Recently, there has been a growing attention to innovation processes based on the involvement of diverse actors in co-creation activities. A new innovation model is evolving, relying on collaboration, openness and participation as drivers for the development of novelty in diverse fields. This model has a central role in social innovation, which is claimed to arise from collaborations across various sectors and social structures. In trying to understand how innovation arises in co-creation processes, this paper relies on the idea of socially shaped innovation, according to which novelty emerges from local interactions through tensions and argumentation.

In exploring how design could support socially shaped innovation, the paper discusses the experience of designing Fabriken, a socially shaped infrastructure for socially shaped innovation. Particularly, the focus is on the design process and on the shift from a design-in-the-studio strategy, based on a funnel model, to a design-in-use strategy, where some participatory tactics such as prototyping, small-scale interventions and long-term engagement are used by diverse stakeholders to explore the design space.

**Keywords:** Socially shaped innovation; collaborative, open and democratic innovation; Design-in-use; Prototyping; Small-scale interventions; Long-term engagement.
1. Introduction

It is Thursday evening at Fabriken, a maker-space located in the basement of an industrial building in Malmö, Sweden. Davey is helping some guys with the CNC mill. Chris and Frank are working on an old vending machine, trying to make it suitable for vending hardware boards. Someone else is mending a flat bike tire. In the textile corner, Luisa is teaching a guy how to crochet. Quinn is in the kitchen, preparing food for tomorrow’s catering. Some guys are sitting on the sofa testing a robot they recently built. Jonathan is trying is new cello built using scrap material

What is the relation between these activities and the emerging innovation discourse that emphasizes collaboration, openness and democracy? What contributions could a maker-space like Fabriken bring to the discussion about innovation? This article uses the author’s experience of being part of designing Fabriken to discuss how to design in and for the emergence of innovation in collaborative processes.

The discourse on innovation has recently shifted from a focus on close processes and creative elites to collaboration, openness and democratization (Leadbeater, 2008; Cheeseborough, 2003; von Hippel, 2005). This discourse is also relevant in the field of social innovation, which calls for collaborations across the public, private and third sector
and for alliances between grass-root initiatives and established organizations. By discussing the implementation of Fabriken as an infrastructure for collaborative, open and democratic innovation, this paper aims to provide two contributions: (1) the understanding of collaborative processes for innovation as processes of social shaping, where novelty emerges from local interactions through tensions and argumentation; (2) the understanding of how to design in and for a process of social shaping through a design-in-use strategy based on the tactics of prototyping, small-scale interventions and long-term engagement.

1.1 Research approach

With regard to the research approach, some considerations have been taken into account. The content of this paper is the result of a research through design process (Frayling, 1993) “where the action is calculated to generate and validate new knowledge or understanding” (1993:4). Fabriken is carried in a frame of constructive design research (Koskinen et al., 2011) “in which construction—be it in product, system, space, or media—takes center place and becomes the key means in constructing knowledge” (2011:5). Specifically, the Fabriken project can be described as constructive research in the field (Koskinen et al., 2011) with a focus on exploring how people understand, design and make use of Fabriken.

Fabriken’s case is part of a research program (Binder et al. 2006) which uses participatory design practices involving grass-root initiatives and more established actors in the context of Malmö city to investigate issues related to democracy and involvement in the innovation discourse (Björgvisson et al. 2010, Ehn 2011, Hillgren et al. 2011). This paper uses the case of Fabriken to discuss social shaping as a way to understand open, collaborative and democratic processes in innovation and suggests the strategy of design-in-use when designing for such processes.

Fabriken is presented as a case study where the role of stakeholders (such as Caroline, the NGO’s manager1) and users is highlighted in order to account for the messy, open-ended and ambiguous nature of experience (Mowles, 2010).

The author of this paper belongs to the research centre involved with the Fabriken project and has taken part in the design and the running of the maker-space (see 4).

