

CREATING AN ANTI-ABLEIST FUTURE FOR SCIENCE

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WHO AM I?



- Postdoctoral researcher, Department of Systems Biology, Harvard Medical School
- Chemical engineer by training
- Lifetime wheelchair user
- Disability rights activist

HOW CAN WE PROMOTE THE EQUITY OF DISABLED SCIENTISTS?

What is the state of being disabled in
science?

What is the state of being disabled?

WHAT IS THE STATE OF BEING DISABLED?

- *15% of the world's adults are disabled (>1 bil)¹*
- Median earnings, US, 2015:
\$21,572 (abled: \$31,872)²
- Internet users, US, 2015: 54% (Able: 81%)²

¹WHO World Report On Disability, 2011

²Americans Living with Disability, Pew Research Center, 2015

WHAT IS THE STATE OF BEING DISABLED?

- *15% of the world's adults are disabled (>1 bil)¹*
- Undergraduate population in STEM with disability, US, 2019: 11%³
- Doctoral degrees awarded to those in STEM with disabilities, US, 2019: 6.8%⁴

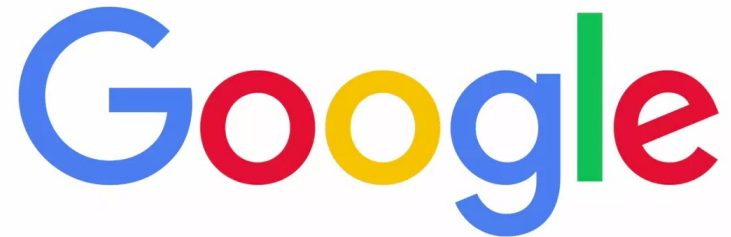
¹World Report On Disability, WHO, 2011

³National Center for Education Statistics

⁴Women, Minorities, and Persons with Disabilities in Science and Engineering, NSF, 2012

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- *15% of the world's adults are disabled (>1 bil)¹*



- 7.5% self-identified as having a disability⁵
 - (Note: 2019 is first year reporting)

¹World Report On Disability, WHO, 2011

⁵Google diversity annual report 2019

WHAT IS THE STATE OF BEING DISABLED?

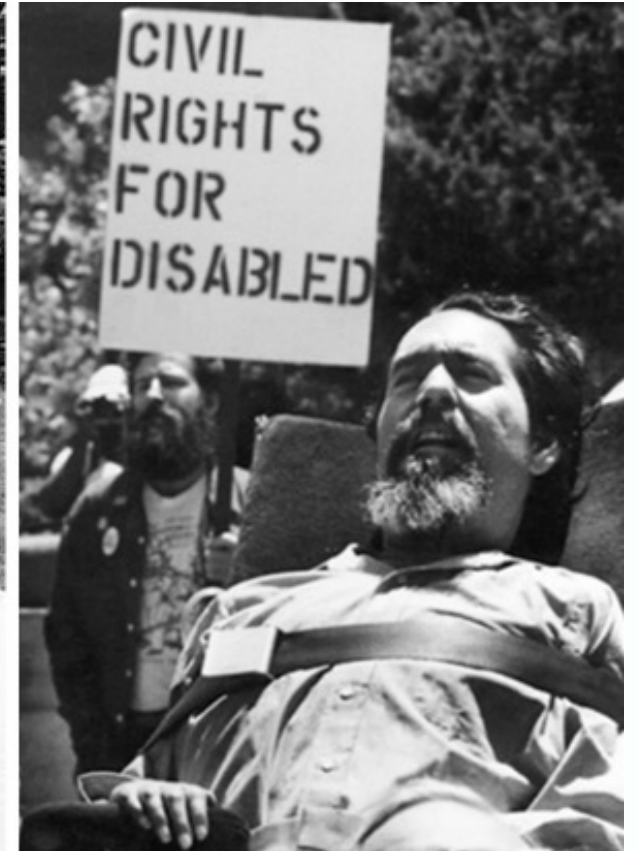
Companies touting “disability inclusion” without providing employment statistics



