



The Social Responsibilities of Scientists in the Digital Age

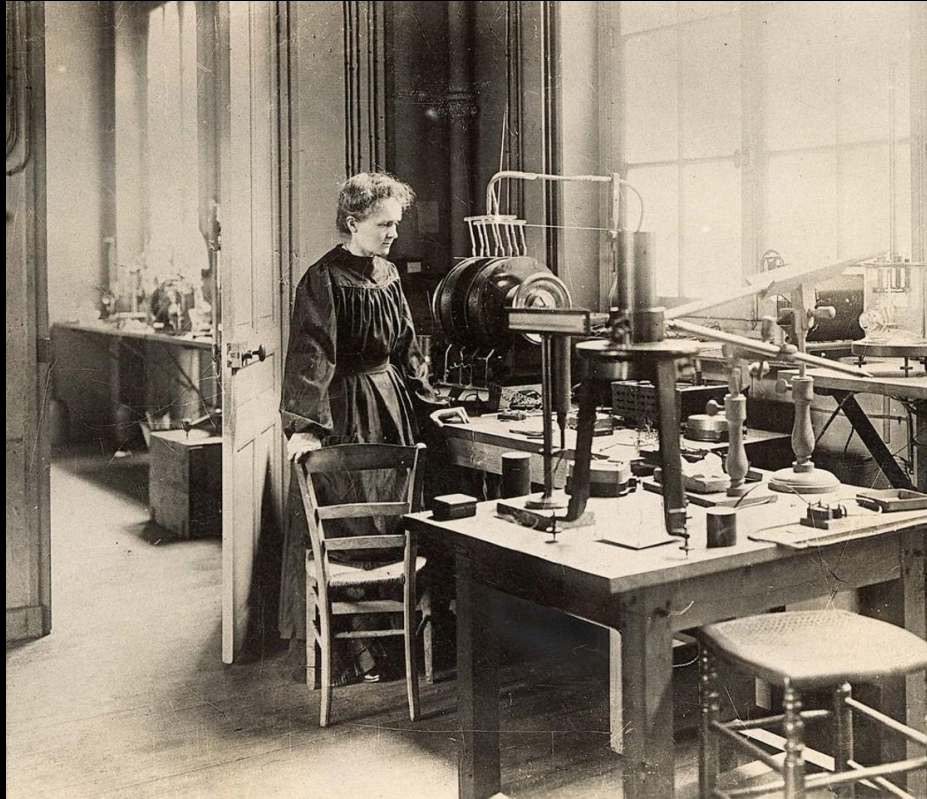
Hans Akkermans

**2nd ACM Summer School on Digital Humanism
September 2023**

Guess Who ... ?



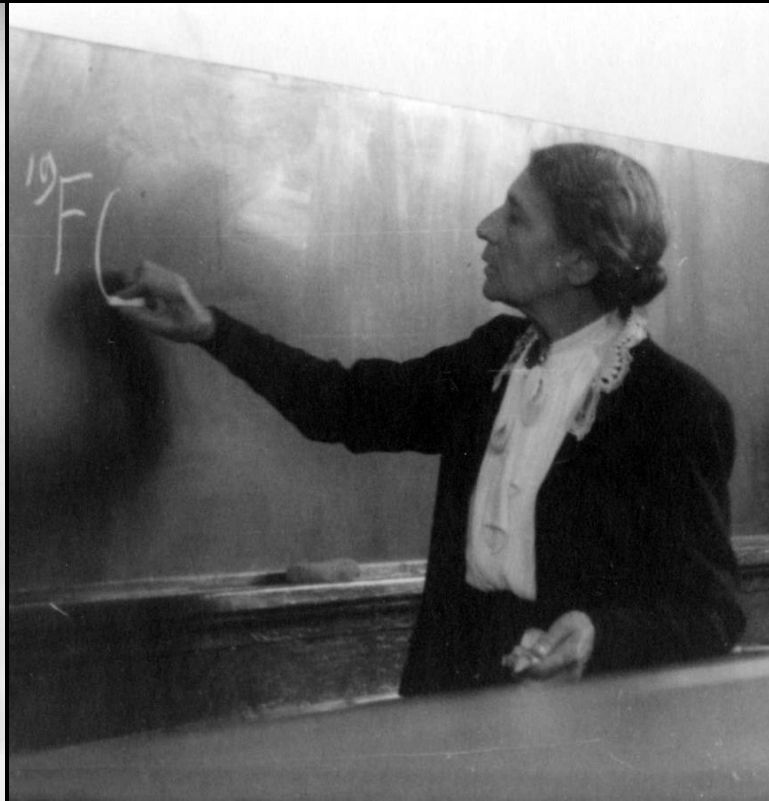
Guess Who ... ?



