Virtual Workshop May 26, 2020. Recommended Resources.

Recommended Resources on the History of American Eugenics by TAGC2020 panelists and participants

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I. Mailing Lists

The Personal Genetics Education Project (pgEd) invites you to join their <u>mailing list</u> to find out about their latest educational resources as well as future workshops.

II. Lesson Plans & Teacher Guides

- 1. pgEd Lesson on "Genetics, History, and the American Eugenics Movement" http://pged.org/lesson-plans/#eugenics
- 2. pgEd Lesson on "Using Primary Sources to Examine the History of Eugenics" <u>http://pged.org/lesson-plans/#EugenicsDocumentAnalysis</u>

3. "A R-based data-driven example to teach Hardy-Weinberg proportions that shows how a skin pigmentation locus is an outlier in terms of levels of differentiation" https://github.com/StefanoAllesina/BSD-QBio3/tree/master/workshops/novembre

4. "Race: A Teacher's Guide" from the American Anthropological Association This is written for high school teachers, but ideas applicable to any classroom <u>https://www.understandingrace.org/ForTeachers</u>

5. "Teaching Race: Pedagogy and Practice." Thurber, A., Harbin, M.B., & Bandy, J. (2019). Vanderbilt University Center for Teaching. <u>https://cft.vanderbilt.edu/teaching-race/</u>

6. "The Illusion of Race" from the American Association for the Advancement of Science. Lesson plans designed to help students learn that race "cannot be clearly defined, and is often used to elevate one group to the disadvantage of other groups." http://sciencenetlinks.com/lessons/the-illusion-of-race/

III. Videos

1. "The Gene - an intimate history" by Ken Burns on PBS

Entire series (4 hours) https://www.pbslearningmedia.org/collection/kenburnsclassroom/film/the-gene/

A short overview of Eugenics from the Gene by PBS Learning Media (10 min.) <u>https://tinyurl.com/y8dwjb94</u>

2. "No Más Bebés" by Renee Tajima-Peña and Virginia Espino, on PBS. This Emmy-nominated film documents the thousands of non-consensual sterilizations by California doctors on Mexican immigrants in the 1960's and 1970's.

Three minute trailer and entire movie http://www.nomasbebesmovie.com/

Additional short clips on PBS https://www.pbs.org/independentlens/films/no-mas-bebes/

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3. "Fixed to Fail" explains the *Buck v. Bell* Supreme Court decision. Chilling. (4 minutes) <u>https://www.pbs.org/independentlens/blog/unwanted-sterilization-and-eugenics-programs-in-the-united-states/</u>

4. "Willis Lynch, For the Public Good" Interview with an older white man who was sterilized against his knowledge or consent as a teenager. (3 minutes) https://longreads.com/2014/11/19/for-the-public-good/

5. "Biology of Skin Color." By HHMI (about 19 min.)

This is not about eugenics, but is included here because it can help teach students about the biology and selective forces acting on skin color, a trait that is literally skin-deep. https://www.biointeractive.org/classroom-resources/biology-skin-color

6. "Three Identical Strangers"

This is not about eugenics, but is included here because it exposes an abuse of scientific power to test the concept of "nature vs. nurture." A set of triplets in an adoption center was intentionally separated and put in families of different socioeconomic groups to test "nature vs. nurture." https://en.wikipedia.org/wiki/Three_Identical_Strangers

IV. Podcasts

Radio Lab episode "G: unnatural selection", specifically focuses on connections between eugenics and intelligence testing.

https://www.wnycstudios.org/podcasts/radiolab/articles/g-unnatural-selection

Fresh Air interview with Adam Cohen, "The Supreme Court Ruling That Led To 70,000 Forced Sterilizations"

https://www.npr.org/2017/03/24/521360544/the-supreme-court-ruling-that-led-to-70-000forced-sterilizations

V. Websites

1. **BSCS Science Learning** promotes evidence-based learning approaches to science with a social-justice mission such as a "<u>More Humane Genetics Education</u>." https://bscs.org/

