The construction of autonomous knowledge in design research

A construção de conhecimentos autônomos na pesquisa em design

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Abstract

Traditionally Design research begins with a double movement: in one movement there is the theoretical knowledge to enlarge and consolidate our professional working practice, and in the other movement there is the research through design from a practical intervention, which is, in turn, reinterpreted in the Design theoretical knowledge field. These two movements, reciprocal and asymmetric, lead us to reflect about our vocation and talents, concerning ourselves as designers and our activities in contemporary Design. In this way a new research quality through design should be considered: one that predicts the construction of autonomous knowledge in relation to the traditional aforementioned movements.

Key words: design research, autonomous knowledge, practical intervention.

Resumo

Tradicionalmente, a pesquisa em design parte de um duplo movimento: um que corresponde ao desenvolvimento do corpo teórico de conhecimento para ampliar e consolidar a nossa prática profissional, e outro que se refere à pesquisa em design, a partir de uma intervenção prática, cujos conhecimentos são reinterpretados no campo teórico do Design. Assim, este artigo focaliza esses dois movimentos, recíprocos e assimétricos, os quais permitem refletir sobre a vocação e talentos, relativos a nós mesmos como designers e nossas atividades de projeto. Por essa razão, uma nova qualidade de pesquisa em design precisa ser considerada, em vista desta reconhecida duplicidade.

Palavras-chave: pesquisa em design, conhecimentos autônomos, intervenção prática.

Introduction

According to ICSID (International Council of Societies of Industrial Design), nowadays, it is difficult to find a Design School in the world that is not practicing some sort of interdisciplinary education (Brietenberg, 2007). As its president states, although Industrial Design lies at the intersection between Engineering and the business world, has been a trend in the last 15 years – as designers acknowledged the value of interdisciplinary collaboration – towards the combination and harmony between the several knowledge fields that interact in Design.

However, interdisciplinary education is only successful when it is accomplished through educational programs with strong emphasis on their own diverse disciplines; the stronger the disciplines, the better the interdisciplinary experience. Therefore, each practitioner must contribute with expertise, accuracy and specialization to the inter-disciplinary experience. Furthermore, the present attention given to team work in the product development process enlarges designers' role, as they are not seen as "specialists with restricted and defined duties, but as generalists with a particular competence field" (Brietenberg, 2007, p. 1).

On the other hand, dealing with Design practice brings us to face the question of the planet's sustainability. Considering most products nowadays are not ecologically sustainable, we need to understand how product design may contribute to this issue. Since knowledge is materialized in products, we can magnify and value the qualities of such products towards the results we expect with our projects (Manzini, 2006; Nicolaiewsky and Monteiro, 2008).

For Manzini (2006), sustainability demands radical systemic innovations based on a dramatic reduction in consumerism and a new concept of well-being (i.e. embracing values that regenerate the social, economical and environmental fabric). Designers must create a bridge

between the external and internal conditions that enable change through local experiences, presenting innovative knowledge and possibilities. According to Manzini, there is no systemic change if it is not prepared on a local scale (i.e. daily and local practices). Systemic change occurs as a social learning process, which will reorient the new steps and maximize the possibilities of a conscious action concerning its consequences and reality.

That process has important implications for Design. In this logic, Design must create artifacts with meaning in people's relations, aiming at increasing these relations quality, and change the focus from product to the results in which this product is inserted. Then designers' role is changed and enlarged.

According to Manzini (2008), in order to work as agents for sustainability, designers need to take a couple of steps towards the comprehension of the context in which they are inserted: they must better understand the change already in progress, i.e. the transition towards a network and knowledge society (which we shall call Change 1) and understand equally well the change required to re-orient the change in progress towards sustainability (which we shall call Change 2).

Change 1 renders transformation in the system, but for that all the social actors involved, including the designer, need to present new ways of action and thought: totally new artifacts; organizational forms and designing networks; and a new reflexive self-conception from the part of the designers, that is, reflecting on how they operate and their role in society. In this new operational situation, Change 2 can occur towards sustainability. In sum, this transition requires a diffuse Design capacity and a certain kind of knowledge that enables individuals, communities, institutions and companies to participate in the Design practice and in a social and operational structure, departing from a social and knowledge network and in which action will take place for a sustainable future.

