Agenda
Local knowledge

1. Final poster reminder
2. Expertise
3. Citizen science
4. Group discussions

Posters

- Posters are due **Monday, Dec 2** at 23h59 on Teams
- *Please do **not** include your name or ID number on the poster*
- You will receive a link to the 'virtual' poster session and four peer-evaluation assignments
- Peer evaluations are due **Friday, Dec 6** (completing this is worth *2.5%* of your total course grade)

Evaluation criteria

- Knowledge and presentation of the topic (20%)
- Clarity and strength of argument (24%)
- Engagement with course themes (24%)
- Clarity of visual presentation (16%)
- Appropriateness of references (16%)

Expertise

EXPERTISE

Scientific knowledge is political

- State actors (policymakers, regulatory agencies, local governments) frequently *consult* with scientific experts.

- Governments *utilize* scientific language and findings to *justify* policies.

Legitimate expertise

- What makes someone an 'expert'?
  Who has the 'correct' expertise on a subject?

- The ideas from this class should make it clear that there are *no straightforward answers* to these kinds of questions.

  e.g. Haraway (1988), Callon (1984), Adams (2002), TallBear (2013), ...

Traditional (representative) democracy

- *People* (individuals & communities) are represented by elected officials.
- *Nature* (the non-human) is represented by scientists.

Deliberative (participatory) democracy

- Citizens (non-scientists and non-politicians) are directly involved in political decision-making.
- Laypeople assess the legitimacy and consequences scientific and technological options discursively.

"I am not arguing that an average citizen is able to design a nuclear reactor or a river dike, but I am arguing that more is involved in designing large projects such as nuclear power stations and water management systems than is described in the engineers' handbooks" (Bijker 2001, pp 31-32)

Bijker, Wiebe E. 2001. "Understanding Technological Culture through a Constructivist View of Science, Technology, and Society." In Visions of STS: Counterpoints in Science, Technology, and Society Studies, edited by Stephen H. Cutliffe and Carl Mitcham. State University of New York Press. muse.jhu.edu/book/9022.

Citizen science

Citizen science is the "doing" of science by non-scientists (laypeople)

- *Citizen science is a very broad concept.*

- Public science, participatory science, civic epistemologies, crowdsourcing, …

Classifying citizen science

- Technoscience is multifaceted, and laypeople can be involved in any aspect of it.
- Allen describes **4 "levels" of public participation in science**.

  (from Irwin 2015 and Haklay 2013)

Level 1 Crowdsourcing and public data collection

Shadows on Stone: Identifying Sing Sing's Incarcerated
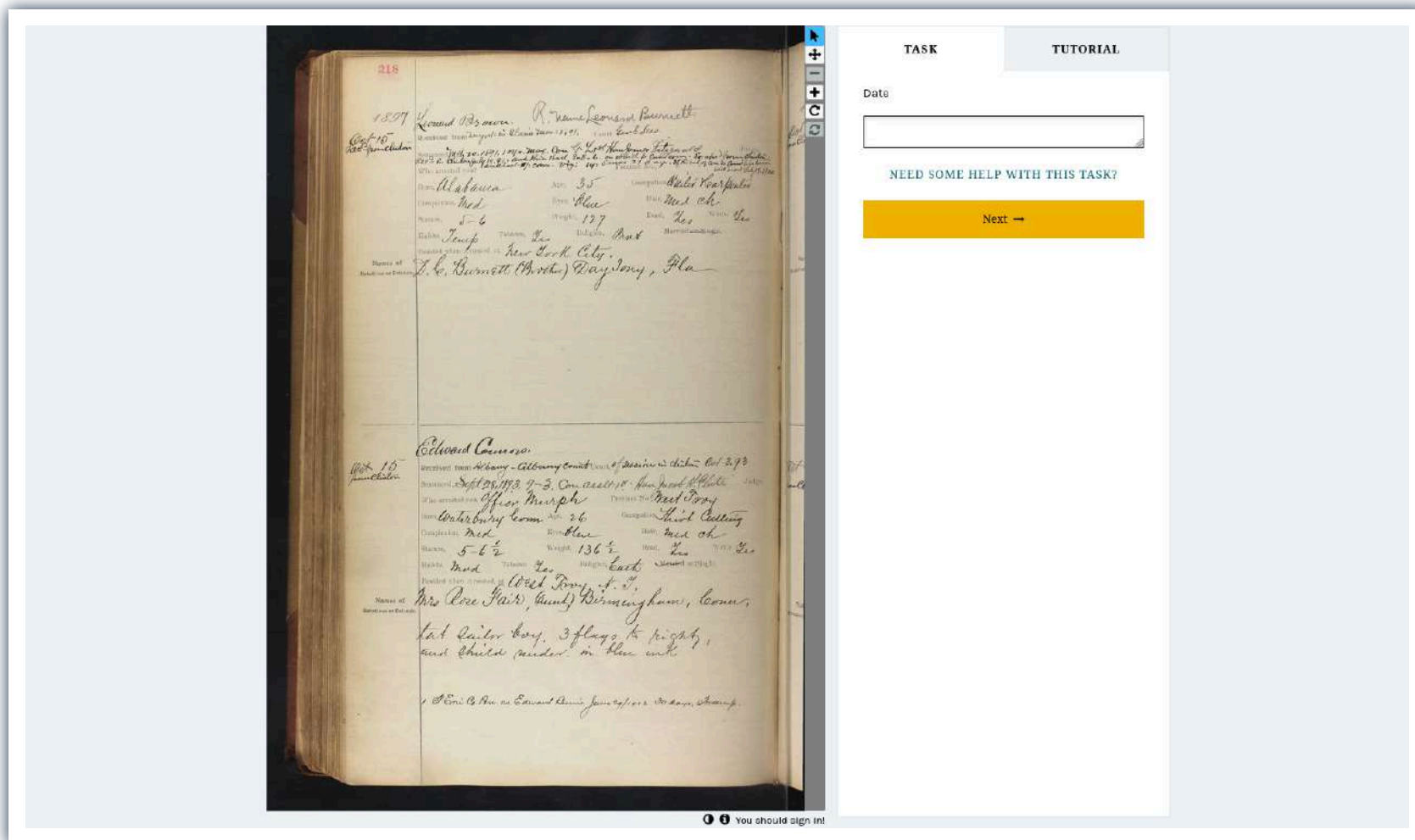
Level 2 Public arbitration of scientists' research

Danish 'consensus conferences'

- Model originally conceived by the Danish Board of Technology
- Panel of non-scientists arbitrates between diverse scientific research on a topic
- "Public trial" of scientific findings

Levitt Center's 2019 consensus conference: "Inventing Social Emergency Medicine"

Level 3 Participatory science

Public involvement in both the definition of the scientific *question* and the collection of *data and evidence*

Tracie Johnson demonstrating the drinking water from Potlotek First Nation in 2020

The #FilmYourHospital hashtag aimed to collect evidence that the COVID-19 pandemic is a hoax

Level 4 — Strongly participatory science (SPS)

Incorporates lay expertise in *all aspects of research*.

Image credit

 Elon Musk on YouTube via Esquire

 Still of Doc Brown from Back to the Future (1985) via The Cincinnati Enquirer

 Screenshot via Zooniverse

 Levitt Center

 Photo of Tracie Johnson by Anya Zoledziowski via Vice