2. Cold Spring Harbor Labs (CSHL) image archive on the American eugenics movement http://www.eugenicsarchive.org/eugenics/

3. **The Personal Genetics Education** Project (pgEd, for short) is a team of scientists, social scientists, educators, and community organizers, with a mission to have inclusive conversations about genetics in every way that it is touching people's lives. https://pged.org/

4. **The Sterilization and Social Justice Lab** is an interdisciplinary research team studying the history of sterilization in the United States. Additionally, they support "efforts to provide reparations to surviving individuals who were involuntarily sterilized under U.S. eugenics laws. http://www.ssjlab.org/

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5. **500 Women Scientists** "An initiative on reproductive justice, covering fertility control targeting women of color, including sterilizations."

https://500womenscientists.org/about-repro-justice

VI. Eugenics Legal Cases

1. 1927 Buck v Bell Supreme Court decision https://www.law.cornell.edu/supremecourt/text/274/200

2. 1978 Madrigal v. Quilligan case: "When Doctors Took 'Family Planning' Into Their Own Hands," by Marcela Valdes, The New York Times (2016) <u>https://www.nytimes.com/2016/02/01/magazine/when-doctors-took-family-planning-into-their-own-hands.html</u>

3. 1974–2013 Fighting for reparations: Elaine Riddick Jesse and others forcibly sterilized by the state of North Carolina seek justice. They did not win in the courts, but found some justice from the state legislature.

• "Sterilized by North Carolina, she felt raped once more", by David Zucchino, Los Angeles Times (2012). https://www.latimes.com/archives/la-xpm-2012-jan-25-la-na-forced-sterilization-20120126-story.html

• "Elaine Riddick has been fighting for 40 years to get compensation from the state of North Carolina", news clip, Associated Press. <u>https://www.youtube.com/watch?v=IWanJoxW2s4</u>

• "Eugenics In North Carolina And Victim Compensation" (1 hour audio) https://www.wfae.org/post/eugenics-north-carolina-and-victim-compensation#stream/0

VII. Articles

1. "Engineering American Society: The Lesson of Eugenics." Micklos D, Carlson E. Nat Rev Genet. 2000;1(2):153-158. doi:10.1038/35038589 https://pubmed.ncbi.nlm.nih.gov/11253656

 "Eugenic Housing: Redlining, Reproductive Regulation, and Suburban Development in the United States." Laura Lovett. WSQ: Women's Studies Quarterly. The Feminist Press. Volume 48, Numbers 1 & 2, Spring/Summer 2020. pp. 67-83. 10.1353/wsq.2020.0019 https://muse.jhu.edu/article/754878

 "Interpreting polygenic scores, polygenic adaptation, and human phenotypic differences." Noah A Rosenberg, Michael D Edge, Jonathan K Pritchard, Marcus W Feldman (2019) Evolution, Medicine, and Public Health 1: 26–34. https://academic.oup.com/emph/article/2019/1/26/5262222

4. "Learned inequality: Racial labels in the biology curriculum can affect the development of racial prejudice." BM Donovan (2017). Jour. of Research in Science Teaching 54 (3), 379-411. https://onlinelibrary.wiley.com/doi/abs/10.1002/tea.21370

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5. "Missing compared to what? Revisiting heritability, genes, and culture." Marcus Feldman and Sohini Ramachandran. Philos Trans R Soc Lond B Biol Sci. 2018 Apr 5; 373(1743): 20170064. https://royalsocietypublishing.org/doi/10.1098/rstb.2017.0064

6. "Should 'race' be taught in high school biology." Michael Schulson The subject of this article also pertains to college level biology and genetics courses <u>https://undark.org/2018/09/12/biology-textbooks-race-high-school/</u>

