Grassroots Innovation

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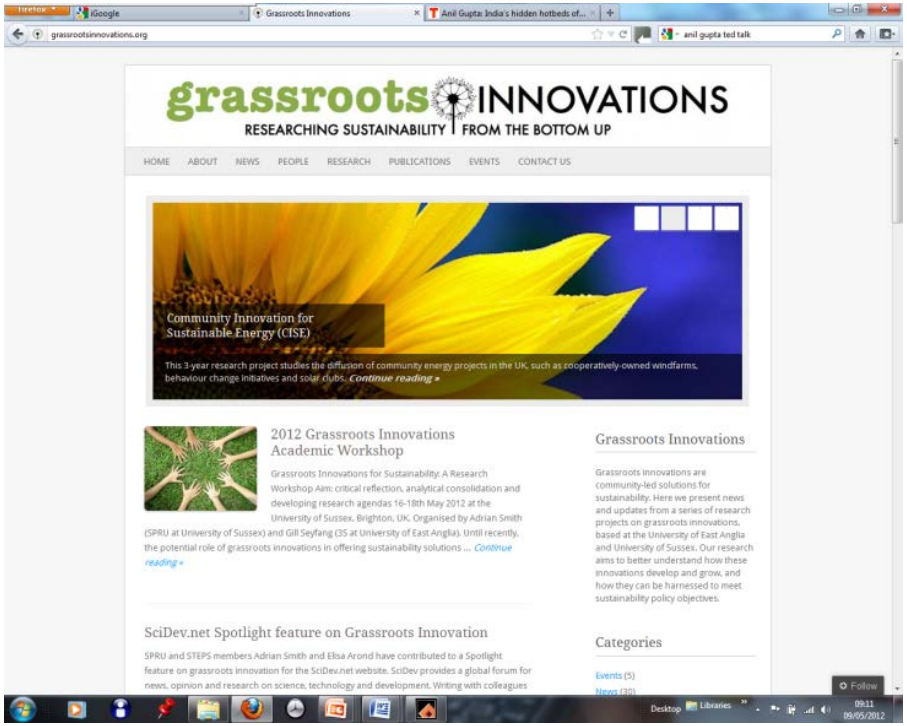
www.grassrootsinnovations.org

Workshop on Makers and Fixers / Circular Economy and Grassroots Innovation

Centre for Sustainable Design, Farnham, 3rd June 2014

Overview …



The first part

[Themes in grassroots innovation research

The second part

[Makers and makerspaces in circular economy

Sources:

[www.grassrootsinnovations.org

Grassroots innovations

[Car clubs

[Solar energy co-operatives

[Refrigeration (*zeer pots*)