Guess Who ... ?

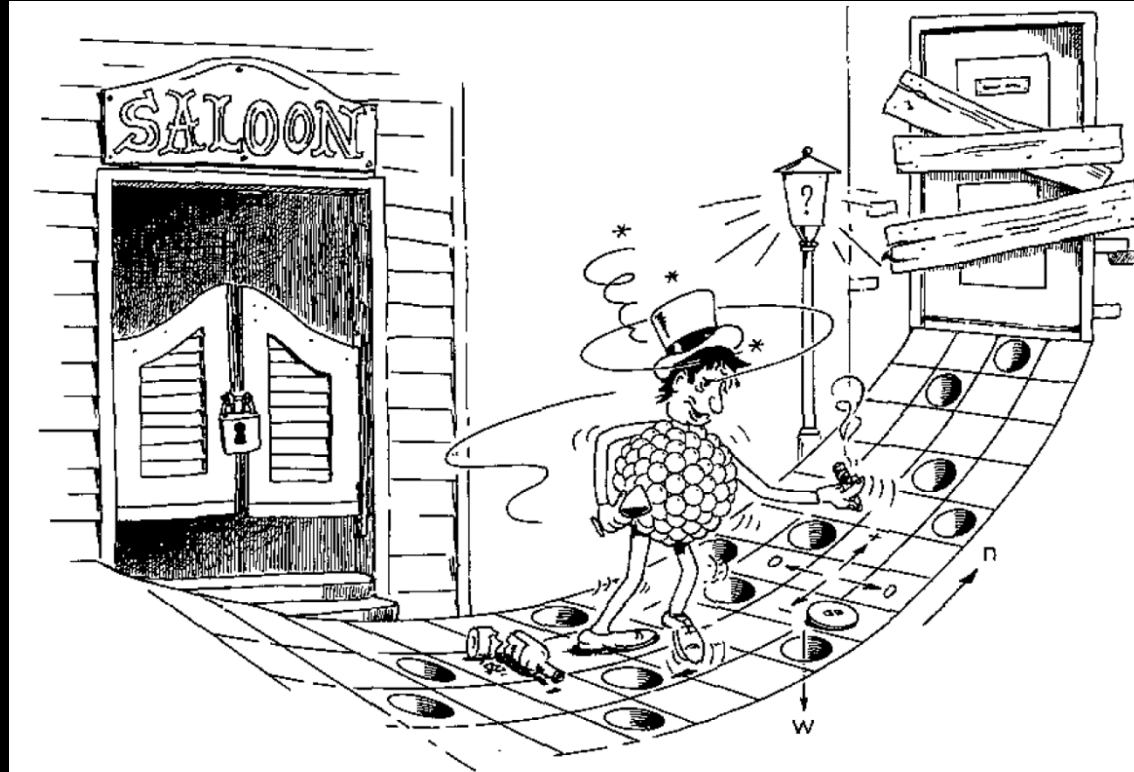


Guess Who ... ?