7. "Signaling Inclusivity in Undergraduate Biology Courses Through Deliberate Framing of Genetics Topics Relevant to Gender Identity, Disability, and Race". Karen Hales discusses how to signal inclusivity in teaching genetics

https://pubmed.ncbi.nlm.nih.gov/323570article 97/

8. "Teaching Race (Bioculturally) Matters: A Visual Approach for College Biology Courses." Amelia Hubbard (2017). The American Biology Teacher 79 (7): 516-524 <u>https://online.ucpress.edu/abt/article/79/7/516/18947/Teaching-Race-Bioculturally-Matters-</u> A-Visual

9. "The Origins of Scientific Racism" John P. Jackson, Jr. and Nadine M. Weidman. The Journal of Blacks in Higher Education No. 50 (Winter, 2005/2006), pp. 66-79

A must-read for developmental biologists!

https://www.jstor.org/stable/25073379?seq=1

10. "Toward a more humane genetics education: Learning about the social and quantitative complexities of human genetic variation research could reduce racial bias in adolescent and adult populations." BM Donovan et al. (2019). Science Education, 103:1-32. <u>https://onlinelibrary.wiley.com/doi/10.1002/sce.21506</u>

11. "Using Culturally Relevant Pedagogy to Reconsider the Genetics Canon." Rachel A. Sparks, Kara E. Baldwin, Rebekka Darner. (2020) Journal of Microbiology & Biology Education, 20:1-6 <u>https://dx.doi.org/10.1128%2Fjmbe.v21i1.1901</u>

12. "Understanding our eugenic past to take steps towards scientific accountability." Rori Rohlfs. A fascinating read about how students discovered Eugenics as a major at their own school <u>http://genestogenomes.org/understanding-our-eugenic-past-to-take-steps-towards-scientific-</u> accountability/

VIII. Books

1. Against Their Will: North Carolina's Sterilization Program and the Campaign for Reparations by Kevein Paul Begos, Danielle Deaver, and John Railey https://books.google.com/books/about/Against Their Will.html?id=KbhfuQAACAAJ

2. Fatal Invention: How Science, Politics, and Big Business Re-create Race in the Twenty-first Century by Dorothy Roberts

https://thenewpress.com/books/fatal-invention

3. *GenÉtica* (Gene Ethics) by Mayana Zatz. Available in Portuguese only. <u>https://www.goodreads.com/book/show/12762800-gen-tica</u>

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4. *Illiberal Reformers: Race, Eugenics and American Economics in the Progressive Era* by Thomas Leonard

https://press.princeton.edu/books/hardcover/9780691169590/illiberal-reformers

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

https://www.penguinrandomhouse.com/books/529315/imbeciles-by-adam-cohen/

- 6. In the Name of Eugenics by Daniel Kevles https://www.hup.harvard.edu/catalog.php?isbn=9780674445574
- 7. She Has Her Mother's Laugh: The Powers, Perversions, and Potential of Heredity by Carl Zimmer

https://www.penguinrandomhouse.com/books/536455/she-has-her-mothers-laugh-by-carlzimmer/9781101984611

- 8. Sex Itself: The Search for Male and Female in the Human Genome by Sarah Richardson https://press.uchicago.edu/ucp/books/book/chicago/S/bo16835663.html
- 9. Superior: The Return of Race Science by Angela Saini http://www.beacon.org/Superior-P1580.aspx
- 10. *The Code of Codes* (1993) Edited by Daniel J. Kevles and Leroy Hood https://www.hup.harvard.edu/catalog.php?isbn=9780674136465
- 11. *The Gene: An Intimate History* by Siddhartha Mukherjee <u>https://www.simonandschuster.com/books/The-Gene/Siddhartha-Mukherjee/9781476733500</u>
- 12. The Social Life of DNA: Race, Reparations, and Reconciliation after the Genome by Alondra Nelson <u>https://www.penguinrandomhouse.com/books/250539/the-social-life-of-dna-by-alondra-nelson/</u>
- 13. War Against the Weak: Eugenics and America's Campaign to Create a Master Race by Edwin Black

https://books.google.com/books/about/War Against the Weak.html?id=3gBduQAACAAJ