[Mobile laundering

[Community currencies

[Wind turbines

[Repair Cafés

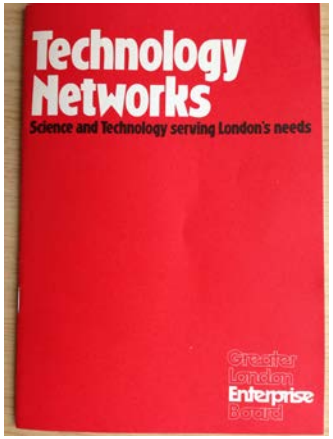
[Equipment adapations

[Eco-housing neighbourhoods

[Rainwater harvesting

[Urban agro-ecology

[Hackerspaces, FabLabs and Makerspaces

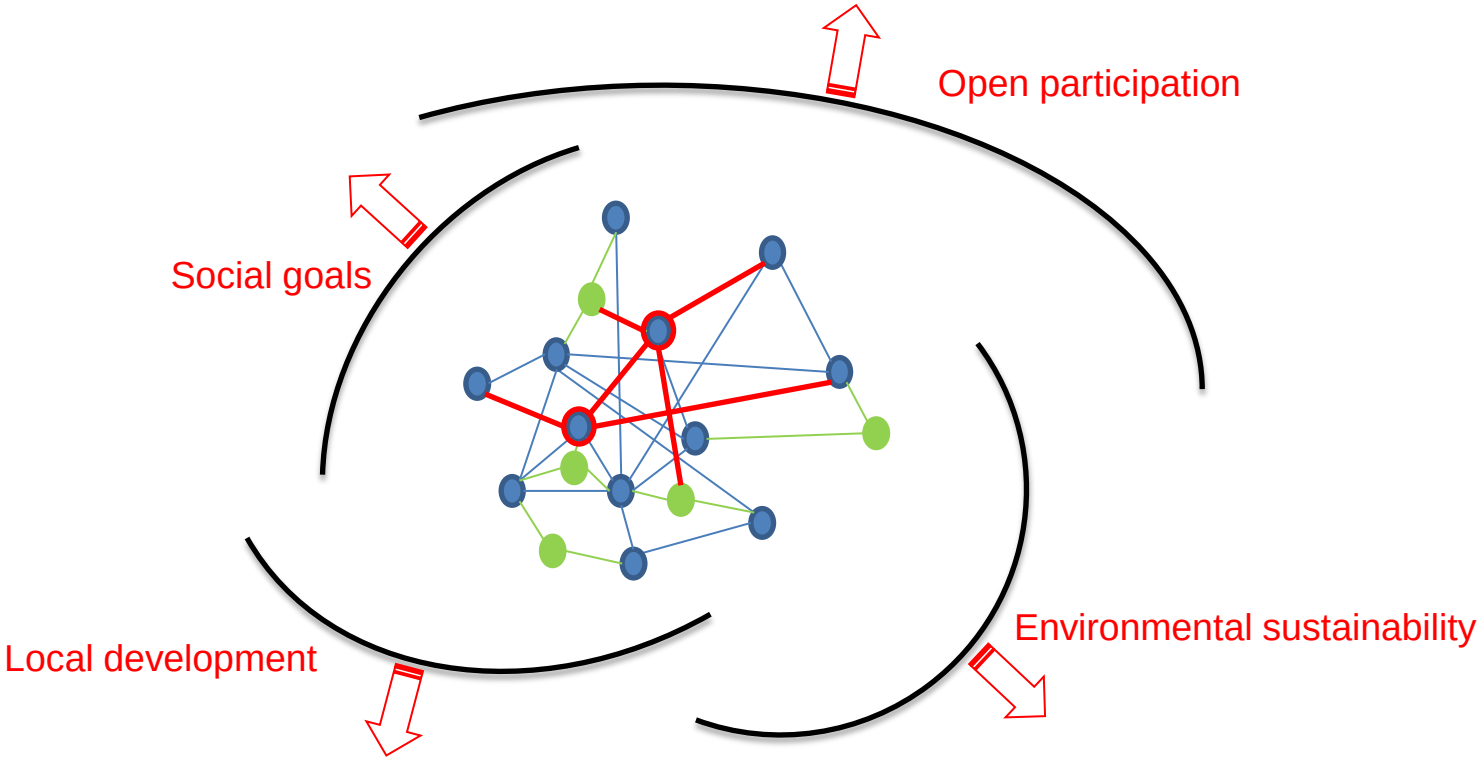


What kinds of innovation emerge in grassroots settings?

- Artefacts (e.g. water-cooled fridges, or upcycled furniture)
- Services (e.g. local food, community energy)
- Infrastructure and facilities (e.g. prototyping support, web platforms, workshops)
- Methodologies (e.g. participatory design, hacking meet-ups)
- Capabilities (e.g. organisational, technical, emotional)
- Identities (e.g. grassroots entrepreneurs, innovation scouts, fixers, makers)
- Concepts and agendas (e.g. knowledge commons, opening-up research institutions)
- Relationships (e.g. peer production, ways of organising, material cultures)
- Contribute diversity for wider change processes




Grassroots innovation movements



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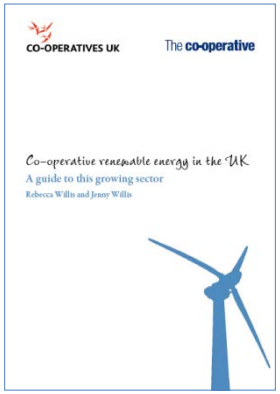
[funding
[supporting
[networking
[partnering
[lobbying
[activism



low carbon communities

Different framings of grassroots innovation influence mobilisation strategies?