A temporal map of Fabriken is provided (Figure 6) positioning in time the diverse steps and activities presented in the article.

---

1 Such a point of view has been summed up during an interview/conversation which has taken place at Fabriken’s premises on 04/11/2011
2. Understanding innovation as socially shaped innovation

2.1 Innovation: collaborative, open and democratic

In recent years, thinkers and practitioners within the innovation field have embraced the idea that innovation arises from networks (Tuomi, 2002) where diverse actors are involved in processes of co-creation (Prahalad et al., 2004). In the business sector, relationships between companies and suppliers are no longer perceived merely as value chains but as value constellations (Norman & Ramirez, 1993) where value is co-created by companies, suppliers and customers (Lusch et al., 2010).

In the technology sector, there has been a shift from closed to open innovation processes, recognizing that sources of innovation can be found outside the company (Cheesborough, 2003). In particular, the role of end users has been challenged: they are no longer seen as passive consumers but as key resources for innovation (Von Hippel, 2005).

The discourse about collaborative (Leadbeater, 2008), open (Cheesborough, 2003) and democratic (Von Hippel, 2005) innovation is spreading, emphasising the importance of networks and co-creation processes for the emergence of novelty.

Co-creation is a central idea in social innovation, which can present shifting roles between the public, private and non-profit sectors with the creation of partnerships between non-profit organizations, companies and public bodies (Philis et al., 2008). This can lead to the creation of bonds between previously separate individuals and groups, which in turn can create a fertile ground for the emergence of new ideas (Mulgan, 2007).

Collaboration between diverse actors characterizes social innovation, but it is also a condition for its development: for identifying unmet needs and generating and implementing ideas (de Ouden et al., 2010). These collaborations seem particularly promising when involving “the bees and the trees” (Mulgan 2007), where the “bees” represent small organisations and entrepreneurs that are mobile, fast and cross-pollinating, while the “trees” are large, resilient organizations that can scale ideas. In design for social innovation, these alliances have been described as designing networks, systems of diverse stakeholders designing together (Jegou and Manzini 2008).

A central question is how to support the development of innovation in co-creation processes involving diverse stakeholders. In trying to understand the practice of open, collaborative and democratic innovation, this paper relies on the idea of social shaping.

3. Understanding co-creation: social shaping of innovation

An extended understanding of co-creation processes is provided by the field of participatory design (PD), based on forty years of experience in supporting co-creation of
knowledge and change in work places (Gregory, 2003) and, recently, in broader public arenas (Björgvinsson et al., 2010; Halse et al., 2010). PD processes engage diverse stakeholders in envisioning possible futures (Gregory 2003) and developing a particular understanding of innovation as a process of social shaping (Buur & Laarsen, 2011): “We see innovation as the emergence of novelty that comes about in local interactions between people with different intentions” (Buur et al., 2010, p.123).

The idea of “social shaping of innovation” is partially grounded in a specific branch of management literature (Stacey, 2000; Stacey, 2007; Mowles, 2010) which uses complexity theory to look upon collaborations between people in organizations. In their perspective, change in human organizations “does not arise as a consequence of abstract idealising, but in the daily exploration of similarities and differences as people co-operate and compete” (Mowles, 2010:8).

The idea of social shaping highlights some key empirical aspects of collaborative processes. An important aspect in social shaping is the role of participants that are looked upon not as generic stakeholders, but as individuals with multiple and concurring agendas. In social shaping, conflicts are seen as key drivers for the emergence of innovation, which is described as the negotiation of meaning between people with crossing intentions (Buur et al., 2010).

The idea that change is negotiated and shaped by social interactions accounts for a certain degree of unpredictability in such processes (Stacey, 2005), in which “approximation and serendipity are the norm- the search for scientific precision is displaced in favour of informed improvisation, practical wisdom, integrated thinking and good judgement based on a shared sense of justice and equity and on common sense” (Hamdi, 2004: xxiii).

