

From 'Do it yourself' to 'Open design': users' involvement and democratization

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The involvement of users in objects' creation and production has been linked to industrial design democratization. A parallelism between two cases, a DIY project from the 1970s and a current Open design project, is presented to understand how users (creators/producers) have been involved. Design approaches have matured during this period; however, they still have a way to go concerning the development of democratic dynamics of creation and production.

1. Introduction

The last few years have seen a quick development of design strategies to involve users in the creative processes of objects' conception. In this context 'Open design (OD) has brought together ideas of shared creation and democratic access, leading to 'social participatory innovation' (van Abel et al. 2011: 13). Several of its current actors have remarked OD's relationship with previous 'Do it yourself' (DIY) movements (Avital 2011: 57; Atkinson 2011: 26-27). Professional designers' DIY projects from the 1970s are now being re-edited or re-launched. James Hennessey re-edited in 2009 his *Nomadic Furniture* books, co-authored with Victor Papanek in 1973 and 1974. An English-translated second edition of Enzo Mari's *Proposta per un'autoprogettazione* from 1974 was launched in 2002 and 2008. The project inspired Domus magazine and FabLab Torino for a DIY design competition named *Autoprogettazione 2.0*, opened in 2012. Artek is offering the *Sedia 1* from Mari's project since 2010; the furniture company produced a short documentary about the project and exhibited it at the Milan fair the same year.

A raising popularity of the culture of making seems to be one of the trends behind this phenomenon. JWT, a global marketing consultant, shows significant numbers in a trend journal edited in 2009. Entertainment, food, beauty and fashion are some of the areas studied. JWT consultants link this trend to frugality in the recession, to anti-consumerism, a declining respect for big businesses, and to the internet and the strength of connected makers (JWT 2009: 3-4). The Institute for the Future (ITF), a non-profit research center for long-term forecasting, highlighted the results of a 2006 survey pointing out related findings.

A self-motivating, self-educating and self-organizing sector of society is emerging that may define an alternative economy. This sector tends to seek out customized or alternative goods, services, and entertainment-preferring to have a more active hand in shaping their own goods, environments, and experiences in conjunction with relatively small groups of like-minded people. (ITF 2007: 4)

It is not the first time that social phenomena are influencing pro-

fessionals and institutions of industrial design. This study aims to analyze how professional initiatives have tried to 'organize' social initiatives, following ideological motivations. The involvement of users in objects' creation and production has been acknowledged as democratic, as much in DIY as in OD.¹ To explore these subjects, the relationship between DIY during the 1970s and the current emergence of OD will be considered. Social and political contexts will be briefly introduced to visualize the environments that gave them relevance. Designers' approaches will be considered through two case studies. Finally, a brief reflection on the democratization of design will close this report.

2. Do it yourself

The term 'Do it yourself' has been used to define a wide variety of popular practices (Atkinson 2006: 2). Some scholars have acknowledged its varied connotations and specific associated techniques along history. A pre-history of DIY embedded in eighteenth and nineteenth-century women craft for the domestic interior has been raised as a phenomenon through which the development of gendered activities can be analyzed (Edwards 2006). The construction of the image of an active, autonomous modern home-maker during the 1920s and 1930s has been linked to specialized feminine DIY media (Hackney 2006). As a masculine tool for reconstruction in the post-wars period, DIY has been also associated to the development of tools and materials that allowed cost saving home improvement activities independently from professional tradesmen and skilled artisans (Atkinson 2006: 2). Overall, DIY dynamics have been associated to varied social phenomena, being described as leisure, as a hybrid of consumerism, or, on the contrary, as an alternative and emancipative cycle of production.

During the 1970s DIY was associated to autonomy and resistance, it was promoted as a creative act of rebellion against the established circles of culture. This shift of meaning is evident in its appropriation by the punk movement.

The DIY ethic states that punks should not be content with being consumers and spectators but instead should become active participants in creating culture, (€) these media should be autonomous from the culture industry and the "mainstream" media as much as possible, to serve as an alternative form of cultural production (Roberts & Moore 2009: 22).

Anarchist ideals were sometimes behind this search for autonomy and the construction of alternative social dynamics. A trend towards self-building as an alternative solution for housing, also supported by professional architects, was taking place during

¹ Sometimes using the term democracy, as in the case of Atkinson 2006: 5-8, van Abel et al. 2011: 13 and Mota 2011: 279; in other cases acknowledging the horizontal nature of their structure, as in Avital 2011: 49.

the same period.² The initiatives by Enzo Mari and Papanek and Hennessey, both furniture projects for being self-build, were contextualized in this particular contemporary environment.³ Papanek itself raises the importance of developing alternative design structures in 'Design for the Real World', the democratizing aspect of DIY and the wrongness of 'the whole concept of patents and copyrights' are acknowledged (Papanek 1972: xxiii). In this context, the relationship with initiatives now considered open-design related is not only in form (the characteristics of the design projects themselves), but in content, in the discourse behind the actual project. Although each of these initiatives lies over a particular ideological base, they aim to create a direct link with the user, questioning the production and market dynamics of traditional capitalism.

