reparative therapy was broadly discredited over the course of the 1970s, ’80s, and ’90s, it hardly disappeared. In fact it has more influence and impact on people’s lives today than many may realize.

Already by the 1960s, such cures had provoked resistance: in April 1965, just months after that *TIME* article ran, the Philadelphia-based gay rights organization Janus invited Hadden to give a lecture on his research, only to surprise him with fierce resistance from the audience. Franklin Kameny, a pioneering gay rights leader, responded sharply, “This is not science, Dr. Hadden; this is faith.” Such attacks emerged amidst a broader turn against the psychiatric establishment, questioning the legitimacy, and benevolence, of clinical interventions.

Together, progressive professionals and [...] counselors would [develop] alternative models of psychotherapy, affirming of same-sex desire. In June 1969, the Dorian Society of Seattle worked with a University of Washington pediatrics professor to found the Dorian Counseling Service for Homosexuals—the first center of its kind in the country. Soon renamed the Seattle Counseling Service, the center was staffed largely by volunteers, from fields including psychiatry, psychology, social work, education and pastoral counseling. In 1971, the center saw over 280 patients in individual treatment and over 75 in groups—with an average of 265 people calling their helpline every month. Similar centers would be founded across the country in the years to come, including the Gay Community Services Center in Los Angeles, Identity House in New York, and the Eromin Center in Philadelphia.

Gay activists would also claim a major victory in December 1973, when the American Psychiatric Association [(APA)] voted to remove “homosexuality” from the second edition of the *Diagnostic and*

How has pseudoscience been used to harm LGBTQ+ people?

Statistical Manual of Mental Disorders (DSM-II), which meant that homosexuality was officially no longer considered a disorder in itself. The decision followed several years of heightened protest focused on the APA—including disruption of national meetings—that won the advocacy of increasingly prominent psychiatrist Robert Spitzer [...]

Since the 1970s, reparative therapies have been reborn through “ex-gay” [religious] ministries, including the umbrella group Exodus International, founded in Anaheim, Calif., in 1976. Mixing pastoral counseling, Bible study, individual and group psychotherapy, and aversion treatments, ex-gay ministries have promised a cure from—or at least avoidance of—homosexuality to thousands of men and women. Exodus International shut down in 2013, with an apology from its leader for giving “false hope”—though the wider network it spawned, Exodus Global Alliance, continues to operate.

And, although mainstream professional organizations have acknowledged the potential harm and ineffectiveness of reparative therapies, they have failed to act decisively to prevent them. In 1994, the National Association of Social Workers stated that their members have the responsibility to inform clients about the lack of evidence supporting reparative therapies, but fell short of banning clinicians from using them. The American Psychiatric Association, meanwhile, acknowledged the risks of reparative therapies in 1998—listing depression, anxiety and self-destructive behavior as likely outcomes—but has likewise failed to outlaw the practice among their members, or charge reparative clinicians with professional misconduct.

Action has come instead through state legislatures and the courts. Reparative therapy for minors is now illegal in California, New Jersey, and Washington D.C., with pending legislative action in nine other states. Meanwhile, in New Jersey, four men who sought treatment from an unlicensed “life coach” in affiliation with Jews Offering New Alternatives for Healing, or JONAH, are suing on the basis of consumer fraud. The court refused to hear claims that homosexuality could be cured from JONAH’s experts, who include a social worker and clinical instructor at Ohio State University; a psychiatrist and preceptor at Massachusetts College of Pharmacy and Health Sciences; and a former University of Toronto professor of psychiatry. As that list may suggest, reparative therapists continue to practice throughout the country and world, some more recently incorporating otherwise “evidence-based” techniques like cognitive-behavioral therapy and eye-movement desensitization and re-processing.

For Samuel Hadden’s part, his research—like the original 1965 *TIME* article—continues to be cited as evidence on blogs and discussion boards. Psychiatrists, psychologists and social workers have had a powerful role in shaping public opinion, and self-perception, of LGBT people, but their organizations continue to have difficulty working through their own histories. They were looking for a “cure” for individuals, and frequently missed the sickness, and unkindness, of society.

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Reading B: Phrenology

Source: James Poskett, “Django Unchained and the racist science of phrenology,” Feb. 5, 2013. [The Guardian](#) (Edited/Abridged).

Expert Worksheet - Reading B

Question	Reading Notes
1. What is phrenology?	
2. Who is Charles Caldwell? How did he use phrenological pseudoscience to justify slavery?	
3. How does Caldwell’s stance on phrenology differ from individuals like Lucretia Mott or Horace Mann?	
4. What does author James Poskett mean by the following statement: “In the 19th century, scientific racism and abolition were by no means mutually exclusive”?	