Another key aspect of social shaping is represented by the local framework as the conditions, in terms of resources and constrains, in which the process is developed and how these conditions are negotiated (Clark 2007).

Finally, another issue is related to how to develop the preconditions for social shaping, which is the creation of a designing network. Previous literature has argued that long-term engagement (Hillgren et al. 2011) is promising when it comes to fostering trust and mutual relationships between possible stakeholders.

To summarize, understanding innovation as a process of social shaping means focusing on the actual practice of creating and implementing change more than on the general discourse; it also means recognizing the empirical complexity that characterizes co-creation and participatory processes.
The idea of socially shaped innovation represents an interesting starting point for exploring how to design in and for social innovation.

4. Fabriken, a maker-space for social(ly shaped) innovation

Fabriken is a maker-space located in Malmö, Sweden. Maker-spaces are workshops that offer access to machines and tools for experimenting with technology and production processes; they are characterized by a culture of openness that relies on sharing knowledge, skills and tools.

Fabriken has been co-designed by three actors: MEDEA, a research centre at Malmö University working with co-creation processes in the field of new media; STPLN, a local NGO (Non-Governmental Organization) dealing with youth coaching and empowerment; and 1scale1, an interaction design consultancy. The maker-space is located in an industrial building in the old harbour area, which has recently been converted into a residential and office neighbourhood. The building is run by the NGO as a facility for diverse activities, from concerts to art exhibitions and from office work to skateboard training. Fabriken is physically located in the basement of a building together with Cykelköket, a bicycle repair workshop, and Tantverket, a textile laboratory.

By exploring the experience of establishing and running Fabriken, challenges of designing in and for social shaping innovation are highlighted. Specifically, the focus of this article is on the shift from a design-in-the-studio to a design-in-use strategy (Ehn, 2008). In the following paragraphs, some design-in-use “tactics” (Di Salvo, 2009) are presented, such as prototyping for the temporary alignment (Suchman, 2000) of conflicting interests, small-scale interventions for explorations of the design space, and long-term engagement for enlarging the designing network.

Before moving to the narrative, some considerations are made on the role of maker-spaces in the innovation discourse and on the reasons why they seem particularly promising in terms of socially shaped innovation.

4.1 Maker-spaces and innovation

Maker-spaces have been considered environments for a hybrid innovation ecology (Troxler, 2010) where the potential of fabrication machines and open-source culture can boost technological innovation and improvements in the production processes. The historical background of such spaces can be found in Karl Hess’ (2005) shared machine workshops from the mid-seventies:

The machine shop should have enough basic tools, both hand and power, to make the building of demonstration models or test facilities a practical and everyday activity. ... For
inner-city residents the shared machine shop might be a sensible and practical doorway to the neglected world of productivity as well as being a base for community experimentation and demonstration. (p.96)

A similar concept drives hacker-spaces, which are community-operated physical places where people can meet and work on their projects. In short, they are real locations (as opposed to online meeting places) where like-minded people gather and hack (Hackerspace, 2010). The culture of these spaces is strongly characterized by hacker ethics (Levy, 1984) which, besides the hands-on imperative, are driven by an open culture that, through a sharing attitude and a peer-to-peer approach, can enhance the development of distributed networks and social bonds (Bauwens, 2006).

Hacker-spaces have been boosted by the development of personal manufacturing machines, also called fabbers: these are the small-scale, low-cost descendants of industrial machines such as 3D printers, laser cutters, and programmable sewing machines (Lipson et al., 2010). As CAD-CAM based systems (Computer Aided Design-Computer Aided Manufacturing), these machines offer the advantages of mass-production processes on a small-scale, thereby empowering individuals to make (almost) anything (Gershenfeld, 2005). The potential of these machines in an open culture context has been recognized by MIT (Massachusetts Institute of Technology) which, through the concept of FabLabs (Gershenfeld, 2005), has made maker-spaces accountable in the collaborative, open and democratic innovation discourse.

