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Skills for design in contemporary society

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Abstract

Several factors have contributed to the expansion of the projectual focus of Design over time. Initially focused on the design of physical products, its scope is evolving toward a systemic perspective. The main design challenge in contemporary times is precisely to develop and/or support the development of solutions to highly complex issues that require a broad vision of the project, jointly and sustainably involving products, services and communication. It is in this context that the interpretive richness and visionary skills, inherent characteristics of this discipline, can contribute to the development of a plurality of solutions and future scenarios. This paper aims to conduct a reflection on approaches and tools that support the development of transversal relations and the role of the designer in system level. Possibilities of expanding the purview of the designer stand out through the strengthening of their role as boost agents of sustainable innovations (design for sustainability) and of projects related to local resources value (design applied to the territory value design system, design in the value chain, service design). In this context, the importance in the development of competencies related to the systemic view is emphasized, as well as to the symbolic analysis and to the establishment of crosscutting relationships with other disciplines and social actors.

Transversality and Design

The word transversal (do Lat. *transversalis*) refers to the quality of diagonally crossing a space, traversing, pervading¹. In the context of research, the concept of transversality relates to a non-disciplinary and non-hierarchical approach to different fields of knowledge. According to Gallo

¹ The word transversal refers to: 1 whose meaning is oblique in relation to a particular reference (a plan transverse to a flat surface) 2 something/someone that crosses, passes through a certain reference, not necessarily oblique (side street) 3 that crosses perpendicularly to the surface or symmetry axis; transverse (cross section). n.f. 4 crossbar" (HOUAISS, Portuguese Dictionary, 2001).

(2001, p. 24), transversality "is precisely the form of transit among knowledge, establishing cross-sections that combine multiple fields, several areas". It therefore implies "a new attitude in the face of knowledge, both in its production and in its communication and learning" (GALLO, 2001, p. 24).

Transversality also relates to the notion of connection among multiple points, conducting, on its turn, to the idea of rhizome (DELEUZE; GUATTARI, 1980) and of network (SANTOS, 1996, 2000; CASTELLS, 1999). The word "transversal" has its origin in geometry. Fairly widespread in the area of social psychology, it has been used to describe the cross-relations established in society, in government and in organizations – broad themes that require plurality of knowledge and of benchmarks.

The purpose of this article, specifically, is to reflect on the question of transversality in design, an area that seems particularly interesting in view of its characterization. The task of design, quoting Maldonado (1976, p. 16), is "to dialectically mediate between needs and objects, between production and consumption". The author highlights the social impact of the designer's activity, which is also addressed by many authors. As noted by Bonsiepe (1998), "the design approach seeks the production of coherence" and has as its success criterion the satisfaction of society. Thus, its results can be characterized as a "socio-cultural innovation" (Bonsiepe, 1998).

In this sense, one can highlight various aspects characterized by transversality in the mediation between the production and the consumption systems: in dialogue, in interaction and in the search for solutions that integrate the demands of society, market and state actors; in the perceived demands of the individual and social group; in the reification of ideas for artifacts that refer to local and global material culture; and in understanding the environmental and cultural impacts of the choices in a project.

The mediating character of the design and its relationship with socio-cultural and technological innovation is evident in the concept proposed more recently by ICSID (2005): "Design is a creative activity that aims to establish the multiple qualities of objects, processes, services and their systems throughout their life cycle. Therefore, design is a key factor in innovative humanization of technologies and crucial to the economic and cultural exchange". In this sense, the frequent interactions of the designer with professionals and parlanes from other areas become evident, as well as in the integration and combination of knowledge in other fields. As Margolin (2000) points out: "Design is also an integrative activity that, in a broad sense, combines knowledge of multiple fields and disciplines, in order to achieve specific results. It has both a semantic dimension and a technical and operative dimension".

Thus, one can understand transversality as the bond that connects areas and allows the integration of various benchmarks, leading to a broader and more integrated view.

Possibilities for designers in contemporary contexts

Several factors have contributed for expanding the projectual focus of design over time. Initially centered on the design of physical products, its scope has been evolving toward a systemic perspective. We live in a time of transition, which many authors refer to as post-industrial society. Globalization and advances in information and communication technology lead to the increasing

dematerialization of products, to the "fluidization" and "virtualization" of relationships and to the "deterritorialization" of production. These phenomena, associated with the need to seek patterns of production and consumption, require yet greater capacity for abstraction, innovation and flexibility in design projects.