The Guardian

Django Unchained and the racist science of phrenology

By James Poskett | February 5, 2013

“Why don't they kill us?” asks Calvin Candie, the southern slave owner in Quentin Tarantino's *Django Unchained*. He wants to know why the African slaves he brutalises do not rise up and take revenge. Before long, he has the skull of a recently deceased slave on the dinner table. “The science of phrenology,” he announces, “is crucial to understanding the separation of our two species.” He hacks away at the back of the skull with a saw, removing a section of the cranium and pointing to an allegedly enlarged area. In African slaves, Candie claims, this bump is found in the region of the brain associated with “submissiveness.”

For Candie, phrenology not only explained slavery, it justified it.

Needless to say, phrenology has now been thoroughly debunked: the idea that the shape of the skull can be used to infer mental characteristics is just plain wrong. But it was extremely popular all over the world during the 19th century, finding converts among reform-minded Bengalis in Kolkata, India, and colonial settlers in Australia. As part of my research into the global history of phrenology, I came across the real-life Calvin Candie.

He was called Charles Caldwell, a doctor from Kentucky who revelled in both phrenology and slave ownership. As in the film, Caldwell was a [lover of Europe], travelling to Paris in the 1820s where he picked up the latest medical craze. He later returned to France in the 1840s in order to hobnob with Pierre Marie Dumoutier, a phrenologist just back from a three-year round-the-world voyage.

At the time, Dumoutier's immense collection of skulls and casts could be found at the Musée de Phrénologie in Paris. There Caldwell could practise phrenology, feeling for bumps on the heads of Tahitians and Marquesas Islanders. No doubt he was considered very [popular] back in Kentucky. In fact, Caldwell even boasted of being one of the earliest experts in phrenology in the United States.

Caldwell deployed phrenology in almost exactly the same manner as the fictional Candie. In 1837 he wrote to a friend claiming that “tameableness” explained the apparent ease with which Africans could be enslaved. This was a standard phrenological argument. Areas located towards the top and back of the skull, such as “Veneration” and “Cautiousness,” were routinely claimed to be large in Africans. His correspondent concurred, writing: “They are slaves because they are tameable.” Clearly enjoying himself, Caldwell replied: “Depend upon it my good friend, the Africans must have a master.”

It's worth emphasising that these words are not from a Tarantino script, crafted for Hollywood shock value. They were written by a slave owner desperate to preserve his brutal way of life. And, while the physical violence of slavery is masked in Caldwell's letters, they betray his warped sense of morality. In a letter written on Christmas Eve 1838, Caldwell made the outrageous claim: “My slaves live much more comfortably than I do.”

The fact that phrenology was used to justify slavery is perhaps unsurprising. What would one expect from such an overtly racist science? But it wasn't just the slavers. My research revealed that some of the most vocal anti-slavery campaigners of the 19th century were also advocates of phrenology, and used it to justify their stance.

How has pseudoscience been used to harm LGBTQ+ people?

Lucretia Mott, a particularly uncompromising American abolitionist, sent her children to phrenological lectures and spoke of the “truth of phrenology” in letters to friends. When she visited Britain she stayed with the renowned Scottish phrenologist George Combe, himself an anti-slavery campaigner. Horace Mann, another major figure in abolitionist politics, was so [favorable to] phrenology that he subscribed to the official journal. After becoming president of Antioch College in Ohio, he even boasted in the same sentence that the professors he employed were both “anti-slavery men” and “avowed phrenologists.”

These are not isolated examples. If anything, the majority of phrenologists were against slavery.

How can this be? George Combe, a man whose phrenological books sold more copies during the 19th century than Charles Darwin's *Origin of Species*, explained his reasoning: “The qualities which make them submit to slavery are a guarantee that, if emancipated and justly dealt with, they would not shed blood.”

For abolitionists, the apparent weakness and timidity of the Africans served two purposes. It countered fears that they would take revenge on their masters if set free. It also provided a moral argument: if Africans were innately weak, society should help them, not enslave them.

In the 19th century, scientific racism and abolition were by no means mutually exclusive.

How has pseudoscience been used to harm LGBTQ+ people?

Reading C: Eugenics and Forced Sterilization

Source: Lisa Ko, “Unwanted Sterilization and Eugenics Programs in the United States,” Jan. 29, 2016.
[PBS](#) (Edited/Abridged).