Six years after Gershenfeld’s book, some observations have been made (Troxler, 2010) about the impact of FabLabs: In terms of technological innovation and production processes, their impact is still small; their innovation ecosystem is often limited and they have not yet found a sustainable business model.

In contrast, users’ empowerment and community strength are claimed to be the main prides of these spaces (Troxler, 2010). This could be due to the fact that a sharing culture can be looked upon as a form of gift economy where mutual reciprocity can reinforce social relationships (Mauss, 1990); however, this is only partially true since in a peer-to-peer approach, there is no obligation of reciprocity involved (Bauwens, 2006). The creation of social capital in maker-spaces seems to rely more on a “do-it-together” approach in which cooperative “making” generates new “connections” between things, ideas and people (Gauntlett, 2011).

A key issue resides in understanding how to support the emergence of these social networks in maker-spaces and what potential they have in terms of socially shaped innovation.
4.2 The social shaping of Fabriken

As previously mentioned, STPLN is an NGO with extensive experience in working with youth empowerment and coaching. It supplies organizations, individuals or unorganized groups of people with support in various forms: equipment, coaching, or just someone to bounce ideas off. STPLN has been running its activities in an old industrial building owned by the City of Malmö. The premises also host the interaction design company 1scale1, which has a history of collaborating with STPLN. One of the members of 1scale1 is also part of MEDEA, the research centre at Malmö University. In 2009, the building was put under renovation by the City of Malmö, creating an opportunity for these three actors to imagine how the space could be further developed and how part of it could become a maker-space co-designed by these actors.

This setting seemed particularly promising in terms of socially shaped innovation since the diversity of the three actors would be fertile ground for creating networks across sectors and social structures and for connecting grass-root initiatives with established organisations.

4.2.1 Design-in-the-studio phase

The purpose of the design-in-the-studio phase was to develop a shared concept of Fabriken. This phase was structured as a funnel process (Westerlund, 2009) where from a fuzzy front end, through iterations, a unique concept should emerge. The process was based on four workshops: the first was aimed at creating a general concept, while the other three were dedicated to analysing some key issues that emerged from the first one, specifically issues like how to embrace sustainability in the space, how to create an open culture, and how to set up an internal currency system for facilitating the sharing between the users.

This first phase (August-December 2010) was driven by the design researchers and took place in the MEDEA studio, since Fabriken’s premises were not yet available. The workshops were designed as a process of collaborative divergences and convergences (Design Council, 2005), each of them was aimed at developing a collaborative exploration ending with a temporal closure that could be re-opened at the next workshop. The aim was to progressively shrink down the design space towards a shared unique concept of Fabriken.
The process did not bring the expected results: no shared concept of Fabriken was generated and there was no agreement about how the key issues should be tackled. Instead, it generated a competitive discussion frame (Westerlund, 2009) where each participant was trying to maximise his or her winnings at the expense of the creative process. A great many conflicts and discussions emerged that almost compromised the project, but they also created the space for a diverse design strategy to emerge.

4.2.1.1 The limits of design-before-use strategy

The first limitation of this process resided in its structure, which was organized according to a design-before-use (Redström, 2006) approach but without the direct involvement of users; therefore, it was problematic to envision future use. However, we could not set up a participatory process since it was unclear who the users would be. Even if it was evident that some groups would have a central role in the space—such as the local hacker community—it was not possible to foresee all the possible users.

Moreover, we were facing the challenge of trying to understand the use of the space before its actual use. As Redström (2006) points out, "The ‘use’ that we simulate, create and invite as part of a design process, be it iterative or participatory, cannot deal with what it means for something to become someone’s, what it means for an object to become part of someone’s life" (p.130). Structuring the concept, deciding which machines should be bought or trying to implement an internal currency system would have meant reducing the possibilities of users’ design activities.
4.2.1.2 Consensus as a threat to the process

The process was leading to tension and frustration because it was based on the assumption that a consensus between the involved stakeholders should be reached. This would have meant leaving behind some agendas, compromising the role and the possible future engagement of the three stakeholders. As the participatory design tradition points out, “conflict and disagreement seem to be unavoidable elements in participatory design in practice, and have to be acknowledged and managed” (Sjöberg, 2006, p.24), since they obviously emerge when multiple needs, objects and motives are brought together (Gregory, 2003).