Designers' vocation, following this direction, is enlarged towards the consolidation of both an autonomous knowledge in Design and a research on practice independent of specific individual projects. In other words, designers may develop talents that allow, above all, modesty in our practice and reflection aiming at a transition from Change 1 to Change 2. In this transition, Design process tends to be distributed among actors with different cultures, motivation and professional development. And design's natural vocation – an accumulation of the traditional talents that have guided our actions so far – does not suffice anymore.

The issues we, designers, face are diverse; they are not in the same place we used to find and there are not enough talents to deal with all of them. In this case it is necessary that researches produce adequate knowledge for the networks, and this means a transferable knowledge about design to be used in different applications beyond the traditional application field. Clearly, it is no more sustainable to produce knowledge in Design research to be implicit and reintegrated in our knowledge body; on the contrary, produced knowledge should be explicit, debatable, transferrable and cumulative (Manzini, 2008).

A new design knowledge

In order to produce perspectives and proposals through the use of proper instruments and competences in Design culture and practice, the research modes are, and must be, very different from the traditional research ones: the production of autonomous knowledge in Design puts in check a level of subjectivity unacceptable in scientific tradition. Design is not an artistic research, totally guided by the subjective dimension. It is a discipline that combines creativity and subjectivity with a dose of reflection and argumentation about its own choices. In research through Design, produced knowledge cannot be only implicit and integrated in Design; but explicit, debatable, transferrable and cumulative (Manzini, 2008). For this author, the level of subjectivity in Design research is an open question. A precise definition of this level would be of great interest. For that it is important to discuss the results accomplished in each case, and case by case, relate them to their contribution to solve the problems we face. Obviously, these contributions will be more solid if the methodologies adopted in each particular case are more adequate. In this sense, we present an example of a Design and Social Innovation case – the case of the Afro-Brazilian Incubators and the Popular Entrepreneurships of Palmares Human Rights Institute (IPDH in Brazilian capitals) – and the results accomplished with a research developed through design in these Incubators.

Design and social innovation in incubators

The description we present follows the structure proposed in the workshop Design, Social Innovation and Sustainable Development, held in September 2008 at the Federal University of Rio de Janeiro (COPPE/UFRJ - www.producao.ufrj.br). Two basic tools were presented to develop the group work during the workshop: (i) the script for the case description including the process of the case Innovation/service; (ii) the results to be achieved.

The main caveat relative to the use of these tools was to adopt the perspective of the actors we are focusing on. This perspective is necessary since it changes the sequence of events reported in the day by day service (journey) and, consequently, the results expected to be achieved. We chose the Incubators' perspective to present the results of our intervention, demanded by the productive chains relative to food, culture, tourism and services' entrepreneurships, which had not included Design in their Incubation first phase (www.ia.org.br).

To understand this description we need to clarify some terms used in the Incubation process we are talking about. The term Incubators (in upper case) refers to the physical place that gathers equipment, classrooms, audiovisual aids, software and computers. The term incubators (in lower case) refers to the technical personnel that selects, plans and follows the entrepreneurs' projects. The entrepreneurs use the Incubators and receive advice from the incubators to implement and release their projects in the market.

In a brief description of these Incubators' trajectories up to the moment we intervened with design, taking into account the Incubation process structure in which we acted, the procedures were as follows:

Phase 1: Pre Incubation – 1 year: directions for the elaboration and improvement of the Business Plan.
Physical evidences: three preparation modules during the first phase of the pre-incubation process fulfilled in the Incubators and in technical visits. *Information/ exchanges*: reflection about the business, direction correction and financial analysis.
Inter-personal perception and relational qualities: weaknesses identification and business opportunities based on reality observation.

Chart 1. Phase 1 – Entrepreneurship pre-incubation period - prototyping.

Phase 2: Incubation – 2 years: Business management – strategy elaboration and partnership identification.
Physical evidences: six preparation modules fulfilled in the incubation phase by the Incubators, in the Incubators and Business fairs.
Information/exchanges: product and service/product evaluation, promotion and enlargement of the entrepreneurship working field (reinvestment).
Inter-personal perception and relational qualities: strategy and partnership development departing from market contacts made in business fairs and through consultancy.

Chart 2. Phase 2 – Entrepreneurship incubation period – implementation.

