Makerspaces as Knowledge Infrastructures for the Factory of the Future
Raúl Tabarés
Fundación Tecnalia Research & Innovation

Makerspaces, Hackerspaces and Fab Labs have become widespread during the last years all over different cities of the world. These kinds of collaborative spaces equipped with digital fabrication tools and other technological equipment have gained in importance lately because of its potential for renovating education practices, fostering collective open innovation and promoting community resilience. Several stakeholders have adopted particular strategies at the policy level for supporting makerspaces throughout different initiatives in countries like USA, China as well as in the European landscape. The trend towards the institutionalization of maker culture in these countries has been focused in aspects such as education, entrepreneurship and innovation, while stressing the opportunities for transformation that the maker movement can help to flourish. In addition, other initiatives have been also encouraging the collaboration between these communities with established professionals such as designers, artists, artisans or manufacturers. The promotion of these alliances is rooted in the premise that maker communities are composed by a subset of individuals that holds a combination of expertise, attitudes and values that can be beneficial for speeding up innovation cycles, extending their networks and testing new businesses approaches. These open source communities rely on physical spaces as well as digital infrastructures, that host a growing number of shared resources for developing technological artefacts. These assets that are freely available on the Internet and the Web have been commonly argued as representatives of digital commons, which represent knowledge connected infrastructures that these communities use, help to maintain and to grow up. In this paper, diffusion of makerspaces across the international geography is analysed as well as the spread of digital platforms oriented to DIY ethos, and the growing popularity of maker culture in society. The author focuses on the increasing interest of institutions and policy makers in this field and how different hybridisation between these communities and other stakeholders are encouraged for promoting and speeding up innovation. For achieving this goal, partnerships between makers and manufacturers funded by the OpenMaker project are examined in a cross-case analysis. The author reflects on the role of makerspaces as knowledge infrastructures that are widely dispersed but connected throughout digital technologies, and how different projects cultivated in these spaces are proposing alternative itineraries and incentives to the current R&D systems. In this sense, development of future forms of work based in advanced skills, specific knowledge and digital commons are critically examined. The author proposes the metaphor of “Factories of the Future” to critically assess how new forms of work are rising throughout digital platforms, urban labs, and alternative forms of organization, in a transition to a more entrepreneurial and innovative citizenship.

Keywords: DIY, P2P, innovation, digital commons, maker culture

The Collaborative Collective Action in Disaster Situations. The 19S Earthquake in Mexico City
Ligia Tavera Fenollosa
Facultad Latinoamericana de Ciencias Sociales (FLACSO-México)

The work explores collaborative collective action in disaster situations. In particular, it is interested in collaborative collective actions related to the earthquake of September 19, 2017 in Mexico City. The main objective is to reveal the constitution of networks and structures of solidarity bonds that emerged in the hours and days after the earthquake in order to determine, at first, the origin, the trajectory, the organization and the way of operating of the main collaborative collective action initiatives identified in the exploratory approach carried out in a previous work, which revealed the existence of a hundred initiatives of different kinds.
In a second moment, the different dimensions of their possible social impacts at the micro, meso and macro levels will be analyzed. The methodology will be qualitative with in-depth interviews with the participants and will be complemented with the analysis of the digital platforms that support the initiatives.

**Keywords:** disasters, solidarity network, collaborative collective action

---

**Citizen Science in Spain. Social Impact of Science-Society Collaboration**
**Benjamín Tejerina**
Universidad del País Vasco/Euskal Herriko Unibertsitatea

It is now 40 years since Paul Feyerabend published Science in a free society (1978) where he denounced the surprising prestige of science in the West and its incompatibility with a democratic society. Since then, scientific experiences based on the participation in various forms of numerous citizens have continued to increase both in Europe and in the rest of the world (Haklay 2012; Irwin 1995; Irwin and Michael 2003; Lewenstein 2004). This communication has three objectives: 1) to identify the different forms of participation between citizens and scientists (Lafuente 2013; EU 2014); 2) to try to respond to the characteristics, means, purposes, social impacts and resistances of this form of collaborative collective action between citizens and professional scientists; and 3) to present the current debates on the role of participation of citizens in scientific projects in the scientific field.

**Keywords:** citizen science, collaborative collective action, social impact, mobilization

---

**El fenómeno de las Lonjas en Vitoria-Gasteiz** *(Video, 2012, 25’)*
**Benjamín Tejerina, Diego Carbajo, María Martínez and Laurent Leger**
Universidad del País Vasco/Euskal Herriko Unibertsitatea

En los últimos años, grupos de jóvenes de Vitoria-Gasteiz (País Vasco, España) han estado alquilando antiguos locales comerciales como espacios de ocio y socialidad. Se les conoce como lonjas (locales comerciales). Este vídeo trata sobre este fenómeno emergente y trata de fusionar lenguajes sociológicos y audiovisuales.

https://vimeo.com/54550320

**Keywords:** identidad juvenil, transición juvenil, lonjas, sociabilidad

---

**Academies for Solidarity under the State of Exception in Turkey**
**Barış Tuğrul and Evin Deniz**

1Hacettepe Universitesi
2Independent Researcher

This paper examines the Academies of Solidarity founded by purged academics who signed a peace declaration and local political agents as collaborative collective actions in a context of deepening authoritarianism in Turkey. For more than two years, beginning right after the failed coup d’état attempt (July 15, 2016), Turkey has officially been governed under the state of exception during which the government made statutory decrees that are subject to no auditing nor judicial appeal by any means. With the implementation of those statutory decrees, they have massively been purged from Turkish universities due to their leading role in an initiative by signing a petition for peace as the armed confrontation between the state security forces and Kurdish