DIY has been linked to democratization in design, as much in the past as in the present. The case of Enzo Mari's *Autoprogettazione?* is of particularly interest to understand the relationship between the ideological aspirations of the professional designer and the reception and meaning transformation by the general audience. His re-edition from 2002 includes a section with some of the public's correspondence to the designer in response to his project from 1974.

Autoprogettazione? includes a compilation of instructions to build wooden furniture 'using rough boards and nails', it aimed to 'teach anyone to look at present production with a critical eye' (Mari 2002: 2).⁴ It states that 'the end product, although usable, is only important for its educational value' (Mari 2002: 5). Therefore, the direct link with the user is only for the construction of meaning; it aims to contribute to alternative perspectives of consumption but indirectly, not by substituting the 'mainstream' product, a scope that is closer from Papanek and Hennessey's work. Mari expects that by the experience of building with his/her own hands the user can 'improve the ability to assess the objects of the market with a more critical eye'. However, Mari himself complains because '99 percent of the times the proposal is not understood or is understood differently' (Mari 2002: 51). Indeed, he highlights that most of the responses he received were from people 'satisfying esthetical needs' or resolving 'real furnishing problems'.

Analyzing this example from the point of view of its democratic value we can identify a motivation for providing non-profit alternatives, getting closer to the user by eliminating corporate intermediaries, and encouraging a participatory attitude from readers.⁵ However, a strong designer-centered approach remains in the project. Mari is not satisfied, even when he receives enthusiastic messages from users, because the objects didn't carry

2 See for example Turner 1977.

3 The projects referred here are:

'Proposta per un'autoprogettazione' from 1974 by Enzo Mari, re-edited under the name 'Autoprogettazione?' in 2002.

'Nomadic furniture: how to build and where to buy lightweight furniture that folds, collapses, stacks, knocks-down, inflates or can be thrown away and re-cycled' from 1973 and 1974 by Victor Papanek and James Hennessey

4 Referring to 'present' as the original date of publication in 1974.

5 Readers are asked to send photos of the furniture built and 'in particular, variations of it', as feedback (Mari 2002: 2).

the meaning they were intended to have. From this perspective, the democratic value of *Autoprogettazione?* is questioned. A democratic approach towards DIY should celebrate the diversity of meanings growing during the participatory process of production. In a period when DIY was embedded with ideas of autonomy, Mari does somehow the opposite, he links the project to his own values and seeks for their permanency beyond the user (and producer).

3. Open Design

Recent transformations of the Web into a participative platform (named Web 2.0) are having significant consequences in society.⁶ The web is considered by many as a symbol of democracy; built from down, where everything co-exists. 'Here is the story of two decades in one sentence: If the past 10 years have been about discovering post-institutional social models on the Web, then the next 10 years will be about applying them to the real world' (Anderson 2010: 63). The collaboration of connected communities is perceived as the next tool for social change, and this trend has arrived to the realm of physical objects.

The term Open Design (OD) derives from the Open Source Software model and refers to the collaborative design of physical objects (de Bruijn 2010). Paul Atkinson defines it as 'the internet-enabled collaborative creation of artefacts by a dispersed group of otherwise unrelated individuals' (Atkinson 2011: 26). Michel Avital adds that the resulting blueprints can 'be adapted at will to meet situational requirements and can subsequently be used by consumers to fabricate products on demand' (Avital 2011: 49). In this context, recent developments in subtractive tools (laser cutters, CNC routers and milling machines) and domestic-scale additive tools (computer-controlled 3D printers) for digital fabrication 'point the way toward a decentralized more customer-centric "maker" culture' (Igoe and Mota 2011: 1). The cultural tendency highlighted in the introduction of this study complements an apparent confluence of trends, associated by some analysts to radical shifts in production dynamics, to a 'third industrial revolution'.⁷

The possibility of a post-industrial, urban, small scale production model associated to OD motivates the ideological points of view of some of the actors involved, acknowledging its democratic, sustainable and anti-consumerist implications. Some of the supportive arguments are the blurring divisions between professional and amateur, a *Pull* rather than *Push* model for consumption, and a particular object-user attachment, contributing to social awareness of our material environment (Mota 2011: 279; Atkinson 2011: 25; Avital 2011: 57; Easton 2009: 45).

