

Science for the People
Presents...

Science and Inequity

* Local and Global Struggles in
Health and Environmental Justice *





Plan for this Workshop



01 INTRODUCTIONS

4:00 - 4:10

What is Science for the People?
Who are our Presenters?

02 LIGHTNING TALKS

4:10 - 4:35

Frameworks for analysis and 8 case studies of science and inequity

03 BREAKOUT ROOMS

4:35 - 5:15

Share experiences, knowledge, and perspectives; brainstorm strategies for local and global action

04 CLOSING

5:15 - 6:00

Reflections and synthesis with the full group





What is Science for the People?



SCIENCE FOR
THE **PEOPLE**

Science for the People originally arose in 1969 out of the anti-war movement. With radical analysis and non-hierarchical governing structure, Science for the People tackled the militarization of scientific research, the corporate control of research agendas, the political implications of sociobiology, and other scientific theories, the environmental consequences of energy policy, inequalities in health care, and many other issues *



Since 2015, SftP veterans have collaborated with a new generation of SftP members to rebuild the organization





Visit <http://scienceforthepeople.org> to check out (and subscribe to!) the amazing new magazine. Donate to the People's Science Network here: <https://pplsci.net/>





Western Mass SftP: Today's Presenters



Sarah Brownell

Preya Patel

Steve Fernandez

Sigrid Schmalzer

Emma Harnisch

Brian Schultz

Tim Nsubuga

Chloe Spurr

Darsh Patel





Science and Inequity Here and around the World: Frameworks for Analysis

A radical analysis: look for root causes, reveal the workings of power

What are the root causes of inequity, how are they maintained through systems of power?

Capitalism: Racism; Patriarchy

Imperialism: inequities on a global scale

What kinds of power do communities have?

How do we use our power to make change?



Medical Apartheid

Profiteering

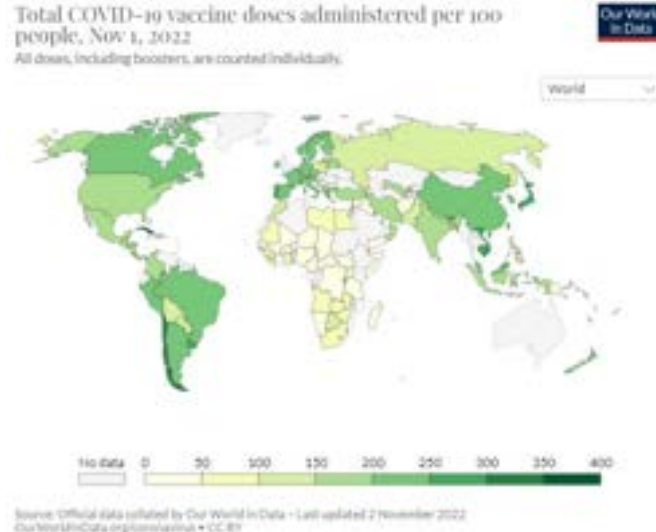


<https://corporatewatch.org/>



COVID

- Lack of COVID related medical equipment in the Global South
- mRNA vaccine tech patented and not shared with Global South
- COVID treatments not shared with Global South



Monkeypox

- Chronic undercounting in Global South due to lack of resources
- Smallpox vaccine stockpiled in wealthy countries
- Smallpox vaccines never shared with African countries
- Black People in the US receive less treatment

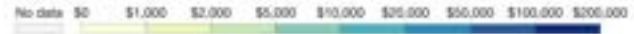


Structural Barriers to Treatment of HIV

Death rate from HIV/AIDS, 2019
The number of deaths from HIV/AIDS per 100,000 people.

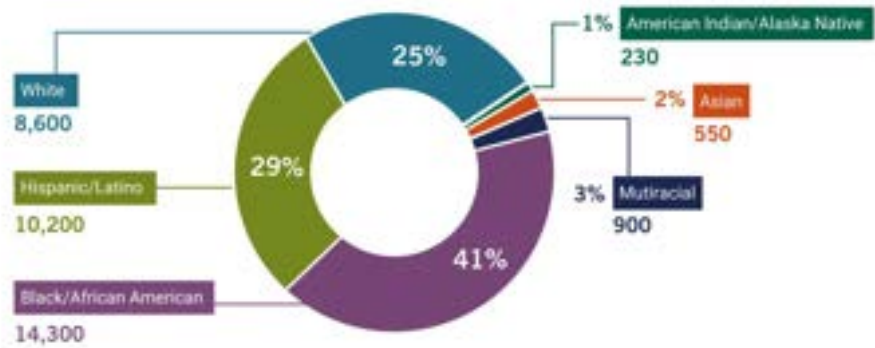


GDP per capita, 2020
Measured in constant international \$.