Furthermore, individuals are part of different collective activities, and, consequently, they are characterized by multiple interests which might differ or even conflict (Bødker, 1991). This aspect was also becoming apparent during Fabriken’s design process. With regards MEDEA, its members have diverse interests in being part of the process, and these interests often clashed. A similar pattern was emerging in the NGO as well: Caroline stated, “It was just two of us, me and Julia, but I was the only one working with the development of the space, while Julia was focusing mainly on her specific projects” (Lundholm, 2011).

In this perspective, striving for consensus in collaborative processes seems impossible and undesirable. By aiming for a common denominator, processes based on consensus tend to become exclusionary and to encourage non-participation by gaining the passivity of people and not their active participation (Hamdi, 2004).

4.2.1.3 Ignoring the local framework

Designers tend to overemphasize the role of stakeholders’ encounters, and they give too little consideration to the negotiation of the project resources and to the local framework in which the project is developing (Clark, 2007). In the initial phase of designing Fabriken, great emphasis was put on the workshops while little consideration was given to the conditions from which the project was arising.

As Caroline underlined, “In this phase we never talked about the previous experiences that STPLN had in trying to establish a maker-space before the collaboration with 1scale1 and MEDEA. We started to work with the idea of having a maker-space already in 2006 and we looked for diverse possibilities of collaboration as well as we tried diverse strategies” (Lundholm, 2011). These experiences were never brought into the design process, leaving out insights that could have been useful in this phase.

Another framework aspect influencing the process was the delay in the premises’ renovation. Due to bureaucratic issues, the possibility to enter the building was postponed
from December 2010 to February 2011, and, finally, to April 2011, thereby delaying the commencement of the activities.

4.2.1.4 Conflicts as explorative occasions
Even if this phase was quite frustrating, it also felt necessary. The emergence of such strong conflicts allowed us to understand that the approach was failing. This brought a shift from trying to resolve the conflicts to acknowledging that the diverse interests would never find a perfect match. A diverse design strategy was needed: one able to support a process of social shaping. Conflicts have opened new possibilities (Bødker, 1991) for the project to develop, becoming a key driver in the Fabriken’s social shaping process.

4.2.2 The design-in-use phase
This second phase (April 2011-on-going) can be described as a process where the three stakeholders, together with the users, are shaping the space. This process is not based on a funnel structure but on explorations of the design space, where a multiplicity of visions and concepts co-exist (Westerlund, 2009). These explorations are performed using some participatory design approaches, such as prototyping, small-scale interventions and long-term engagement (Hillgren et al., 2011). These approaches can be described as tactics (Di Salvo, 2009) since they represent designerly means that broaden the participation to the design process. They distinguish themselves from traditional design activities driven by designers since they can be manipulated beyond the common purpose of design (Di Salvo, 2009) and, in the case of Fabriken, appropriated by the users to drive their own design activities.

4.2.2.1 Prototypes for design-in-use
After the design-in-the-studio phase, the three stakeholders decided to interrupt the design process until the premises would be available. However, a few weeks later, 1scale1 and STPLN decided to organize a Hackathon\(^\text{2}\) in a warehouse close to the premises under renovation. This event was aimed at getting in contact with possible future users of Fabriken.

By organizing this event, 1scale1 and STPLN were claiming back their driving role in the project, but they were also opening the possibility for a new design strategy to emerge: an approach based on interventions where stakeholders and users are engaged together in exploring Fabriken’s design space.