[The grassroots ingenuity perspective - people innovating for themselves and their communities

[Movements document, nurture and commercialise these innovations – emphasise artefacts and services

[The grassroots empowerment perspective – inclusive innovation as tool or catalyst for community development, capacity building, and empowerment

[Movements bring initiatives from elsewhere and include local communities decisively in the process – emphasise identities and relationships

[A structural critique perspective – grassroots innovation fails to attend to powerfully constraining economic, political and social relations

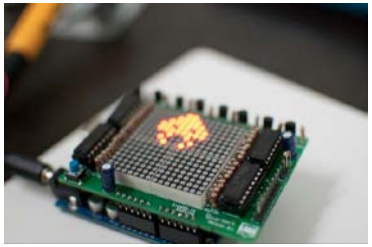
[Radical initiatives makes the abstract structural impediments very visible and suggests wider alliances for movements

Mobilising makers and fixers: what kinds of circular economy?

[Ingenuity framing – how can maker/fixer activities operate as incubators for new discrete practices; scaled-up and -out through business model entrepreneurship?

[Empowerment framing – how can maker/fixer activities be institutionalised into post-consumerist concepts, cultures and systems of sharing, remanufacturing and social economy?

[Critique framing – how are difficulties experienced by makers and fixers rooted in, say, questions of political economies and larger producers dominating circular designs?


CHALLENGES:

how to scale yet remain integral to local process and context sensitivities?

how to build towards radical transformation whilst being relevant and appropriate to neighbours now?

how to connect maker projects to wider social, political and economic mobilisations for the circular economy?

Claims about maker movements and makerspace facilities

[Third industrial revolution (from bits to atoms) – extending digital revolution into the material world (e.g. Anderson 2012)

[Democratising and/or personalising manufacturing – engagement in commons-based peer production (e.g. Benkler and Nissenbaum 2006)

[Unlocking grassroots innovation – educational and accessible digital fabrication technologies (e.g. Troxler 2010)

[More sustainable production and consumption – local manufacturing and post-consumerist activities (e.g. Schor 2010, Thorpe, 2012)

Makers and fixers: what kinds of innovation?

[How do the claims link to the realities emerging on the ground; and what implications for (circular) production and consumption?

[Issues such as sustainability not always the main concern with makers – though what is happening and discussed touches on debates surrounding sustainability issues …

… participation, ownership, skills, fun, identities, and material developments, design ideas, what materials to use, and why… the value of things …

…. what sustainability possibilities are evident?

[In depth study of emerging material cultures and relations with political economies of production and consumption

Conclusions

grassroots INNOVATIONS

RESEARCH BRIEFING 23 May 2014

A World Café event held in Copenhagen discussed possibilities for creativity, inclusion and sustainability in FabLabs, Hackerspaces and Makerspaces

Grassroots digital fabrication in makerpaces

Report from a World Café

Adrian Smith and Sabine Hielscher (SPRU), Sascha Dickel (Technical University Munich), Ellen van Oost (University of Twente), Johan Søderberg (IFRIS)

Around the world there is a flourishing of innovative workshop spaces that allow people to access tools freely and make things in collaborative projects. FabLabs, Hackerspaces and Makerspaces are all examples.

In these spaces people access networked, digital design and fabrication tools and, it is argued, can therefore make almost anything they wish. Ideas, designs, experiences and viewpoints are shared between spaces through on-line social media. Makerspaces are globally connected. Indeed, observers and participants consider makerspaces to connect to and express materially various broader social movements, such as the maker movement, hacking, and free/open hardware movements, to name just a few.

Some makerspaces receive policy attention and institutional support (e.g. through universities, libraries, skills programmes), often for the potential they seem to offer for promoting creativity, innovation, skills, and revitalising manufacturing entrepreneurship. Other makerspaces are self-organised, rely on their own resources, and value their autonomy. There are various combinations in between. In this report we use the term 'makerspace' as a general term for community-based workshops, and recognise the wide diversity that exists in terms of organisation, participation, purposes, settings and histories.

Commentators argue that the international burgeoning of makerspaces presents a variety of possibilities. For some, makerspaces suggest new forms of democratic and decentralised production and consumption. Some argue they can close production-consumption loops locally, and develop more sustainable material relationships. The facilities may cultivate grassroots innovation, and even

Makerspaces allow people to experiment with grassroots digital fabrication

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[How to think about makers and fixers as innovative for circular economies?

[Developing new concepts, methodologies, and processes, as well as novel artefacts, services and techniques

[How to engage with the various visions and aims associated with maker and fixer movements?

[Aims framed as ingenuity, empowerment and critique implies different strategies

[How each connects to realities on the ground is key: material cultures; political economies