Expert Worksheet - Reading C

Question	Reading Notes
1. What was the intended purpose of coerced sterilization programs in the 20th century?	
2. How have these programs been used in California?	
3. How was coerced sterilization related to the broader eugenics movement?	
4. What landmark cases define the ongoing struggle against coerced sterilization and for reproductive rights?	



Unwanted Sterilization and Eugenics Programs in the United States

By Lisa Ko | January 29, 2016

Coerced sterilization is a shameful part of America's history, and one doesn't have to go too far back to find examples of it. Used as a means of controlling "undesirable" populations — immigrants, people of color, poor people, unmarried mothers, the disabled, the mentally ill — federally-funded sterilization programs took place in 32 states throughout the 20th century.

As historian William Deverell explains in a piece discussing the "Asexualization Acts" that led to the sterilization of more than 20,000 California men and women, "If you are sterilizing someone, you are saying, if not to them directly, 'Your possible [offspring] are inassimilable, and we choose not to deal with that.'"

According to Andrea Estrada at UC Santa Barbara, forced sterilization was particularly rampant in California:

Beginning in 1909 and continuing for 70 years, California led the country in the number of sterilization procedures performed on men and women, often without their full knowledge and consent. Approximately 20,000 sterilizations took place in state institutions, comprising one-third of the total number performed in the 32 states where such action was legal (from *The UC Santa Barbara Current*).

"There is today one state," wrote Hitler, "in which at least weak beginnings toward a better conception [of citizenship] are noticeable. Of course, it is not our model German Republic, but the United States" (from *The L.A. Times*).

Researcher Alex Stern, author of the new book *Eugenic Nation: Faults and Frontiers of Better Breeding in America*, adds:

"In the early 20th century across the country, medical superintendents, legislators, and social reformers affiliated with an emerging eugenics movement joined forces to put sterilization laws on the books. Such legislation was motivated by crude theories of human heredity that posited the wholesale inheritance of traits associated with a [range] of feared conditions such as criminality, feeble-mindedness, and sexual deviance. Many sterilization advocates viewed reproductive surgery as a necessary public health intervention that would protect society from deleterious genes and the social and economic costs of managing 'degenerate stock'."

Eugenics was a commonly accepted means of protecting society from the offspring (and therefore equally suspect) of those individuals deemed inferior or dangerous – the poor, the disabled, the mentally ill, criminals, and people of color.

More recently, California prisons are said to have authorized sterilizations of nearly 150 female inmates between 2006 and 2010. The Center for Investigative Reporting reveals how the state paid doctors \$147,460 to perform tubal ligations that former inmates say were done under coercion [...]

While California's eugenics programs were driven in part by anti-Asian and anti-Mexican prejudice, Southern states also employed sterilization as a means of controlling African American populations.

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“Mississippi appendectomies” was another name for unnecessary hysterectomies performed at teaching hospitals in the South on women of color as practice for medical students [...]

Gregory W. Rutecki, MD writes about the forced sterilization of Native Americans, which persisted into the 1970s and 1980s, with examples of young women receiving tubal ligations when they were getting appendectomies. It's estimated that as many as 25-50 percent of Native American women were sterilized between 1970 and 1976. Forced sterilization programs are also a part of history in Puerto Rico, where sterilization rates are said to be the highest in the world.

Landmark Cases

The film *No Más Bebés* follows the story of Mexican American women who were sterilized under duress while giving birth at Los Angeles County-USC Medical Center in the 1960s and 1970s. *Madrigal v. Quilligan*, the case portrayed in the film, is one of several landmark cases that's affected the reproductive rights of underserved populations, for better or for worse.

Here are some other important cases:

Buck v. Bell: In 1927, Carrie Buck, a poor white woman, was the first person to be sterilized in Virginia under a new law. Carrie's mother had been involuntarily institutionalized for being “feeble-minded” and “promiscuous.” Carrie was assumed to have inherited these traits, and was sterilized after giving birth. This Supreme Court case led to the sterilization of 65,000 Americans with mental illness or developmental disabilities from the 1920s to the '70s. (Justice Oliver Wendell Holmes wrote in reference to Carrie: “Three generations of imbeciles are enough.”) The court ruling still stands today.

Relf v. Weinberger: Mary Alice and Minnie Relf, poor African American sisters from Alabama, were sterilized at the ages of 14 and 12. Their mother, who was illiterate, had signed an “X” on a piece of paper she believed gave permission for her daughters, who were both mentally disabled, to receive birth control shots. In 1974, the Southern Poverty Law Center filed a lawsuit on behalf of the Relf sisters, revealing that 100,000 to 150,000 poor people were being sterilized each year under federally-funded programs.