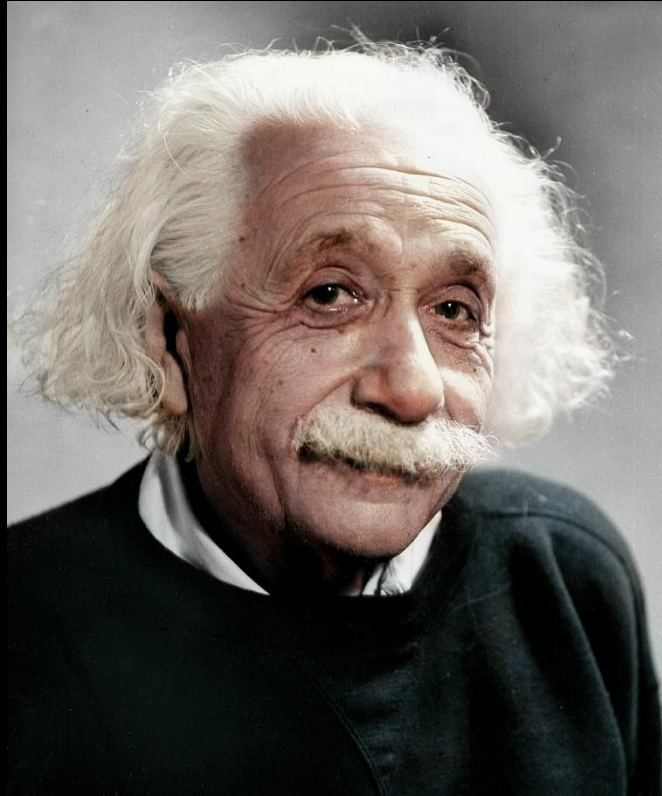
Nature, 11 Feb 1939

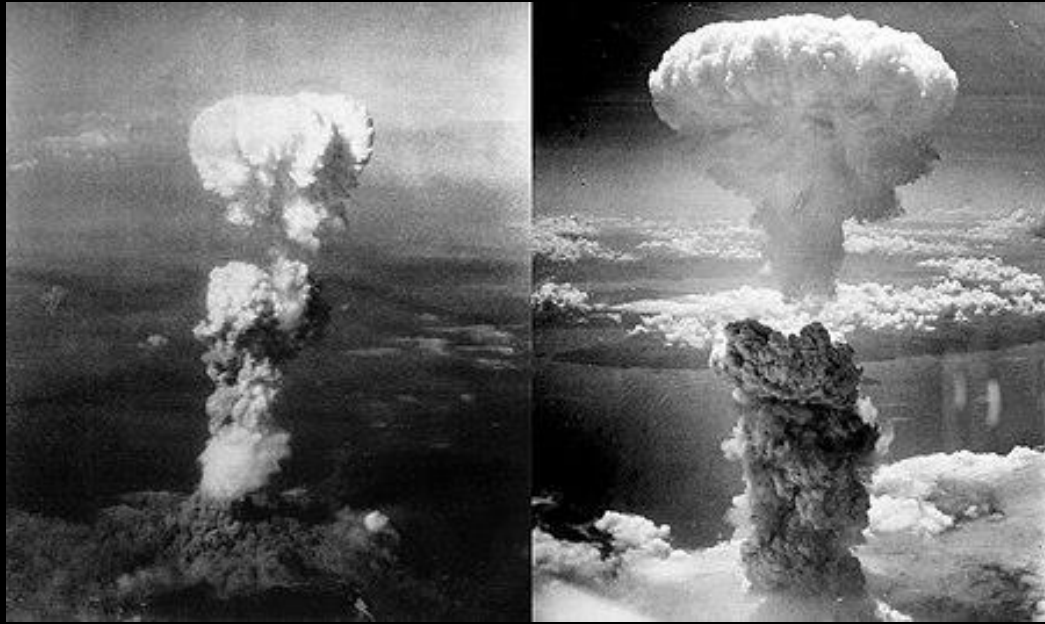
DigHum Summer School Bonus: Crash Course Nuclear Reaction Physics



Wim Tukker,
31 August 1982

Guess Who ... ?





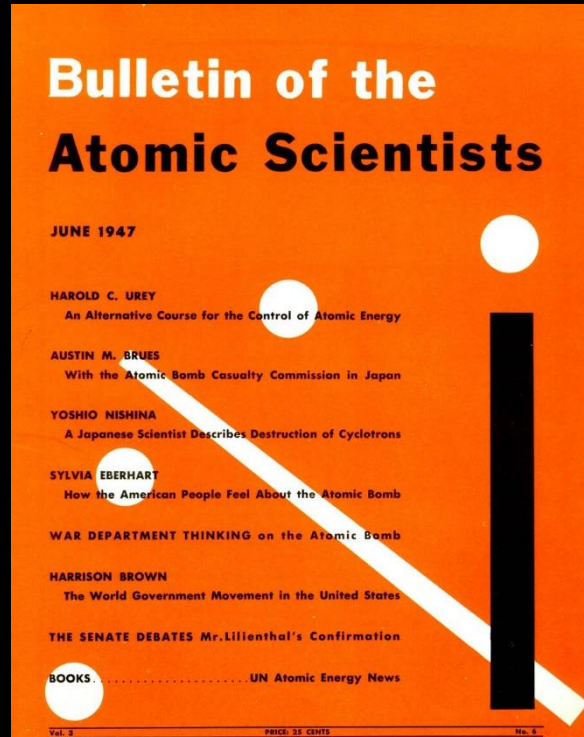
Robert Oppenheimer:

*(Bhagavad Gita,
Mahabharata):*

"Now I am become Death,
the destroyer of worlds."

“Doomsday Clock” since 1947

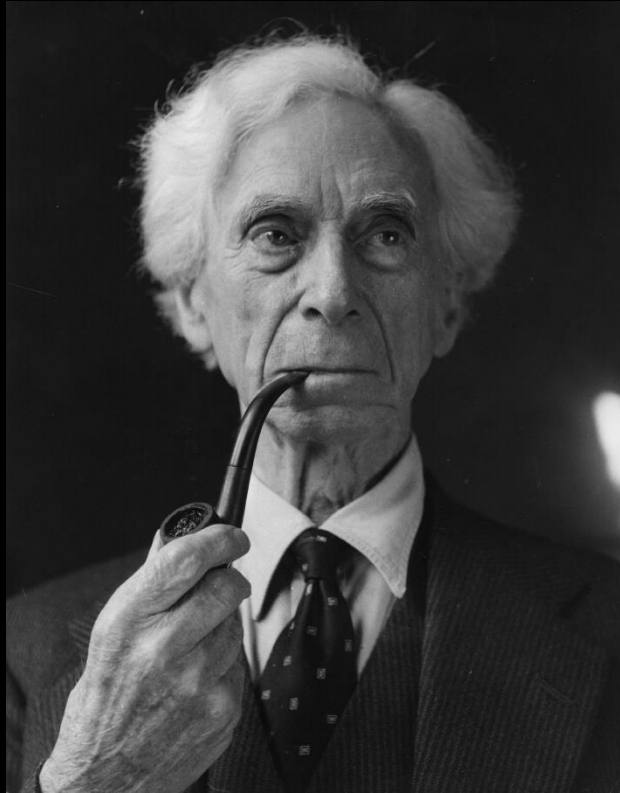
Bulletin of the Atomic Scientists



Guess What?



Guess Who ... ?



Social Responsibilities of Scientists (Bertrand Russell, 1960) 1/2

- 1. “The scientist is also a **citizen**; and citizens who have any special skill have a public duty (...) that their skill is used in accordance with the public interest.”
- 2. Scientists and technologists possess **special knowledge** in their field. This position of knowledge brings with it a different position of **responsibility** in the public societal debate, also as seen in the public eye.

Social Responsibilities of Scientists

2/2: Scholarship-with-Citizenship

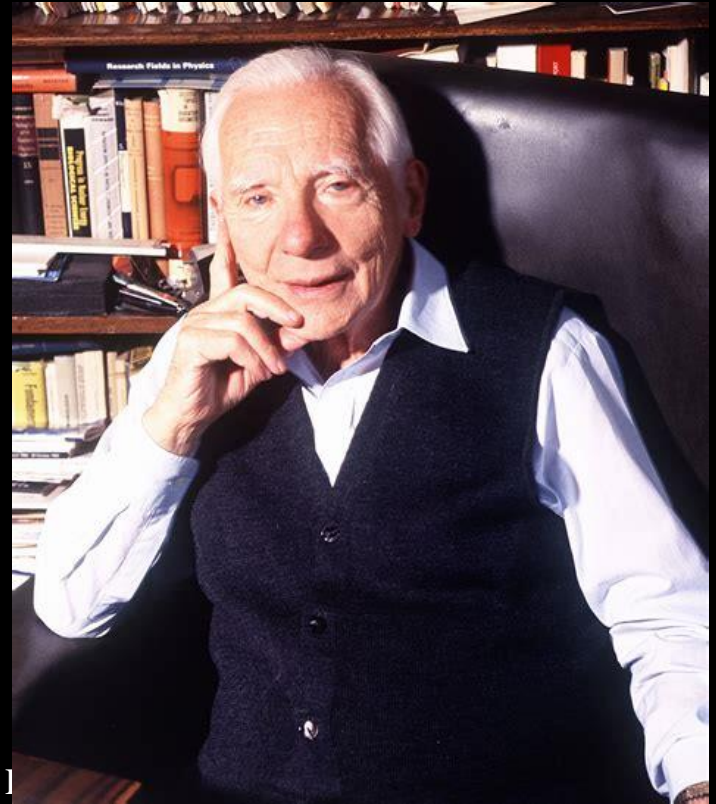
- **Different avenues** are open for scientists and technologists:
 - (a) Education:** Educate the general public as well as policy makers and politicians on the societal impacts of technologies that need to be addressed.
 - (b) Research:** Investigate and explain to the general public and society at large what will be or might be the (also unintended) consequences or impacts of technologies in the (near) future.
 - (c) Application:** urge for and, insofar as possible, work on beneficial applications of technology and counteract harmful ones.
 - (d) Policy:** from a sound knowledge base, contribute to formulating sound and effective policies regarding the application and governance of advanced technologies.