Phase 3: Post Incubation – from the third year on Network Insertion
Physical evidences: Incubators' operational support to the entrepreneurships in the post-incubation period, by using the Incubators' infra-structure and partners as support.
Information/exchanges: contact points with other people, companies and realities for the entrepreneurship promotion and consolidation.
Inter-personal perception and relational qualities: entrepreneurs' reconsideration about business strategies and entrepreneurship design scenario customization.

Chart 3. Phase 3 – Entrepreneurship post-incubation period – consolidation.

As a Social Innovation case, these stages represent different emergence and expansion phases of new ideas implemented by the Incubators (solution prototypes) for relatively consolidated solutions (worked solutions) up to the implementation of these solutions.

Discussion on the research results

In the Design & Innovation research, carried in the scope of network construction between the Incubators and UFRJ, the concepts of design scenarios, enabling platforms and product-service systems were used to reinforce the contextualization and cultural valorization of the products and services developed by the entrepreneurships (Monteiro and Bartholo, 2009; Monteiro, 2008).

The major problem entrepreneurs identified at the beginning of the Design & Innovation workshops was the lack of money to implement their projects. We started by the understanding of the solutions proposed in the projects and then we identified what was lacking for the implementation. At the end of the workshops, new ideas and projects were presented but not with the focus on the initially presented problem (lack of money). A new approach emerged: what can we do, considering the lack of funds, to change present reality towards the expected reality? What systems should we project to reach the expected results? The learning process pointed to a change from an initially passive attitude into a proactive one, taking into account the potential partners for the needs of each initiative and the solution components projected up to that moment.

We observed that those workshops contributed to restructure the entrepreneurs' projects, presented and discussed during the course, and to motivate new entrepreneurial practices. There was an increase in the entrepreneurs' self-confidence when exposing their proposals and aggregating new Design values: strategies and partnerships to their businesses. Finally, we observed that the visualization of the proposals by means of scenarios demonstrate that Design is an important tool in the development of these entrepreneurships. The insertion of Design in these entrepreneurships happens as strategies redesigned by the project staff and regrouped in four scenario clusters:

> *Scenario 1: entrepreneurial actions visibility;*
> *Scenario 2: entrepreneurs' and partners' preparation;*
> *Scenario 3: entrepreneurship working field enlargement;*
> *Scenario 4: project market release.*

The activities were focused on the internalization of design knowledge as a strategical element of the entrepreneurship incubation process; not as an expert's resource to be demanded in the solution of difficult problems whenever they appeared.

The continuation of Phase 3 would happen (considering the Incubators', as the privileged social actor, point-of-view) in the transition between Change 1 (Phases 1 and 2) and Change 2. Phase 3 configures the transition to the entrepreneurship sustainability in an autonomous way.

This transition is designed by Manzini (2008) as the germination and growth of a new idea of social well-being and a new production system that allows the reduction of impacts over the environment and the regeneration of the social, physical and cultural quality of the implementing places and the Planet as a whole.

From these results we can identify a "diffuse social demand" for a new knowledge in Design. This demand is not explicit in the case because the observation in the entrepreneurship post-incubation phase is still incipient in terms of concrete results. These entrepreneurships should keep connected with the Incubators to be stronger in the work market, acting and replicating their actions

to enable new entrepreneurships, without losing sight of their identity relation with their respective "symbolic sites" (Daghri and Zaoual, 2008). This is starting to happen now regarding the first groups of incubated entrepreneurships in the Afro-Brazilian Incubator.

Conclusion

These results point to a new designers' role in this process: the role to ethically evaluate the used methodologies and identify the type of social well-being the entrepreneurs are willing to promote with their projects. For that designers must use and enable the use of socially adequate instruments. In this particular case, instruments are accessible for entrepreneurs' autonomous use; then, entrepreneurs should turn to designers only when these instruments are no more sufficient for the implementation of new projects. This design is a co-creation phenomenon in which people and communities interact in a broad social innovation learning process. A process that is generated and regenerated by a new form of knowledge through the insertion of design in this Social Innovation case. This new form makes explicit, discusses, transfers and accumulates knowledge in a socially distributed network and contributes to enlarge/develop our vocation and new professional talents, relative to the socialization of our way of being and our way of doing Design.

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