Eugenics Compensation Act: In December 2015, the US Senate voted unanimously to help surviving victims of forced sterilization. North Carolina has paid \$35,000 to 220 surviving victims of its eugenics program. Virginia agreed to give surviving victims \$25,000 each [...]

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Reading D: The Tuskegee Experiments

Source: Ada McVean, “40 Years of Human Experimentation in America: The Tuskegee Study,” Jan. 25, 2019. [Office for Science and Society](#), McGill University [Edited/Abridged].

Expert Worksheet - Reading D

Question	Reading Notes
1. How did scientific racism inform the United State’s early treatment of health and medicine for Black Americans?	
2. What were common pseudoscientific beliefs about Black Americans in the late 19th/early 20th century?	
3. How did these ideas inform doctors’ approach to the Tuskegee Study? Why weren’t infected patients given medication?	
4. How did the Tuskegee experiment come to an end? Why did it take so long?	



40 Years of Human Experimentation in America: The Tuskegee Study

By Ada McVean | January 25, 2019

Starting in 1932, 600 African American men from Macon County, Alabama were enlisted to [participate] in a scientific experiment on syphilis. The “Tuskegee Study of Untreated Syphilis in the Negro Male,” was conducted by the United States Public Health Service (USPHS) and involved blood tests, x-rays, spinal taps and autopsies of the subjects.

The goal was to “observe the natural history of untreated syphilis” in black populations. But the subjects were unaware of this and were simply told they were receiving treatment for bad blood. Actually, they received no treatment at all. Even after penicillin was discovered as a safe and reliable cure for syphilis, the majority of men did not receive it [...]

Scientific and medical authorities of the late 19th/early 20th centuries held extremely harmful pseudoscientific ideas specifically about the sex drives and genitals of African Americans. It was widely believed that, while the brains of African Americans were under-evolved, their genitals were over-developed. Black men were seen to have an intrinsic perversion for white women, and all African Americans were seen as inherently immoral [...]

This all matters because it was with these understandings of race, sexuality and health that researchers undertook the Tuskegee study. They believed, largely due to their fundamentally flawed scientific understandings of race, that black people were extremely prone to sexually transmitted infections (like syphilis). Low birth rates and high miscarriage rates were universally blamed on STIs.

They also believed that all black people, regardless of their education, background, economic or personal situations, could not be convinced to get treatment for syphilis. Thus, the USPHS could justify the Tuskegee study, calling it a “study in nature” rather than an experiment, meant to simply observe the natural progression of syphilis within a community that wouldn’t seek treatment.

The USPHS set their study in Macon County due to estimates that 35% of its population was infected with syphilis. In 1932, the initial patients between the ages of 25 and 60 were recruited under the [false promise] of receiving free medical care for “bad blood,” a [common] term encompassing anemia, syphilis, fatigue and other conditions. Told that the treatment would last only six months, they received physical examinations, x-rays, spinal taps, and when they died, autopsies.

Researchers faced a lack of participants due to fears that the physical examinations were actually for the purpose of recruiting them to the military. To [calm] these fears, doctors began examining women and children as well. Men diagnosed with syphilis who were of the appropriate age were recruited for the study, while others received proper treatments for their syphilis (at the time these were commonly mercury—or arsenic—containing medicines).

In 1933, researchers decided to continue the study long term. They recruited 200+ control patients who did not have syphilis (simply switching them to the syphilis-positive group if at any time they developed it). They also began giving all patients ineffective medicines (ointments or capsules with too small doses of neoarsphenamine or mercury) to further their belief that they were being treated [...]

How has pseudoscience been used to harm LGBTQ+ people?

It was in these moments that the Tuskegee study's true nature became clear. Rather than simply observing and documenting the natural progression of syphilis in the community as had been planned, the researchers intervened: first by telling the participants that they were being treated (a lie), and then again by preventing their participants from seeking treatment that could save their lives. Thus, the original basis for the study—that the people of Macon County would likely not seek treatment and thus could be observed as their syphilis progressed—became a self-fulfilling prophecy.

The Henderson Act was passed in 1943, requiring tests and treatments for venereal diseases to be publicly funded, and by 1947, penicillin had become the standard treatment for syphilis, prompting the USPHS to open several Rapid Treatment Centers specifically to treat syphilis with penicillin. All the while they were actively preventing 399 men from receiving the same treatments.