Social design approaches in the past were focused in designing for the people; this perspective has been changing to design with the people, and now the relevance of design by the people is being raised. The particularity of OD, in comparison with DIY projects from the 1970s, is the possibility of user involvement in all

6 Citizens are organizing collectively for political uprisings through social networks. Hobbyists are connecting with individuals sharing interests to learn from each other. A critical mass is building popular knowledge platforms.

7 See for example: Anderson 2010: 105.

the stages of creation and production of the object. Professional designers are moving to the position of the meta-designer, designing platforms for objects' collective creation rather than the objects themselves.

An interesting case to visualize how designers are managing these significant changes is *Open Structures*, an OD project created by Belgian designer Thomas Lommée.⁸ The base of *Open Structures* is modularity 'through modular construction you generate objects that can change along time, they can evolve, and therefore they can adapt and become more resilient' (Lommée: 2012). The shared grid is expected to work as a common language, just like html in the diversity of the internet. Lommée is interested in spreading this language; he asked people he knew to design objects based on the grid. Means of transport, simple domestic appliances and furniture are some of the resultant objects.

If we compare Lommée's approach with Mari's there are in fact several shared characteristics. Both projects search for an ideal, they tend to design a social dynamic; the objects themselves are of less significance. The instrumental decisions of the project are embedded in their contemporary environment. However, in general, the implications of OD go beyond the ones of DIY. A decentralized network involves innumerable combinations and collaborations, the dynamics of DIY are just one part of it. Users/producers/creators become more independent in OD, they can take action in several places of the system, rather than being restricted to follow step-by-step instructions. Freedom of action for all the contributors is one of the principles of OD. Forty years have passed and democratization of design looks closer.

Another useful source for understanding the dynamics of OD, in this case independent from designers' approach, is the *RepRap* community. In a thorough study of its activity, Eric de Bruijn acknowledged the horizontal, representative and volunteer-based characteristics of this organization (de Bruijn 2010). The goal of the *RepRap* community is to 'collaboratively develop a low-cost fabrication device that can, to a large extent, produce a physical copy of itself' (de Bruijn 2010: 18). The author describes how individuals collaborate to create parts and exchange files and objects for free and under open source licenses. The explosive growth of the community is highlighted.⁹ An important motivation for joining is to build the machine itself, for the member's own use. The *RepRap* community is coordinated by the core team, whose members are voted on board by unanimous vote. The team can be considered a non-hierarchical group with some level of responsibility of coordinating work (de Bruijn 2010: 20). The motivations for volunteering in the community have been identified as: autonomy, desire of competence, relatedness, and meaning (de Bruijn 2010: 21).

Based on de Bruijn's words, the *RepRap* community seems to

⁸ For more information visit the Open Structures web page: <<http://www.openstructures.net/>>

⁹ The adoption rate increases so fast that new adopters outnumber all those who joined more than 6 months ago' (de Bruijn 2011: 29).

embed all the current internet-based aspirations of democracy. Unfortunately, *Open Structures* is not there yet. If we consider democracy as freedom, *Open Structures* gives creators/users/produces total autonomy for creation and production as long as the grid is respected.¹⁰ Not only there is not an intended meaning for objects, there is not an intended technology to apply or moral principles to follow. Besides freedom, collaboration is encouraged.¹¹ But if we compare the individual approach of Lommée, inviting designers to participate, 'curating' the project as he admits, with the bottom-up growth of the *RepRap* community, we can see design still has a way to go (Lommée 2012).

Rather than originating ruled networks following personal motivations and calling for contributors, the democratic open designers will assist in spontaneously formed communities with common interests. Private benefit is a core subject in projects depending on volunteer contributions (de Bruijn 2010: 44). Communities sharing specific interests or needs are particularly prone to collaborative creation (de Bruijn 2010: 16; Von Hippel 2005). That is how people like to work together and where design actions towards democratization will take place. The role of professionals as designers and meta-designers will be assisting collaborative processes, participating as one more member who has, such as the others, a particular expertise.

4. Conclusions

There is a parallelism between the historical moments when DIY and OD initiatives from professional designers became relevant, searching for autonomy and the construction of alternative cycles of production and consumption are some of the common points. Although the social dynamics encouraged by designers through their projects in both periods have similarities, the implications of OD go beyond the ones of DIY: DIY is just one part of OD.

The cases analyzed in this study illustrate a process of maturity towards users' participation during the last forty years. Nowadays, bottom-up organizations for the collective creation and production of physical objects are developing. However, initiatives from professional designers remain somehow designer-centered. A collaborative approach towards spontaneously formed communities of creators/producers/users with common interests would lead to a real democratization of design.

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¹⁰ Besides the employment of the grid, Lommée requests that objects are designed for disassembly and that recyclable materials are favored.

¹¹ The common grid allows sharing parts or redesign new objects re-using parts. An online platform containing all components, developed also by Lommée's initiative, makes this process possible.

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