ACCESS TO EDUCATION HAS HISTORICALLY BEEN LIMITED

Ed Roberts

- First student at Berkley in a wheelchair, 1962
- Forced to live in hospital by university
- Led the fight for curb cuts in the city



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ACCESS TO PUBLIC SPACE HAS HISTORICALLY BEEN LIMITED

Protests for the Rehabilitation Act of 1973



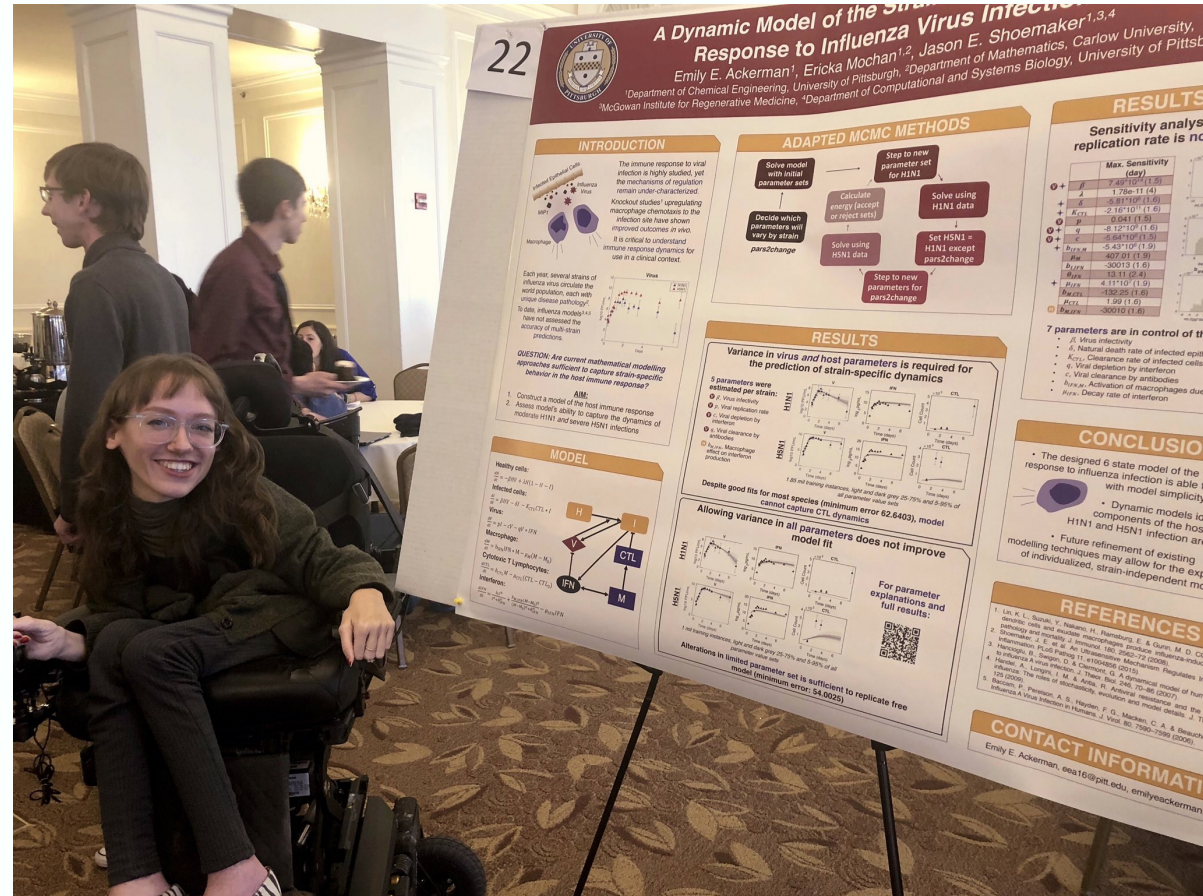
THE ADA (1990)