By 1952, however, about 30% of the participants had received penicillin anyway, despite the researchers' best efforts. Regardless, the USPHS argued that their participants wouldn't seek penicillin or stick to the prescribed treatment plans. They claimed that their participants, all black men, were too "stoic" to visit a doctor. In truth these men thought they were already being treated, so why would they seek out further treatment?

The researchers' tune changed again as time went on. In 1965, they argued that it was too late to give the subjects penicillin, as their syphilis had progressed too far for the drug to help. While a convenient justification for their continuation of the study, penicillin is (and was) recommended for all stages of syphilis and could have stopped the disease's progression in the patients.

In 1947 the Nuremberg code was written, and in 1964 the World Health Organization published their Declaration of Helsinki. Both aimed to protect humans from experimentation, but despite this, the Centers for Disease Control (which had taken over from the USPHS in controlling the study) actively decided to continue the study as late as 1969.

It wasn't until a whistleblower, Peter Buxtun, leaked information about the study to the *New York Times* and the paper published it on the front page on November 16th, 1972, that the Tuskegee study finally ended. By this time only 74 of the test subjects were still alive. 128 patients had died of syphilis or its complications, 40 of their wives had been infected, and 19 of their children had acquired [...] syphilis.

There was mass public outrage, and the National Association for the Advancement of Colored People launched a class action lawsuit against the USPHS. It settled the suit two years later for 10 million dollars and agreed to pay the medical treatments of all surviving participants and infected family members, the last of whom died in 2009 [...]

The Tuskegee study has had lasting effects on America. It's estimated that the life expectancy of black men fell by up to 1.4 years when the study's details came to light. Many also blame the study for impacting the willingness of black individuals to willingly participate in medical research today.

We know all about evil Nazis who experimented on prisoners. We condemn the scientists in Marvel movies who carry out tests on prisoners of war. But we'd do well to remember that America has also used its own people as lab rats. Yet to this day, no one has been prosecuted for their role in dooming 399 men to syphilis.

How has pseudoscience been used to harm LGBTQ+ people?

Jigsaw Reflection Sheet

Directions: After completing the Jigsaw Activity, complete the Reflection Sheet below individually.

Reading Summaries:

Reading A	Reading B
Reading C	Reading D

Group Discussion Reflection:

- How do the readings connect?
- What are the common themes or differences?
- What did you learn from your peers?

Handout 2: Primary Source Graphic Organizer

Primary Source Analysis

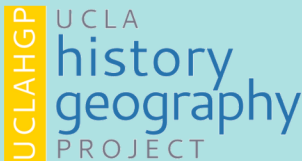
Directions: Respond to the primary source by answering at least one question in each of the following categories.

OBSERVE	REFLECT	QUESTION
<ul style="list-style-type: none">• What do you notice first?• Find something small but interesting.• What do you notice that you didn't expect?• What do you notice that you can't explain?• What do you notice that you didn't earlier?	<ul style="list-style-type: none">• Where do you think this came from?• Why do you think somebody made this?• What do you think was happening when this was made?• Who do you think was the audience for this item?• What tool was used to create this?• Why do you think this item is so important?• If somebody made this today, what would be different?• What can you learn from examining this?	<ul style="list-style-type: none">• What do you wonder about...<ul style="list-style-type: none">○ Who?○ What?○ When?○ Where?○ Why?○ How?



One Institute is the oldest active LGBTQ+ organization in the United States, dedicated to telling the history and stories of queer and trans community and culture through K-12 educational initiatives, public exhibitions, and community engagement programs.

oneinstitute.org



The UCLA History-Geography Project (UCLA HGP) is a professional learning community that supports History-Social Science and Ethnic Studies educators. As a regional site of the California History-Social Science Project and part of UCLA's Center X, we work with teachers, schools, and organizations to make K-12 classrooms more inquiry-driven, culturally responsive, and civically engaged.

centerx.gseis.ucla.edu/history-geography



The Los Angeles LGBT Center's OUT for Safe Schools® program transforms school campuses into communities of support and safety for LGBTQ+ students.

schools.lalgbtcenter.org/out-for-safe-schools

ONE Archives at
the USC Libraries

ONE Archives at the USC Libraries is the largest repository of Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) materials in the world.

one.usc.edu

This lesson plan was created by a Los Angeles teacher partner as part of “Pride, Resistance, Joy: Teaching Intersectional LGBTQ+ Stories of California and Beyond,” a K-12 LGBTQ+ History Teacher Symposium in July 2024, organized by One Institute, the UCLA History Geography Project, OUT for Safe Schools® at the LA LGBT Center, and ONE Archives at the USC Libraries.