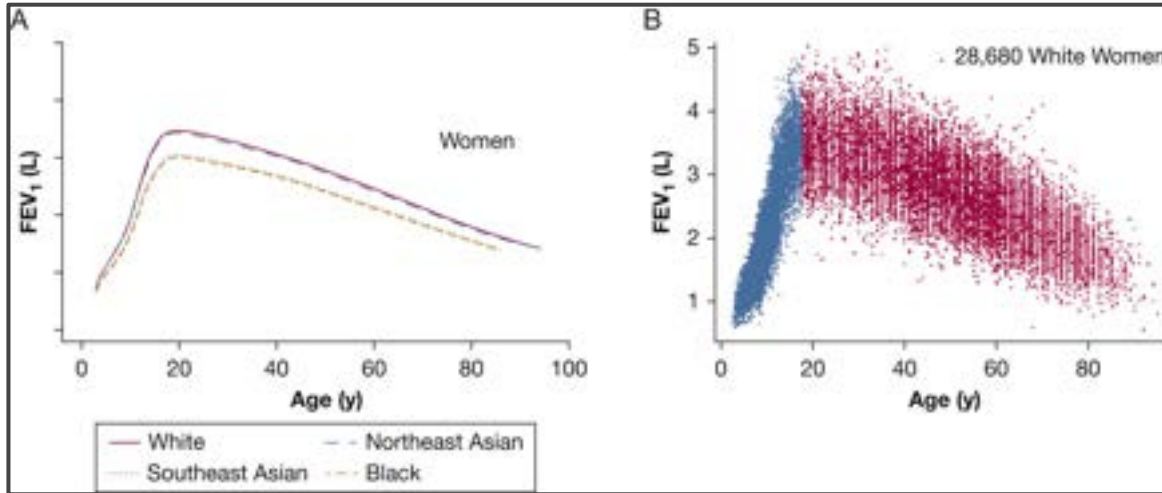
Source: WHO, Global Burden of Disease (2019)
Note: To allow comparisons between countries and over

HIV incidence by race/ethnicity, 2019

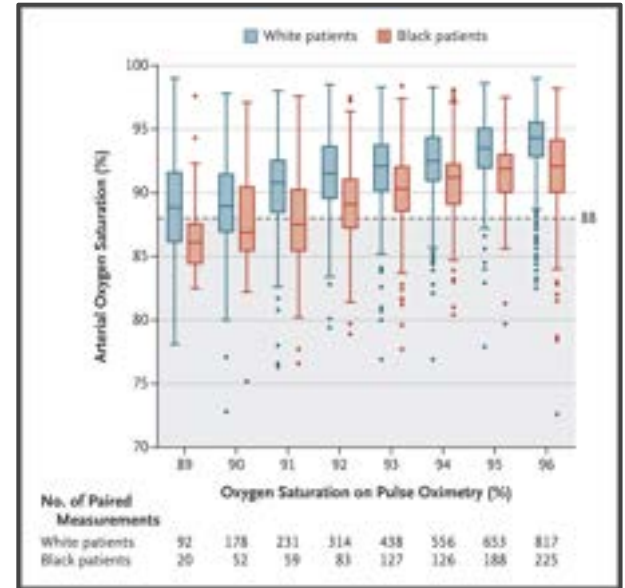


OurWorldInData.org/economics-growth - CC BY

Medical Device Design Inequity



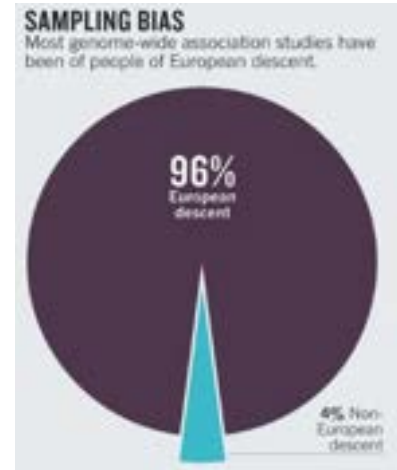
Pulse
Oximeter



Spirometer

Medical Genetics: Inequities in Data and Accessibility

- Medical Genetics and Personalized Medicine
- Issue 1: Availability and Distribution of Genetic Counselors worldwide
- Issue 2: Lack of Diversity in Genetics
- 1 + 2 = Issue 3: prevents personalized medicine from becoming mainstream in global health care systems
- Genomic Researchers need to recognize the importance of studying underrepresented populations to ensure that the **benefits** of research are distributed *fairly* and maximize the potential for discovery. Only then can Personalized Medicine prosper



