

Open and participatory citizen social science for evidence-based decision making

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Abstract

How can we best combine citizen science and participatory social research to produce benefits for involved citizens and communities, researchers, and society at large? An open and participatory citizen social science enables citizens to co-design and intervene in evidence-based decision-making processes by combining diverse modes of participation in many phases of research from setting the research agenda, contributing e.g. to the design of indicators, policy measures, and community action, to evaluating the outcomes. We are working in an international partnership on a citizen social science framework that combines approaches from open science, citizen science, participatory social research and data activism.

1 Introduction

In the last years we have witnessed a boom of citizen involvement. Facilitating the inclusion of individuals or groups into decision making has never been so important as today. Furthermore, socio-technological innovations in digital interaction have paved the way for new opportunities for participation and methods of intervening into social behaviour (Mayer 2015b). At a time of deep-set social challenges, government spending reductions, falling trust in democracy, and growing scepticism towards "expertise", new ways of conducting research to deliver demonstrable social impact are needed. By introducing citizen science strategies into social research and combining them with already existing and often long standing experimental and participatory methodologies pressing societal challenges can be more effectively addressed.

2 Towards Social Citizen Science

In this contribution we apply a working definition for "citizen social science" as a form of open and participatory social research that directly involves citizens and communities in the research process, including research design and evaluation, with the aim of creating (1) knowledge valid for every participant for decision making and (2) data and tools to intervene and monitor decision making processes. Citizen social science is acting at the interface of science, policy and society, and can be mobilised to tackle a broad range of societal challenges. In many initiatives and projects not yet labelled as citizen social science, researchers and stakeholders have gone beyond the concept of the citizen as data collector or social sensor and have developed approaches for civic mobilisation, aiming at legal or political influence of civic activism and citizen generated data (Milan & van der Velden 2016).

3 Open Science

Whereas the open science movement commonly strives to increase reproducibility, accountability, re-usability, collaboration and societal participation in science (Mayer 2015a), the suggested citizen social science approach proposes to widen these objectives to participatory settings of data-driven decision making beyond academic realms. Open data, open method, open evaluation and open education need to be reconsidered in the context of citizen social science. What does it mean to make data and methods re-usable and assessable not only for social scientists but also for stakeholders taking part in the creation of those data? Principles of open

and collaborative evaluation need to be defined in order to empower participants and respect stakeholder's rights at the same time.

4 Citizen Science

Citizen science (CS) builds on several traditions, from crowdsourcing data collection in environmental research, computational social science to participatory action research (Purdam 2014, Heiss & Matthes 2017). However, most CS projects follow a scientific agenda. Scientists are the main drivers and creators of knowledge.

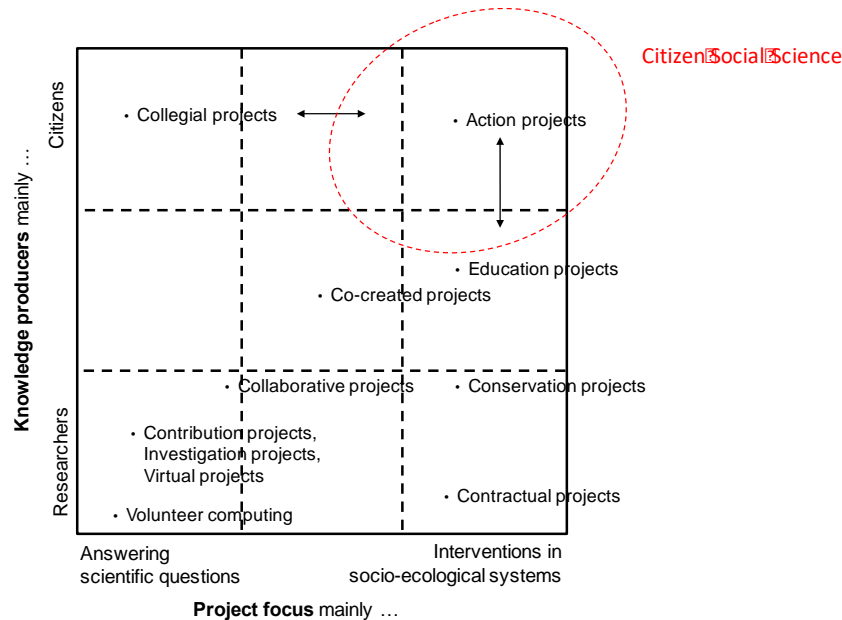


Figure 1: Types of citizen science projects Source: Schäfer and Kieslinger (2016:3)

Further up and right on the axes, citizens and societal issues gain more influence in the research process. In the upper right corner, we find projects that involve citizens in both, agenda setting and in knowledge production. Therefore, we situate our approach to Citizen Social Science there, as we believe it adds important dimensions to the democratisation of science (Serrano-Sanz et al. 2014). There is broad consensus that participatory approaches could foster active engagement instead of passive audiences and co-shape social innovation. Citizen science also provides big opportunities to open social science at large, with the social sciences being rather at the margins of both the open science and the citizen science discourse. Moreover, our approach aims at integrating citizens and communities in the research process by fully acknowledging ethical issues for transparent decision making and citizen involvement in policy making.

5 Participatory Social Research

Before there was the label citizen science (Irwin 2002, Bonney 1996), a widespread movement aiming at opening the research process to non-scientists and democratizing the scientific research process already existed. In the social sciences participatory approaches such as participatory action research (PAR) paved the way for our contemporary understanding of participation in citizen science. PAR consists of a set of approaches that are emphasising the involvement of the research subjects on equal footing into the research process as co-researchers (Whyte 1990, Fals-Borda & Rahman 1991). The methods developed in PAR are highly interventional and performative, seeking to collaboratively understand the social phenomena by changing them and reflecting the interventions. Common principles of PAR are thus part of our understanding of citizen social science and can especially enrich it at the baseline with their reflexive capacity for co-evaluation.

6 Data Activism

Data literacy, participatory datafication and data analysis based on Critical Data Studies (Kitchin and Lauriault 2014) can intervene into social policy making and improve participation in open governance processes. Data activism can be regarded as answer to the all-encompassing datafication going on today and its inherent politics of representation (Milan and Velden 2016). Citizens can become “data activists” (Baack 2015) opening up policies, regulations and indicators in order to see how they affect their daily lives, but also to co-create new evidence to inform policy makers. The “data-producers” themselves should benefit from their participation and be able to use their data for empowering their position. Central questions for citizen social science practice in relation to data activism are: How can we best turn data into evidence? How can we combine data activism resting on open social data with the protection of the personal rights of the citizens involved?

7 Conclusion

Citizen social science allows us to bring together the best of both worlds: citizen science and participatory social research and learn about benefits and challenges of openness in participatory decision making. There is great potential for strengthening citizen social science for active social policy making. Different traditions feed into our conceptual understanding of how innovative social scientific practices can contribute to address social challenges in a participatory way. This paper suggests a new citizen social science concept combining elements from open science, citizen science, participatory methods and data activism. With this approach to an open and participatory citizen social science we propose new ways of conducting research to deliver demonstrable social impact and benefits to involved citizens, researchers, and society at large.

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