Russell-Einstein Manifesto (1955)

- “In view of the fact that in any future world war, nuclear weapons will certainly be employed, and that such weapons threaten the continued existence of mankind, we urge governments of the world (...) consequently, to find peaceful means for the settlement of all matters of dispute between them.”
- “We appeal, as human beings, to human beings:
Remember your humanity and forget the rest.”

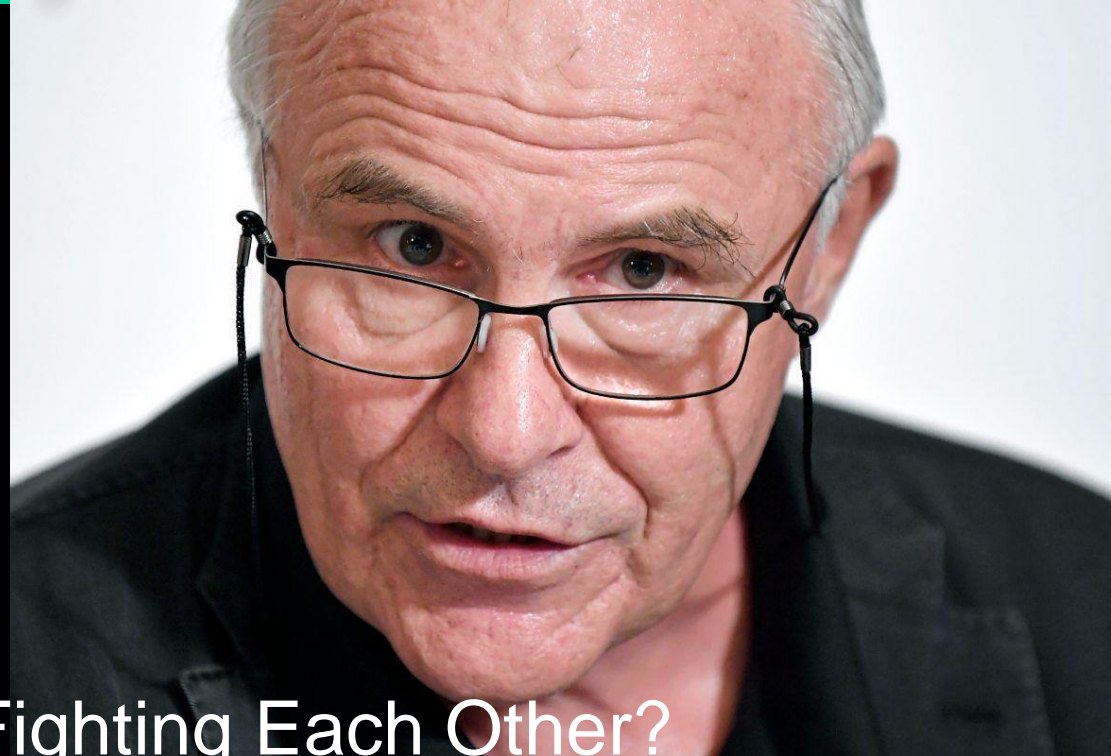
Guess Who ... ?

