

Making and Doing Session: Making Citizen Science through Doing Citizen Science

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Citizen science is a topic of growing interest among both STEM researchers and STS scholars, the latter of whom have offered critiques of the term “citizen science” as well as its practice. Among these questions are the following: who decides which science gets done?

Our making and doing session will be about interrogating citizen science through practice. Enclosed in this packet is a fake grant proposal. Participants in our workshop will form teams to respond to the proposal. Two roles are defined for teams: experimental designers and citizen scientists.

Designers will write an experiment (within the confines of the proposal) and leave it for citizen scientists to complete. Citizen scientists will then carry out the experiment to the best of their ability using the equipment that is available.

At the end of the session, teams will be invited back for a discussion.

National STS Foundation Grant Award

NSF Org: NSF Department of Citizen Science
Award Number: 48274028372840
Start Date: August 31, 2017 (1pm)
End Date: August 31, 2017 (4pm)
Awarded to Date: \$1.98
Investigators: Brian Callahan
Dylan Rees
Sponsor: 4S University (4SU)
Sheraton Downtown
Boston, MA

Abstract:

This NSF-DCS project seeks to bring together scholars and practitioners to explore environmentally-focused initiatives at the intersections between citizen science, lay participation, and engineering. The project will have three main activities: (1) upcycling, (2) mapping, and (3) discovery. The project will focus on citizen science data collected by teams of uniquely qualified citizens who are acting outside of their normative professional roles. The intellectual merit of this project is to critically engage with the ethical, moral, scientific, qualitative, and quantitative concerns in using citizen science data collection in credentialed scientific research. Previous work does not fully reflect on the challenges and realities of citizen data collection. This project is designed to make you think about the appropriate methods of credit to be given to citizen scientists, through engaging with an “on-the-ground” citizen science project.

The broader impacts of the project include new methods of incorporating lay people into the production and execution of scientific research. Credentialed academics and lay citizens come from many different types of lifeworlds, which may enhance the process and results of scientific research. Lay citizens represent a growing proportion of scientific investigators, and this project aims to find new pathways into incorporating their knowledges.

The project is being funded by the NSF Department of Citizen Science.

1. Upcycling - The creation of something of higher value from something of lower value.

Examples:

- A “separator” that blows air over harvested grain, seeds or some other particulate matter in order to separate heavier particles from lighter ones.
- A planter that can be used for indoor gardening.
- A device that heats water using the sun.

2. Mapping - Measure the value of something in the immediate environment of the conference and attempt to map out how the value changes in space.

Examples:

- Ambient light levels.
- pH of nearby water or soil.
- Air quality.
- Building acoustics.

3. Discovering - Finding out something new about the conference environment

Examples:

- Could you safely plant vegetables nearby?
- Could individuals with a particular mobility issue fully access the building?

Schedule and Planning

- Every 15 minutes throughout the workshop, the investigators (Brian and Dylan) will carry out a “group launch”. Any participants who have gathered for the group have the following two options: 1.) Become a designer group and write an experimental proposal for citizen scientists, or 2.) Become a citizen scientist group and carry out one of the experiments created by the designers.
- The same people are welcome to serve both designer and citizen scientist roles as long as they don’t do an experiment that they themselves designed.
- Citizen scientist groups are highly encouraged to wear funny hats for visibility (provided at the booth).
- Participants who stop by the booth in between launch sessions can either return later on for a launch session or attempt to identify a citizen scientist group to join (find the people with the funny hats).

For the remaining 30 minutes of the Making and Doing Session (3:30pm-4:00pm), we invite participants to return to the booth for an informal discussion about knowledge creation and power in citizen science, exploring your experiences as a designer and/or a citizen scientist. We will try to confront the realities of citizen science, especially surrounding questions of credit. We will attempt to brainstorm the appropriate levels and methods of crediting citizen scientists for the work performed.