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Title. Citizen ethics through design: Perspectives on "citizen ethics" in the development of healthcare technologies

Citizen Science is defined as "the general public engagement in scientific research activities when citizens actively contribute to science either with their intellectual effort or surrounding knowledge or with their tools and resources" (Socientize Consortium 2013, Den Broeder et al. p. 506). Over the years, various methodological strands of citizen science developed. Approaches range from citizens as sensors or crowdsources, to citizens participating in data analysis, to citizens contributing to scientific problem definition and co-constructing knowledge. At the University of Twente, we take an approach to citizen science that focuses on the development and implementation of health technologies, such as the *handscan* and the app "*SamenGezond*" (Healthy Together) and seek to involve in particular citizens of the Twente region.

In this workshop, we want to focus on the design of healthcare technology, where a citizen science approach could represent a methodological Copernicus revolution. We are working towards ways in which citizens get actively engaged in co-shaping human-technology relations by enabling researchers to actively include citizens in scientific endeavors. In addition to co-constructing knowledge, citizens and researchers would also co-shape how the technologies will affect attitudes, norms, and values. This way, citizen science would bring about an awareness of the profound impact of healthcare technologies on society and the human condition. The participating citizens would not only be citizen scientists, but also "citizen ethicists.
What could this "citizen ethics" look like? What would the roles be of the designers, researchers, the academic ethicists, and the citizens, respectively? What are the theoretical, methodological and practical implication of including citizen ethics in a research program?

In the workshop, we will tackle the aforementioned questions. Instead of taking a theoretical approach, we will explore citizen ethics by trying to actually do it, using methods inspired by the mediation theory (Veerbeek,2011). We welcome designers, philosophical ethicists, researchers from other relevant disciplines, to develop and discuss "*technomoral scenarios*" related to the "*SamenGezond*" app together with citizens that we will invite to the workshop. That app promises to be our digital health coach who helps us make healthy choices every day. Potential effects of the app concern how we perceive our own health, what role the demand to live healthily plays in our life, and how we conceive of our own responsibilities regarding our health. After a quick round or pitches to introduce each participant's work/position, we will work in transdisciplinary teams on "*technomoral scenarios*". Using canvases, Legos and other materials, we will attempt to visualize and anticipate how the app will mediate the users' moral perceptions and actions by tangibly laying-out the "*technomoral scenarios*". Finally, we will reflect on the process and outcome of the activity. The goal is to understand how involving citizens in the design process enhance citizen's freedom and self-reliance.

Keywords: citizen science, citizen ethics, healthcare technologies, technomoral scenarios, design.

Addendum:

The workshop can be carried out online and offline. Online we will use free software for digital scenario making (e.g., Mural) and a video-chat software as per conference instructions. We will make available links to join the online discussion. The organizers have acquired substantial experience in facilitating an online workshop for a non-specialized audience.
Offline we expect to work in a room with a projector. We will bring props and equipment. We will in teams respecting the 1.5 meter distance and the safety measures in place for the Corona crisis.

Tentative program:

1. Welcome and Introductions
2. Participants pitches (2 minutes per participant)

3. Division in teams
4. What is a technomoral scenario?
5. Break
6. Technomoral scenario activity
7. Reflection
8. Wrap-up and follow-up
9. Virtual or in-person drinks