Environmental Justice & Health, the case of Haiti

Structural Racism + Western Techno-Elitism

A Few Selected Examples from Haitian History

- 1804 Haitian Independence: Other countries refuse to trade with free Haiti.
- 1825 Indemnity Payment to France: Haiti pays France \$21B for loss of revenue from slavery.
- 1994 Trade Liberalization: Haiti forced to cut import taxes on rice while AR farmers get subsidies.
- 2011 Election Manipulation: Sec. of State Clinton & SAS change first round election results without evidence.
- 2022, Peyi Lok: US supports illegitimate PM Ariel Henry over civil society's Montana Accord



Haiti's Rice Production and Imports before and after structural adjustment (000) tonnes, 1961-2014



Allison Shelley/Getty Images



Richard Pierrin/AFP via Getty Images



UN unsafe waste water dumping practices.
Photo Credit: Lahiny Pierre



Reinvent the Toilet Challenge Winner 2012
Photo Credit: Gates Foundation

OR Local Socio-Ecological Solutions



SOIL's EcoLakay Toilet Service
Photo Credit: Sustainable Organic Integrated Livelihoods (SOIL)

Phosphorus Pollution



https://www.niehs.nih.gov/research/programs/climatechange/health_impacts/waterborne_diseases/index.cfm



<https://www.conserve-energy-future.com/causes-effects-and-solutions-to-eutrophication.php>



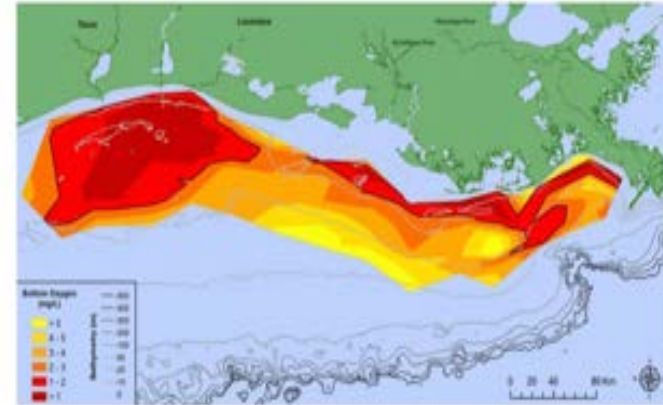
<https://www.ecowatch.com/dead-zones-algal-bloom-national-strategy.html>



