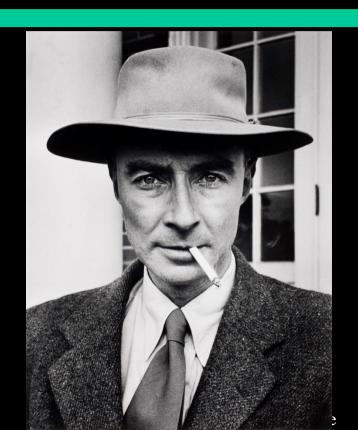


The Social Responsibilities of Scientists in the Digital Age

Hans Akkermans

2nd ACM Summer School on Digital Humanism September 2023



HansA, 08 Sep 2023

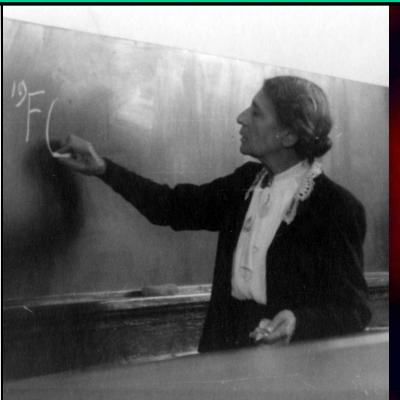






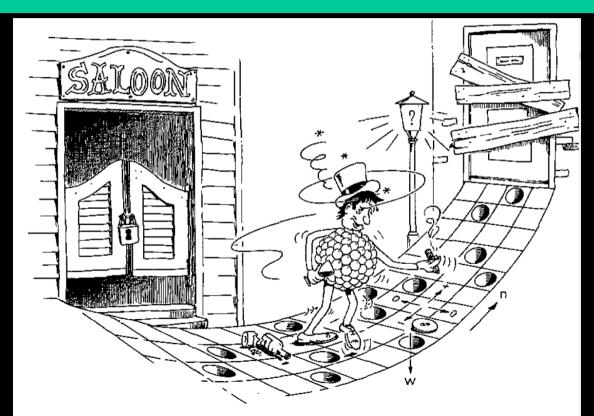
ies in the Digital Age HansA, 0



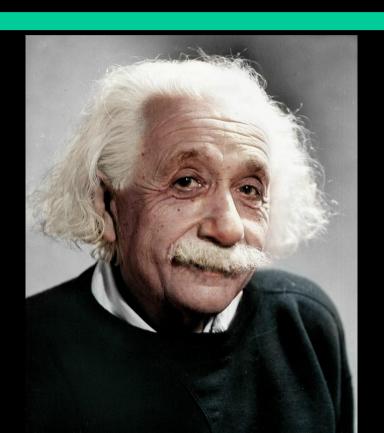




DigHum Summer School Bonus: Crash Course Nuclear Reaction Physics

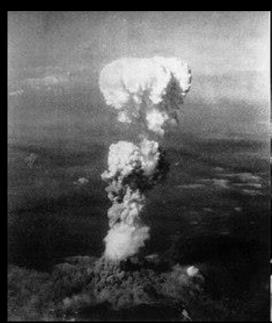


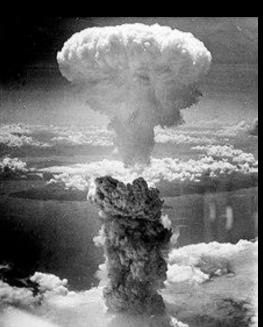
Wim Tukker, 31 August 1982



HansA, 08 Sep 2023





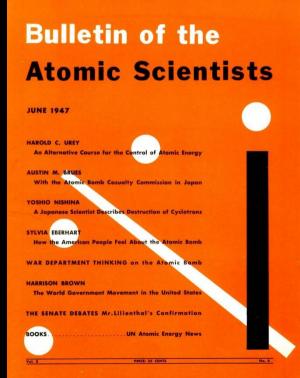


Robert Oppenheimer:

(Bhagavad Gita, Mahabharata):

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

"Doomsday Clock" since 1947 Bulletin of the Atomic Scientists

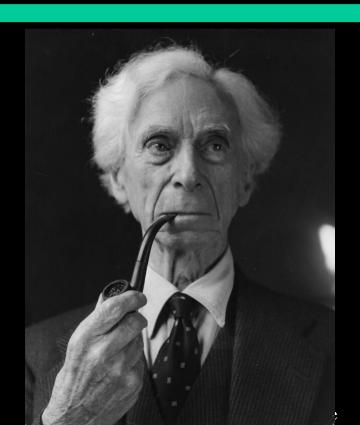


HansA, 08 Sep 2023

Guess What?



