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5th STS Italia Conference

"A Matter of Design. Making Society through Science and Technology"

June 12-14 2014, Milan, Italy

Track 12 - The Return of “Production”. The emerging fabrication models as generators of new socio-technical paradigms

Abstract Title

Back and Forth Between Social and Technical: A Collective Experience in the Transdisciplinary Making of Sustainable Artifacts

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Abstract

From Fablabs to Hackerspaces we now see the emergence of promising venues following open and collaborative frameworks mixing multiple types of knowledge and skills. They are supported by an accessibility of additive and subtractive fabrication machines, open source software and hardware, and many other personal manufacturing tools ushering in low-cost and DiY trends, to create anything from micro controllers and apps, to wearables and tangible devices in the hype of highly anticipated Internets of Everything. And, from academia, business or industry, to lay individuals or pro-amateurs, all are expected to benefit from these spaces and their material and conceptual platforms, as everyone here is ultimately encouraged to learn how to produce, use, share, copy and improve assorted objects or systems. This presentation will focus on a collective experience of learning and making in one of these spaces, by addressing both the final outputs, and the processes that led to, and occurred during STTF2013 Summer School “*Sustainable Technologies and Transdisciplinary Futures: From Collaborative Design to Digital Fabrication*” (<http://sttf2013.iscte-iul.pt/>), jointly organized by VitruviusFabLab-IUL (Digital Fabrication Laboratory) and CIES-IUL (Centre for Research and Studies in Sociology) of ISCTE-IUL (University Institute of Lisbon), with partners as the JRC-EC, and altLab - Lisbon’s hackerspace.

Gathering graduate students, researchers, and professionals from STS, Design, Social Sciences, Humanities, Architecture, Computer Science, Communication and Management, the challenge was to engage all participants within a transdisciplinary collaboration model based on working groups, while generating sociotechnical debates and tangible outputs that could meet concrete social needs. From generative design, qualitative social data analysis, or ethical debates, to digital fabrication, physical computing, or open production exercises, STTF2013 participants worked in sociotechnical processes of discussion, design, and fabrication of environmentally, economically, socially and culturally sustainable prototypes for distinct social groups that pass by, use, or live near two Lisbon’s waterfront territories, Cais do Sodré and Cacilhas, considering issues as cradle to cradle cycles, conviviality, empowerment, modularity, transparency, etc.

Devising these prototypes through such processes allowed for each development stage to be reflected upon, worked, decided and envisioned through a broad spectrum of disciplinary views. And its particular mix of social and technical backgrounds and skills, with citizen needs and local knowledge, resulted in several routes for designing, producing, distributing, and using more appropriate artifacts. But adding issues or people often apart does not only allow methodological sharing or collective work, as it also requires careful attention to divergent goals and backgrounds, dissimilar learning needs, conflicting notions of cooperation, or disparate abilities to use available technical or social tools. The same logic that enables a transdisciplinary creation of artifacts from start to end, also provides insights on the most challenging aspects of mingling conceptual and material processes from social and technical fields in these emerging spaces. An experience such as STTF2013 present us the opportunity to rethink both the embedding of social questions and their connected stakeholders within technological outputs, and the paths that should precede some of the novel heuristic and fabrication frameworks of our nearest futures.