The event was quite successful in terms of participation and projects that were developed. During the two days, diverse activities were happening related to the stakeholders’ diverse

\(^2\) A hackathon is an event where a group of hackers gather for several days to collaboratively build programs, applications or objects.
agendas. While 1scale1 was focusing on physical prototyping and electronics, MEDEA’s researchers were facilitating connections between participants and establishing activities not related to electronics. The NGO, STPLN, was advertising Fabriken.

Some projects were driven directly by the participants, who had the chance to express their expectations towards Fabriken in terms of equipment and infrastructure. The Hackathon allowed for a temporal alignment (Suchman, 2000) of the three stakeholders and became a prototype of how it would be possible to shape Fabriken without reaching consensus and by involving the users.

After the Hackathon, other prototypes were arranged, such as the official opening after the renovation (April 2011); Vårstädning (May 2011), a weekend of workshops on the theme of sustainability; and Christmas Bizarre (December 2011), a weekend of workshops on the theme of Christmas. At the opening, the NGO focused on the organization of the event while the design researchers were involved in organizing practical workshops and a pitch for ideas, an open-contest for projects that could be developed in the space; for example, the Christmas Bizzare was initiated by one of the users, Quinn. While STPLN’s people together with Quinn were taking care of the overall strategy, the author of this paper, along with one member of 1scale1 and other users, was involved in organizing and driving different workshops.

These occasions allowed for prototyping roles and activities. By rehearsing these events, the stakeholders could undertake diverse roles and try different collaborative constellations.
4.2.2.2 Small-scale interventions for exploring the design space

Organizing events is quite demanding in terms of time and resources. A less laborious tactic is the one of small-scale interventions, which is based on narrow design actions such as setting up a “collective urban garden” outside Fabriken’s premises (May-September 2011) or organizing short workshops about specific activities.

These actions have been defined as small-scale interventions, referring to the strategy of small-changes in city planning (Hamdi, 2004); this strategy recognizes the value of narrow design actions inside a broader strategy as a way to acknowledge serendipity and uncertainty in the design process. Small-scale interventions are used to explore and enlarge the design space of Fabriken. They work both as prototypes for investigating possible futures and as provotypes (Mogensen, 1994) challenging the present understanding of the space. Moreover, these interventions require few resources and can be quickly organized and modified according to opportunities appearing in the local framework.

The small-scale interventions’ tactic has also been adopted by Fabriken’s users, who are initiating their own activities on the basis of the available resources.

4.2.2.3 Tantverket, long-term engagement for enlarging the designing network

Another tactic is to work more with a long-term engagement (Hillgren et al., 2011); the establishment of the textile laboratory is a good example of this.
The idea was to expand the designing network beyond the regular users, the members of the local hacker community (Forskningavdelingen), and the volunteers of the bicycle repair shop (Cykelköket). The opportunity came by when Luisa, who is, as she defines herself, a textile geek, contacted Fabriken. She was working on a feasibility study for her project Mormors Verkstad (Grandma’s Workshop), a place for reclaiming and learning traditional textile skills. As a part of this study, she was interested in setting up a textile community. On this basis in May 2011, Tantverket (the Grannies’ Group) was established as a weekly meeting where people with interests in textile could gather and work together. The idea was to buy some tools and fabrics, to initiate the group activities and then to let the participants take the lead. However, building a community needs time and intervention. In addition to being in the space every Thursday evening to meet the participants, Luisa and the author have tried several activities, from organizing workshops to setting up swap parties\(^3\) and participating in Fabriken events.

\(^3\) Events based on bartering of garments
After six months, the community’s Facebook group counted more than 90 subscribers and Tantverket’s activities had a high media exposure (Luisa has been interviewed four times by local newspapers and radio). The online community was quite active, and if an event or a workshop was organized, the response was always good in terms of participation; however, the number of regular participants remained quite low and some evenings nobody showed up.

