

Social learning in engineering practice: Towards democratic construction of sustainable communities?

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In an era of climate change engineering practices has become pivotal to the construction of sustainable societies. Whilst engineering might enable new ways of living it remains true that sustainable solutions are always embedded in social practices of particular times and places. Accordingly it remains a continuous challenge towards sustainable change to take into account the interplay between technical and social dynamics.

The current landscape contains various opportunities and challenges for doing so. In recent years we have seen an increasing number of public engagement initiatives, one the one hand aiming to further dialogue on science and engineering, while on the other being criticised for not adding much new except science communication to the public. Equally, the flowering of user-driven innovation focusing on specific aspects of incremental technology development has been criticised for not being able to adequately grasp the broader societal aspects in which engineering science operates. Thus, the pressing need to understanding the interrelated dynamics of technical, social and societal aspects enabling sustainable change still remains.

The Citizen Science for Sustainability (SuScit) project sought to develop novel ways for engineering researchers, practitioners and citizens to address this challenge through an action research and public engagement programme aiming broadly to explore community understandings of urban sustainability in order to provide a basis for reflexively identify future research needs and opportunities.

In doing so the SuScit project took a rather distinct approach: First, it sought broadly to address the challenges of sustainability by enabling citizens to explore and articulate local lived experience, rather than building the deliberation on discourses predefined by scientific communities. Secondly, the process aimed to enable exchange of different kinds of human experience; create room for shared reflection; and foster social learning, which could lead to joint action and future projects by linking the knowledge, experience and perspectives of researchers, practitioners and local communities.

Hereby the SuScit project aimed to address issues which were not merely engineering problems but indeed part of democratic and societal challenges. The project in particular sought to address the environmental and social challenges faced by marginalised and deprived urban communities. Understanding the challenges of marginalised communities often represents a particular challenge to academic communities usually having rather different experiences in their personal and professional life. However, these marginalised issues can prove crucial for broader transitions towards urban sustainability.

Aiming to enable social learning on these issues the project was fundamentally based on researchers' capability to learn from engaging with the public as a prerequisite for adding new perspectives to future research and practice. This paper addresses the experiences of doing so by examining the dynamics of social learning processes between engineering researchers, practitioners and local citizens taking part in the deliberations on urban sustainability.