<https://www.epa.gov/nutrientpollution/effects-economy>

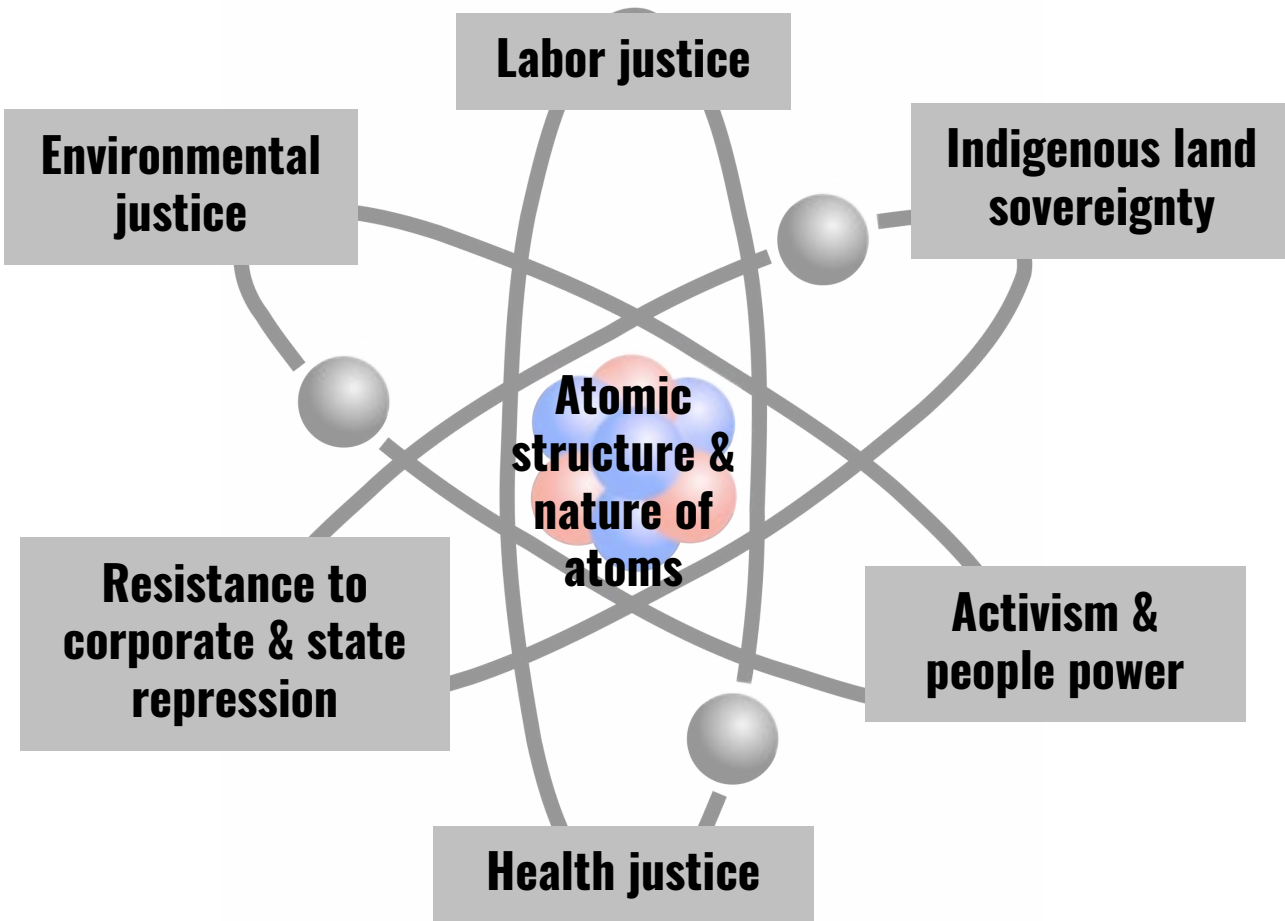


Image credit: Michigan Sea Grant



The Gulf of Mexico hypoxic (dead) zone in 2021, which measured 8,334 square miles (78,400 square kilometers). Lower values represent less dissolved oxygen in the water. Louisiana Universities Marine Consortium. CC BY-NC

Science for the Future: Teaching the Periodic Table through Extraction



How do we address the histories of scientific inequity through the way we TEACH young scientists?

Student reflections on the project:

"It is important to have multiple ways of seeing."

"Stories give us real life context to elements and teaches us more than just chemistry."

Synthesizing What We've Heard⁺



TYPES OF INEQUITY

- Inequities in Knowledge Production (sample bias; physical bias; interpretation bias)
 - Inequities in Project Design (what are the research questions)
 - Inequities in Decision Making (who decides)
 - Inequities in Distribution (who gets the benefits)
 - Inequities in Negative Impacts (who suffer the harms)
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ADDRESSING INEQUITY

- Community-driven research and design (solutions that work for people)
 - Respecting indigenous and community knowledge
 - Education: equipping the next generation of scientists with a social justice lens
 - Organizing for systemic change (capitalism, militarism, white supremacy, patriarchy)
 - We need more here! Let's discuss other ways in the breakout rooms
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Breakout Rooms

You will soon be assigned to a breakout room

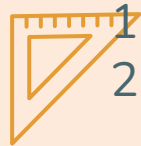
Take a few minutes for introductions: each person should share their names, pronouns (if desired), and **very briefly** what brought them to the workshop

One person should volunteer to facilitate, and one person to take notes. **Use the form linked in the Chat.**





Breakout Questions



1. Introductions (5 minutes)
2. How does what you heard in the Lightning Talks relate to struggles that you have been involved in (in your own work and/or community?) (10 minutes)
3. How can people who have been left out of STEM be included through local projects related to health, environmental justice, or other areas? (10 minutes)
4. How do you understand the relationship between local and global struggles? How can we build solidarity between local organizing and global struggles for STEM equity? (10 minutes)
5. Review main points you want to share with big group (5 minutes)

Your notes on these questions will help us to create a toolkit for
 addressing STEM inequities