In this dynamic context that some characteristics of this discipline, as the interpretive richness and visionary skill – or anticipatory, as pointed out by Maldonado (1976) – may contribute to the development of a number of solutions and future scenarios.

In fact, it is the systemic perception that characterizes and stimulates the action of the designer nowadays. We can observe, for instance, the evolution from organizational competitiveness vision (focusing on resources and outcomes of an organization) to the vision of systemic competitiveness. This perception has reinforced the potential of design as a strategic element for innovation focused on the resources and skills of a territory.

This growing need to expand the project scope (in general, not only of design projects) has been addressed by several authors in the areas of economics, marketing, engineering, design, ecology. We highlight some formalized approaches from the end of the 80s, such as "augmented product" introduced by economist Levitt (1990); "product system", formalized in the 90s by Manzini (2004) and Mauri (1996), placing design between the production and consumption systems, and incorporating service to product; "product-service system", highlighting the issue of sustainability of the production and consumption model; and " design system ", which highlights the importance of design for the development of a territory.

Over the past decades, the search for sustainable solutions has established itself as imperative in the project. The environmental dimension in the culture and practice of design was primarily focused on reducing the environmental impact of materials and processes, evolving to the design of the product lifecycle and, eventually, in a more comprehensive and integrated way, to design for environmental sustainability, as indicated by Manzini and Vezzoli (2002).

Design for sustainability involves "design of inherently sustainable new products-services and the proposal of new scenarios that meet sustainable lifestyles", as pointed by Manzini and Vezzoli (2002). It is about "... promoting new quality criteria that are altogether environmentally sustainable, socially acceptable and culturally attractive" (MANZINI; VEZZOLI, 2002, p 22.).

Thus, the management of complexity and the search for new perspectives to meet the needs of contemporary society, considering the sustainability of the production and the consumption systems, are the keynotes of nowadays design project.

These concerns are reflected in the concept of "Product-Service System" (the English term for acronym PSS), formalized in the mid-90s. The dimension of sustainability is highlighted in the concept presented by Mont (2000): "a system of products, services, support networks and infrastructure developed to be competitive, satisfy users' needs and have less environmental impact than the traditional business models". Strategic innovation of this approach, according to Manzini and Vezzoli (2002), is "a new interpretation of the product concept". It evolves from product conception as a result of an industrial process to the design of the product as an integrated set of mutually dependent products and services targeted to a particular need. Therefore, a company offers utility (functions or deliverables) rather than tangible products".

These considerations point to the challenges and opportunities of design in the development of systemic solutions (including products, services and information), reinforcing the need to rethink the culture and practice of design and the forms of intervention of design in society. It is worth noting that the role of design in the "world of services" and in the information exchange, transcending the traditional activity of formal and physical design of objects, already anticipated by Branzi (1988, p 13) in the 1980s.

Still from a systemic perspective, design can be applied to a territory. In this sense, the designer can help strengthen the territory vocation by developing products and services based on local resources, locally adding greater value, stimulating economy.

The use of design as a resource for building an innovation strategy at the regional or national scale "is an important tool to imagine a re-configuration and a potentiation of the supply capacity of companies in global markets", as stated by Guidi (2003), from the *Confederazione Generale dell'Industria Italiana*. For this to happen, the author points out, it is necessary to move from one dimension of general cultural understanding to a qualitative and quantitative understanding of the "design system".

In this sense, the meaning of "design system" relates to the "analysis, from a systemic perspective, from the set of activities and from the design actors and their relationship to the national socio-economic-productive context, with the aim of delineating a map of the design features of the country" – according to the definition adopted by the *Design Italia System* network – SDI (2006). The design system "involves complementary systems of goods and services, becoming a local resource activator, even of those hidden or not expressed, and not only the ones of productive character" (SDI, 2006).

The design system approach can simultaneously benefit several producers and companies due to the fact that it applies to a particular geographical region or a productive pole or yet a Local Productive Arrangement - APL. The growing awareness of the importance of design for local development has contributed to their integration into the political agenda of many countries and regions. And the actions taken by organizations like the British Design Council in the UK, Barcelona Centro de Diseño in Spain, and SDI in Italy have been reinforcing the importance of investment in design as systematic and strategic activity in organizations and communities. This scenario presents opportunities and challenges for the professional in this area.