HansA, 08 Sep 2023



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.

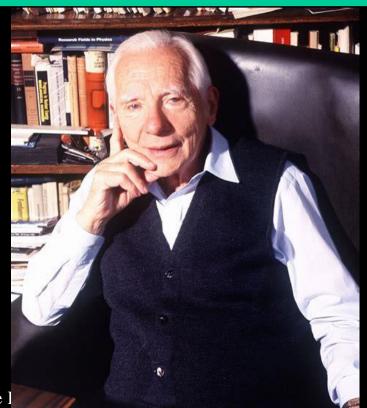
Russell-Einstein Manifesto (1955)

• "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."

Pugwash conferences

Nobel Peace Prize 1995



- Atomic Age:
- "One World or None"



One World or Many, Fighting Each Other?

United Nations SDGs and Digital Technologies

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

SUSTAINABLE GALS DEVELOPMENT GALS





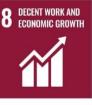
































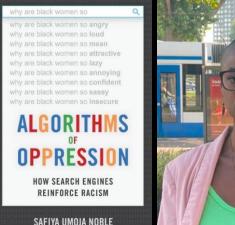
Inequalities & Bias 5 (SDG-5 & SDG-10)

- **5** GENDER EQUALITY

REDUCED INEQUALITIES



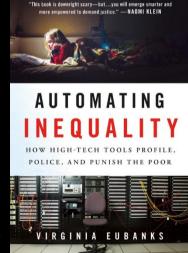
- Noble, 2018
- Eubanks, 2017
- Broussard, 2023







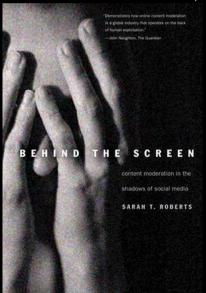
"The VU proctoring software didn't recognize me as a human being", Robin Pocornie, bio-INF student VUA, 15 July 2022 ocial Responsibilities in the Digital Age

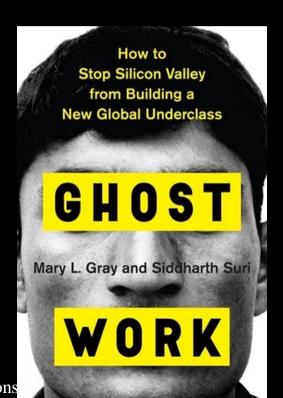


Decent Work & Economic Growth

(SDG-8)

- Gray & Suri, 2019
- Roberts, 2019



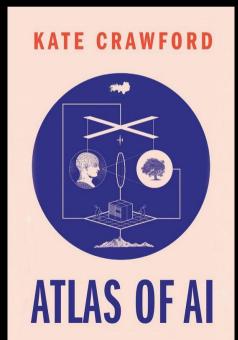


B DECENT WORK AND ECONOMIC GROWTH



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

• Crawford, 2021

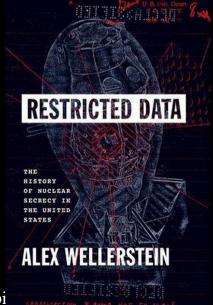






Peace, Justice & Strong Institutions (SDG-16)

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









To Think About 1/3: Ethics

Fully appreciating the overarching scope of 65 requires weaving more than ethics into the reigning curricula.

DY RAMEV CONNOLLY

Why

Computing
Belongs

Within the Social Sciences

Issues go beyond the individual level

Social, community, society, (global) citizenship

Systemic nature of issues

Why We Should Supplement Ethics with Citizenship

Why We Should Supplement Ethics with Citizenship

Randy Connolly

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1 INTRODUCTION

Over the past three decades it has become increasingly common to include social and professional issue topics within undergraduate computing programs. A decade ago, a consensus had emerged around best practices in teaching these topics: namely by covering a

ABSTRACT

Over the past three decades there has been a concerted effort by computing's standards bodies (ACM [3], IEEE [3], ABET [2], CSTA [18]) to encourage curriculum developers to include ethical thinking into their computing programs. Part of this effort has included

- Contextual
 - Example: Al in the West vs. Al 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."