Covers:

- Employment discrimination
 - “Reasonable accommodations”
- Public entities and accommodations
 - “readily achievable”
 - “...easily accomplished without much difficulty or expense”
- Telecommunications



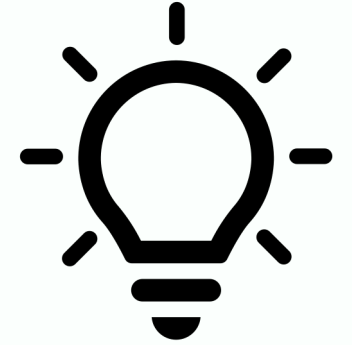
THE RESULT:



YET! I BRING MY SOCIETAL CONTEXT BAGGAGE TO LAB EVERY DAY

- Old university buildings kept inaccessible until last minute
- To qualify for Medicaid, must have <\$2k in bank account
 - Winning Gilliam Fellowship put me over income limits
 - Out of pocket personal care: \$1600/month
- Conferences/traveling costly, difficult
- Rent for my accessible apartment is 95% of my take home salary each month
- Aide hiring shortage

THE DISABILITY COMMUNITY ISN'T A MONOLITH



- Wide variety of needs (maybe conflicting)
- Many fear they don't know enough to adequately support their peers
- This work requires a willingness to communicate!

*The goal is to create a system ready to support
the needs of disabled scientists*

TO PROMOTE THE EQUITY OF DISABLED SCIENTISTS, WE MUST:

- Examine **explicit and implicit bias** in our fields, institutions, and selves
- Address issues **at each step of the pipeline**
- Create opportunities for **conscious mentorship**
- Reform the practice of science to be **actively anti-ableist**

OUR BIAS / OUR FIELDS' BIAS COLORS THE WAY WE SEE DISABLED SCIENTISTS

*(leave it home
tomorrow!)*

- We all bring our ableism to work
- Our vision of what an X-ologist looks like is likely not based on disabled people



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- “Standards” reflect and uphold these biases in our fields
- Those who cannot keep up are “unfit”



THE GEOSPACE PROJECT

OUR INSTITUTIONS NEVER EXPECTED TO WELCOME DISABLED SCIENTISTS

- As a result, support is needed:
 - **Infrastructure** updates
 - **Clear policies** around accommodations, benefits, time off, grievance protocol, etc.
 - **Increased funding** for disability offices
 - **Training** for leadership, PI's, peers, etc.
- Beware the minority tax!

MORE DISABLED PEOPLE ARE ON THE WAY!

- **Universal design** eliminates barriers for everyone



MORE DISABLED PEOPLE ARE ON THE WAY!

- **Universal design** eliminates barriers for everyone
- Accessibility goes beyond the physical
- When possible, avoid “band-aid fixes”
- Ensure inclusion of disability in **DEI efforts**

MENTORSHIP IS INVALUABLE AT ALL CAREER STAGES

- Being disabled can be isolating
- We don't enter spaces with the **institutional knowledge** needed to solve our problems
- There are additional unknowns at each step in a disabled scientist's career
- **Foster opportunities** for wisdom to spread

TO BE ANTI-ABLEIST, THE SCIENTIFIC ENTERPRISE MUST CHANGE

- We must all **re-envision** what science can look like
- Our science does not come before our bodies and our wellbeing
- Equity efforts must be **multiscale**
- *“Nothing about us without us”*

QUESTIONS FOR REFLECTION

- What biases do I hold? How do they effect my view of what “good science” is?
- Does my department/institution actively support the equity of disabled scientists? What barriers exist? If I don’t know, who can I ask?
- Where do I have the power to make change and support others?

We’re all responsible for creating an anti-ableist environment for ourselves and our peers

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THANKS !

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