Skills for designing in a fluid and complex world

Currently we can observe a strong tendency to developing projects characterized as systems (incorporating products, services and communication), in which the articulation of cross-links is crucial. In this sense, the synergy between professionals with complementary skills is essential for developing projects for systemic character. Therefore, it is necessary for design to be positioned in this context, seeking tools to support their action at the strategic level and expand their sphere of interaction.

Changes in the nature of the project and the expansion of the projectuality territory cause "changes in professional practice and in the ways of organizing and conducting design processes", as pointed out by Bertola (2005, p. 32). In this sense, it is timely asking: "What are the skills that design needs to develop to act in contemporary society?"

The issue has been addressed by some authors, among which Manzini (2004) and Thackara (2005) stand out. According to Manzini:

[...] it is necessary to think "design in a fluid world" in which products, services and information combine and generate innovative ways of designing, producing and consuming/using, which result from the articulation of a multiplicity of actors. To act in this context, the designers "have to change your professional profile, becoming operators within a network, taking the role of suppliers in the innovation process. [...] When dealing with sustainable solutions, the design activity that drives the innovation process should be facilitated by the designers, rather than being directly held by them". (MANZINI, 2004, p. 20).

In this sense, the designers, from their creativity and communication skills, can help promote a high degree of active social participation, reinforces the author.

Under a similar perspective, Thackara (2005) addresses the "design in a complex world", showing the transition from products to services and the need to change the paradigm of the design project: from "designing for" to "with" and from "design as a project" to "design as a service", implying models of collaborative, open and continuous action including the user. The author stresses the importance of integrating the designer with local stakeholders and citizens to develop forms of collaborative innovation, resulting in new services for everyday life of communities. According to Tackara (2005, p. 216), "most solutions involve new alliances and new connections" and, in this sense, it points to the need to develop peripheral vision and cultivate the habit of observing people, places, organizations, projects and ideas in search of new connections and opportunities.

Therefore, design should be able to contextualize and globalize, developing solutions that positively relate these two poles. Thus, one can favor the local potential and resources, serving the needs of users located in specific contexts and, simultaneously, promoting the integration of communities and diversity, incorporating the benefits of technological advancements and enabling dialogue and local and global networks. Indeed, the need to work "in view of the voltage relationship between what is common and what is different, between the local and the universal" is identified as a major challenge for contemporary society by Morin and Wulf (2003), shared by many authors such as Castells (1996) and Santos (1996).

These considerations reinforce the need to develop skills that go beyond a specific professional context related to interactivity, to the ability to listen and act in different contexts, to the information management, to the collective development, to systems analysis, among others.

It is worth quoting a study by the Organisation for Economic Co-operation and Development – OECD on key skills needed to promote a successful life and a prosperous society. A set of skills that fall into three major categories has been identified: "a) using tools to interact with the environment and solve problems; b) to interact with heterogeneous groups and c) to act autonomously, standing in a broader social context" (OECD, 2004, p. 9).

The interactive use of tools relates to the need for the professional to be update with the technologies, to adapt tools to their own purposes and to conduct an active dialogue with the world. It involves interactive the use of: the language, symbols and texts; information and

knowledge; and technology. The interaction with heterogeneous groups relates to the need to deal with the diversity of pluralistic societies, to the importance of empathy and social capital. It involves good relations with others, cooperation and teamwork, management and troubleshooting. Finally, autonomy in action relates to the need to understand their own identity and establish goals in a complex world, to exercise rights and assume responsibilities and to understand other contexts. It involves systematic understanding and action; the design and development of personal plans and projects; and the recognition and defense of their rights, interests, limits and needs. According to the study cited, these skills can be combined according to the context of life, e.g. cultural norms, access to technology, social and power relations.

One can observe that the identified skills apply to many professionals who work in contemporary society. So, back to the focus and reflection of this article, some considerations may be pointed out.

The use – and the project – of tools to interact with the environment and to solve problems constitute, in themselves, some of the main focuses of the designer. The ability to interact with heterogeneous groups is essential in mediating and integrating different universes and understanding of plural cultural contexts in the design of products and services. Learning to interact is also crucial for the development of solutions that involve forms of collaborative innovation and social participation. Finally, autonomy is crucial to the performance of design at a systemic level, for the development of identity and local culture, of our resources and territories. Thus, the development (or improvement) of these transversal skills is crucial to sustain the action of the designer in the contemporary world and to expand their work field.

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