Citizen Science as Civic Science:
New spaces for reflexive practice?

CITIZEN SCIENCE IN ALBERTA: CHANGING PERSPECTIVES, BREAKING BARRIERS
MacEwan University

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REFLEXIVITY
To bend back

Reflexivity = reflection + possibility of change

Image source: Clyde Robinson  CC
Note to whoever @PCSTNetwork commented on Gwendolyn Blue’s abstract and suggested removing reflexivity from the title: in this conversation five people came to her talk because it WAS in the title 😊 #PCST2018 chat

Really enjoyed Gwendolyn Blue’s presentation on reflexivity, partly because I’ve grappled myself with the term (and blogged about it here makinggood.design/thoughts/phdpa...) #PCST2018 #scicomm #reflexivity
Citizen science is a social process as much as it is a scientific process

Science and environmental – decision making are social processes too
CIVIC SCIENCE?
“The task of the future is to build knowledge and understanding among and between citizens and scientists, so that the distinctions between the two groups vanishes – so that both become citizen scientists, potentially able to solve our problems together”

Ursula Franklin
DATA COLLECTION AND QUALITY

DOES MORE DATA ALWAYS LEAD TO BETTER DECISION-MAKING?
WHO DEFINES ENVIRONMENTAL PROBLEMS and SOLUTIONS?

FROM WHAT CULTURAL ASSUMPTIONS AND VALUES?
The trouble with wilderness: Getting back to the wrong nature.
Fig 1. Scientists’ prioritization of five communication objectives for online public engagement (1 = lowest priority, 7 = highest priority).

https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0148867
Public Facing Science

"Back stage" Science

Scientific sufficiency
Public deficiency

Uncertainty and ignorance necessary part of science

Bruno Latour - *Science in Action*
Steve Hilgartner *Science on Stage: Expert Advice as Public Drama*
INEQUALITY IN SCIENCE: Not all views considered
MEANING MATTERS

STORIES MATTER
BEAR 71 (National Film Board)
Power matters
Uncertainty and Ignorance Matter
To what extent should citizens be part of debates over knowledge, standards, protocols and policy approaches?

• If the goal is to empower citizens...

• Standards ensure consistency
  • Old practices
  • New technologies
  • Make possible widely shared knowledge

• Standards are social technologies – outcomes of slow painful negotiations

• Standards discipline
  • “technical safety standards (levels of control required to protect against harm) and forms of social order (institutionalized responses to civic and political expectations) operate in any society to sustain one another (Jasanoff, 1988)

• Negotiations over standards matter – to what extent should citizens be a part of this?
VALUES
MATTER

What values for what kind of citizen science?
What values should guide principles?

“skeptical, questioning virtues of experimental turn of mind”?

Openness, transparency, honesty, equality, equity?
Civic science should embrace the modest virtues that underlie the success of both science and democracy.

- Truth is provisional
- Knowledge and power can’t be separated
- Questioning of experts and institutions should be encouraged
- Steps forward may need corrective steps back
- Technology and information won’t solve problems on their own
- Understanding history and culture are as important as data
- Decisions require trade-offs
  - Who will be winners and losers?
- Humility in the face of uncertainty and ignorance
Which path for citizen science?

Integration of citizens into the logic of the present system and bring about conformity to it

AND / OR????????

‘practice of freedom’, the means by which men and women deal critically with reality and discover how to participate in the transformation of their world.

Paulo Freire, Pedagogy of the Oppressed
Thank you!!