- Pugwash conferences
- Nobel Peace Prize 1995



Guess Who ... ?

- Atomic Age:
- “One World or None”
- Digital Age:
- One World or Many, Fighting Each Other?



United Nations SDGs and Digital Technologies

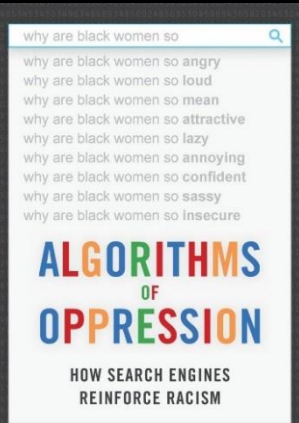
... the world ... a
better place ...



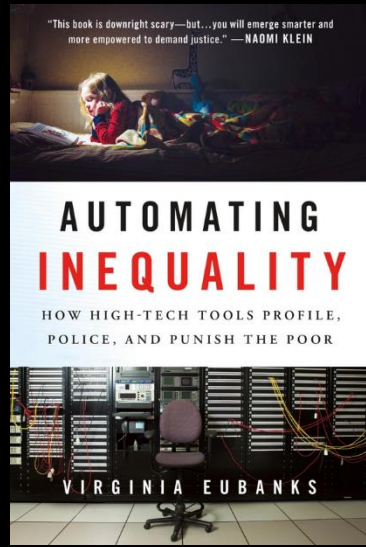
Inequalities & Bias (SDG-5 & SDG-10)



- Noble, 2018
- Eubanks, 2017
- Broussard, 2023



“The VU proctoring software didn’t recognize me as a human being”, Robin Pocornie, bio-INF student VUA, 15 July 2022

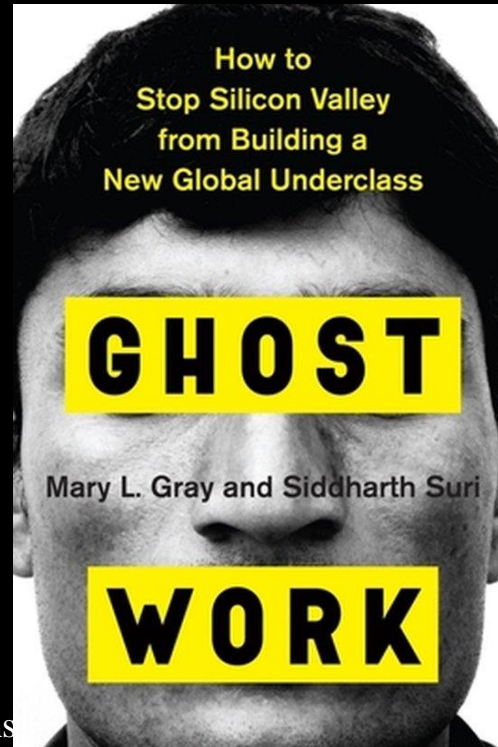
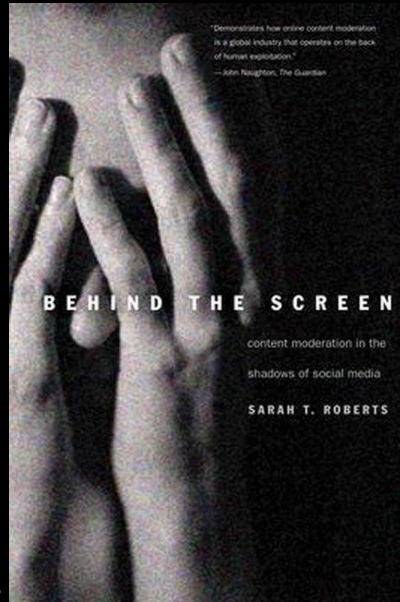


Decent Work & Economic Growth (SDG-8)

