JCOM

THIRD INTERNATIONAL ECSA CONFERENCE, TRIESTE 2020

ECSA Special Issue

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Abstract

Over 500 delegates took part in the third international ECSA conference in September 2020. Across 30 sessions, as well as keynote talks, e-poster presentations and more informal settings, they discussed and debated a diverse range of subjects related to citizen science. This special edition of *JCOM* brings together some of the central themes that were under the spotlight at ECSA 2020.
Since ECSA 2020 has been one of the first examples of a conference that moved completely online, and it has been considered a big success, we also include the Conference Report, as supplementary material with this editorial.

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Sustainable Development Goals

A major current focus in the field of citizen science is how citizen science can support the Sustainable Development Goals (SDGs). With ten years to go until the SDGs are due to be met, there remain many gaps in the data. Citizen science has both an opportunity and a role to play within this important area. For example, it can provide high-quality data at high spatial and temporal resolutions, and facilitate the implementation of specific goals.

Several talks around this theme explored issues of inequality, in terms of the people actually involved in citizen science activities. Thus, discussions at the conference resonated with the motto of the SDG's second principle: to "leave no one behind". The article 'Agenda 2030's "Leave no one behind" in citizen science?' in this special issue, by Montanari et al. [2021] explores whether this is a realistic aim.

Underlining the political relevance of the topic, the European Commission supported the 'Knowledge for Change: Citizen Science and the SDGs' conference, held in Berlin and online in October 2020, shortly after ECSA 2020. A special issue of *Sustainability* will further stimulate and develop scientific discussion around citizen science and the SDGs [Heigl et al., 2021], while an online survey conducted in 2020 provides valuable empirical data and information on European citizen science projects and their actual contributions to the SDGs [Moczek et al., 2020].

Health

The potential for citizen science in the field of health is another rapidly growing area of interest. This was reflected in the conference programme, with diverse contributions related to this subject. One focused on the field of so-called 'patient science', a new citizen science approach for medical and health research where scientists and citizen scientists co-create, plan and implement research, for example a study on a chronic disease. At the other end of the engagement spectrum, a platform called 'Crowdience' crowdsources information about chronic pain, and reveals the potential for this to identify issues relevant to people's everyday lives.

Citizen science in health research also raises ethical questions, however, and these need thorough consideration. The article 'Investigating the process of ethical approval in citizen science research: the case of public health' by Ficorilli et al. [2021], captures just one of the discussions that took place during the conference. Together, these highlight the potential, and need, for further developments in this relatively new area of investigation, both on the level of projects looking at health issues (e.g., opportunities and project design) and on the meta-level (e.g., wider ethical issues). This topic was one that participants wished to see debated further in future conferences and discussions, together with legal issues that are relevant to, but not limited to, health and citizen science. The formation at the conference of the new ECSA working group, Citizen Science For Health,[1] is a significant step towards making this happen.

Citizen social science

The ECSA 2020 conference included many discussions that fall under the umbrella term 'citizen social science': research that provides an opportunity to focus on the social construction of social reality. This perspective requires interpretation and understanding of socio-cultural meaning, communication and social action. Consequently, citizen social science is well positioned to take citizens' social concerns and issues as its main thematic focal point, and consider citizens' participation as a key feature of all stages of the research process, from project design to co-evaluation of projects. Campos, Monteiro and Carvalho [2021] explore this further in their article, 'Citizen social science or the public participation in social science research'.

The differentiation of terminology between citizen science or citizen social science might not be relevant for all participants. However, it provides socially relevant perspectives to be debated by researchers, policy-makers and funders. Indeed, a survey of conference participants revealed the desire to discuss citizen social science further, including a greater focus on the connection of social movements and citizen science, and how artists contribute to citizen science.

The science of citizen science

As well as considering the application of citizen science in myriad fields, ECSA's biennial conferences also provide a chance to take stock of how the field itself — the science of citizen science — is advancing. Much of the current thinking was captured in the recent book, *The Science Of Citizen Science*, by Vohland et al. [2021], and several of the papers in this special issue offer reflections on this theme.

[1] https://ecsa.citizen-science.net/working-groups/citizen-science-for-health/.

In "Gamification for Social Perception: Introducing Scientific Literacy to Dabblers in Citizen Science", Emilio Velis et al. describe PACMAC, a card-based cooperative card game aimed at introducing dabblers to hypothesis and falsifiability concepts through the visualization of a social perception map.

"Citizen Science Impact Pathways for a Positive Contribution to Public Participation in Science" by Artemis Skarlatidou and Muki Haklay present the H2020-funded DITOs project and discuss the use of logic models in citizen science. They share the project's assumptions, design considerations for deeper engagement and its impact pathways demonstrating how logic models can be utilised in citizen science to monitor programme effectiveness and for their successful implementation.

In "Awareness, views and experiences of Citizen Science among Swedish researchers — two surveys", Pavel Bína et al. show that CS is a far from well-known concept among Swedish researchers. And while those who have heard about CS are generally positive towards it, researchers overall are hesitant to invite citizens to take part in the research process.

Insights from citizen science projects

ECSA 2020 was also a chance for researchers from across Europe to share the latest findings from their citizen science projects. A great many projects were showcased during the thematic sessions and e-poster sessions, and several of these are captured in full in this special issue. For example, Hager et al. [2021] provide insights from WeObserve, an EU-funded project that sought to strengthen the awareness, acceptability and sustainability of citizen observatories in Europe, by establishing a knowledge platform to share and highlight best practices, and to identify and address challenges to inform practitioners, policy-makers and funders of future citizen observatories.

Heinisch's article focuses on the citizen linguistics project 'German in Austria', which tests the co-creation approach — integrating citizens in the entire research process — and combines different forms of public participation, including a "linguistic treasure hunt", in which citizens collect and analyse data on linguistic landscapes [Heinisch, 2021].

Celino et al. [2021] look at a recurrent theme in citizen science: participant motivation. Drawing on their experiences from the TESS network (Telescope Encoder and Sky Sensor), which is focused on fighting light pollution, they present their methodology for studying the motivations of citizen science participants, which uses a conversational survey toolkit called Coney. And Diviacco et al. [2021] examine another topic familiar to many in the field; crowdsourcing. Their article draws lessons from the MaDCrow project (Marine Data Crowdsourcing), an innovative technological infrastructure for the acquisition, integration and dissemination of data on the marine ecosystem of the Gulf of Trieste. As well as gathering data, this tool aims to increase public awareness of environmental Issues, especially climate change.

Conclusions

The articles in this *JCOM* special issue reflect just some of the many that captured the attention of delegates at ECSA 2020. As the citizen science community in Europe shifts its focus to the fourth ECSA conference in 2022, it will be fascinating to see how they have developed over two years, as the field of citizen science expands into new and increasingly diverse areas of research.

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Supplementary material

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