Unlike the other two Fabriken groups (Forskningavdelingen and Cykelköket), Tantverket is not involved in daily activities and discussions. However, its members are part of the Fabriken designing network. Some of them represent external actors that can be temporarily involved in the social shaping of Fabriken on specific occasions (e.g. workshops, larger events). Others have entered the space through Tantverket and are now driving their own activities and developing relationships with other users.
Figure 6: Fabriken timeline

2009

2010

2011

2012

collaboration between STPLN, MEDEA and 1scale1

STPLN building is put under renovation by Malmö city

Design-before-use

Design-in-use

WS workshop

E event

SSI small-scale intervention

LTE long-term engagement

Carin project

Rebecka’s fashion company

Quinn’s catering company

Cykelköket

Opening

Collective garden

Västarödning

Tantverket

Swap party

Carving ws
5. Fabriken, a socially shaped infrastructure for socially shaped innovation?

Eight months after the opening, some considerations can be made about social shaping at Fabriken.

Collaborative networks are emerging, involving not only Fabriken, but also the whole premises. While people are sewing, soldering and laser-cutting in the basement, STPLN is hosting events and managing a co-working facility at the ground level, using the same collaborative, open and democratic approach that drives Fabriken. Users are moving from one space to the other, developing alliances and taking advantage of all the possibilities.

One of these users is Carin, a former teacher, who contacted Fabriken to get support for starting her project. Her idea is to create a space where children can develop their creativity and environmental awareness by playing with cast-off materials from manufacturing processes. Fabriken is supporting Carin’s project in different ways: On the one side, it provides her access to a workshop where she can experiment with materials and do activities with children. On the other side, it allows her, by being in the space, to become part of Fabriken’s network and to get to know possible partners.

In terms of the broader innovation discourse, Fabriken also works as a space for technological experimentations. Forskningavdelingen’s members have been involved in the creation of several different prototypes of robots, software applications and hardware boards; some of these experiments have been commercialized. A number of users use the facilities as a support for their start-ups: Quinn has started a catering company using the premises’ kitchen. Rebecka, a fashion designer, has also recently founded her own company and is using Tantverket as her atelier.

Beside users coming to the space for setting up a small company or exploring the possibilities of technologies and machines, there are also participants who have been unemployed or on sick leave for a long time. In this sense, Fabriken counts in the social innovation discourse, but in a way that we never expected.

From these outcomes, it seems that the Fabriken experience can bring a contribution to the general discourse of collaborative, open and democratic innovation. In fact, the phenomena appearing in the space seem to indicate that novelty emerging from social shaping is manifold since it simultaneously involves diverse dimensions, from technological to social ones, from economical to organizational ones.
6. Conclusions

This article has developed two contributions: the first is the understanding of collaborative, open and democratic innovation as processes of social shaping; the second is the understanding of how to design in and for social shaping.

Social shaping is used to describe processes of co-creation, underlining the complexity and challenges of participatory practices where, in a specific local framework, a designing network is developed by involving stakeholders with diverse agendas. To explore how to design for and in a process of social shaping, the case of Fabriken is presented. In particular, the article describes the shift from a design-in-the-studio to a design-in-use strategy, which creates the possibility of having participatory explorations during the use phase through the tactics of prototyping, small-scale interventions and long-term engagement.

Based on Fabriken’s experiences, social shaping seems promising for the generation of manifold grass-root innovation, and design-in-use appears to be successful in supporting these processes.

However, further research is needed to investigate the role of the designer in social shaping and to define more precisely the competences needed in the shift from a funnel process, where designers have a leading role, to a design-in-use process, where leadership is distributed between participants, conflicting agendas are navigated and local framework is considered.

Acknowledgements

Thanks to Pelle Ehn, Elisabet M. Nillsson, Richard Topgaard, Caroline Lundholm and STPLN people, Fabriken Team, 1scale1, Luisa and Tantverket, Cykelköket, Forskningsavdelningen and all the people participating in the social shaping of Fabriken. Additional thanks to the participants of the Summer School “Social Shaping of Innovation” at SPIRE Center, Denmark.

References