8 DECENT WORK AND
ECONOMIC GROWTH

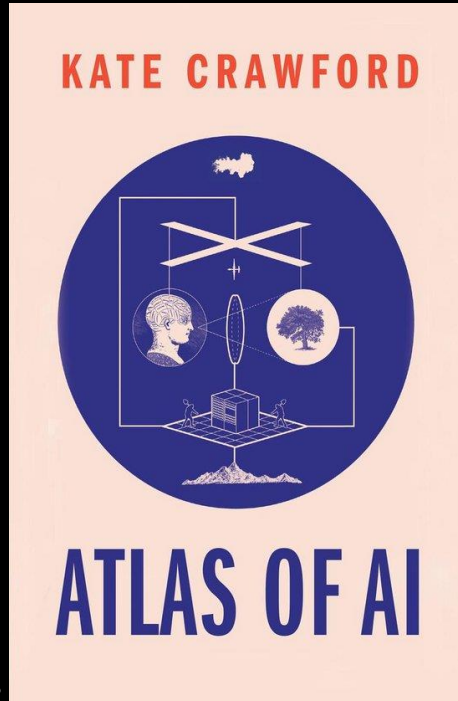


- Gray & Suri, 2019
- Roberts, 2019



Natural Resources, Energy and Climate Action (SDG-12, SDG-13)

- Crawford, 2021

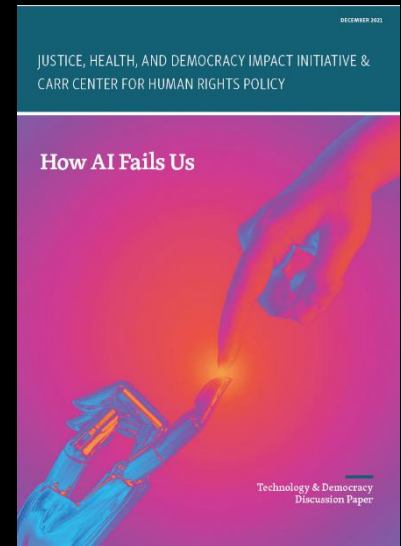
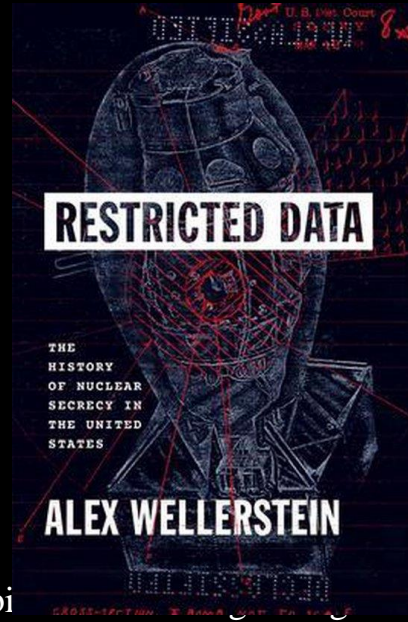


Peace, Justice & Strong Institutions (SDG-16)

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



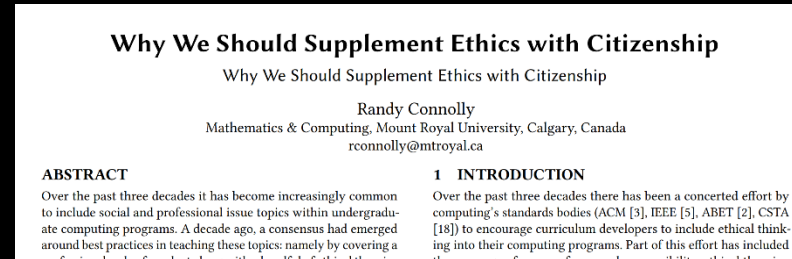
- Democratic Sustainability:
 - *DigHum AI Summit, July 2023 (dighum.org)*
- Siddarth et al, 2021
- Wellerstein, 2021





To Think About 1/3: Ethics

- Issues go beyond the individual level
- Social, community, society, (global) citizenship
- Systemic nature of issues
- Contextual
 - *Example: AI in the West vs. AI in the Global South*



To Think About 2/3: Action

- (usually attributed to Albert Einstein)
- “The world will not be destroyed by those who do evil, but by those who watch them without doing anything.”

Neurath's Boat (1913/1921)

Otto Neurath (co-founder Vienna Circle)



- “We are like sailors who on the open sea must reconstruct their ship but are never able to start afresh from the bottom. Where a beam is taken away a new one must at once be put there, and for this the rest of the ship is used as support. In this way, by using the old beams and driftwood the ship can be shaped entirely anew, but only by gradual reconstruction.”

