Gastbeitrag: From Design Thinking to Design Culture

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1 | Introduction: the birth and rise of Design Thinking

Starting from Archer's idea that *"there exists a designerly way of thinking and communicating that is both different from scientific and scholarly ways of thinking and communicating, and as powerful as scientific and scholarly methods of enquiry when applied to its own kinds of problems."* (Archer 1979: 17) and from Lawson's (1980) research on the mental process that architects undertake in solving problems, Rowe (1987) popularised the term "Design Thinking" by indicating the different ways in which designers face design situations. Even if Lawson's studies reveal some biases, they opened a new field of research, meant to investigate and describe the specificity of the designerly approach to problem finding, setting and solving. From then on, Design Thinking became an increasingly relevant topic in design research. By using theories, methods and tools from disciplines such as psychology, cognitive sciences, anthropology and education, research on Design Thinking worked to elicit and model designers' thinking processes and cognitive style, the composition of the design teams, the interaction among their components and the procedures and the processes that designers activate (Dorst/Dijkhuis 1995; Dorst/Cross 2001). Traditionally, this field of research is based on analysing designers and design practice to understand the "designerly" ways of problem finding, setting and solving by observing the ways they approach the design of different artefacts (Cross 1982; Schön 1983). According to the most relevant studies, designers make use of empathic skills, envisioning capabilities, divergent idea generation, visualisation tools, synthesising and prototyping in their approach, just to mention some of the skills and tools generally associated with designers and their cognitive style.

A widely renown and accepted conclusion of these investigations is that designers can (or are used to) tackle ill-defined or indeterminate problems with a solution-oriented attitude (Cross 1982; Buchanan 1992).

The idea that design can be focused not only on products but also on intangible artefacts such as signs, interactions, processes, and services represents the first important expansion of the concept of Design Thinking (Buchanan 1992). From the beginning of the new century, the notion of Design Thinking progressively moved from the restrict field of the academic debate to a much wider audience, with the idea that companies can adopt it to cope with the challenges of innovation in contemporary markets. A series of contributions from design practitioners and scholars (Kelley 2001; Brown 2008, 2009; Lockwood 2009) spread Design Thinking as a process that companies can undertake to better compete and face the challenges of innovation.

These contributions supported the emergence of design practices, which in most cases were still confined in the technical offices of enterprises to give shape to new tangible products, suggesting and sustaining their application to the much wider scope of leading innovation projects and processes combining technological and marketing issues.

Design Thinking expands the "modern" definition of design that describes it as a complex process of coordination of multiple factors meant to give shape to new artifacts (Maldonado 1976). The famous IDEO scheme assumes this definition, introducing the idea of combining a user-

centred perspective with marketing and manufacturing issues, and presents Design Thinking as an innovation process that integrates the ability to capture people's needs and wants (desirability), with business goals (viability), and technological possibilities and capacities (feasibility).

In this frame, design shifts from a purely technical to a strategic role: Design Thinking stops being simply described as the attitude of designers in facing and solving problems, becoming an approach to innovation that can be applied to a variety of situations also by non-designers.

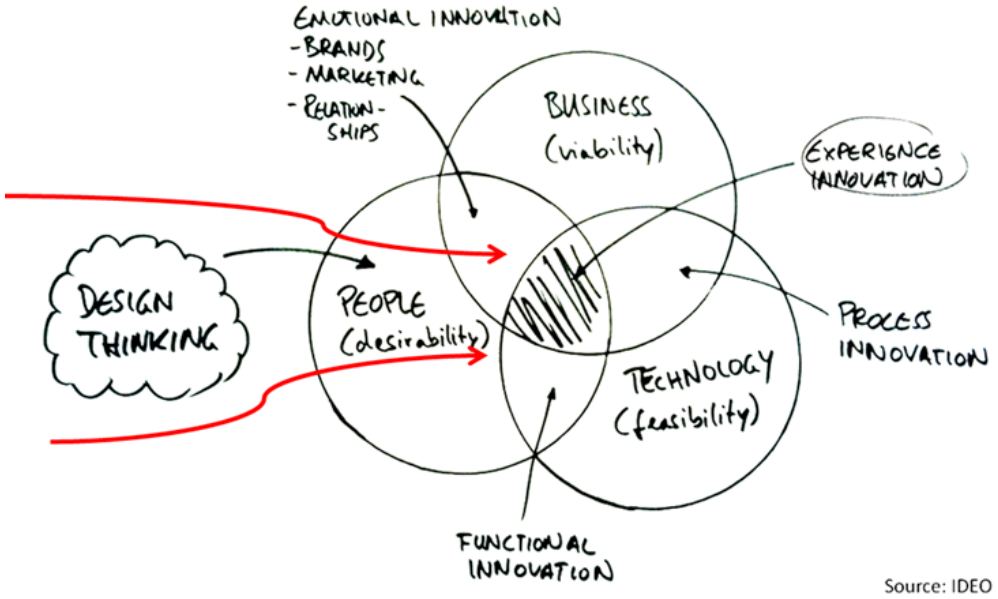

Fig. 1: Design Thinking (Source: IDEO)

We can understand and interpret this transformation only if we place it within the overall change of the economic framework, from an economy of products to an economy of services, and from a period of linear economic progress to a period of uncertainty. The emergence of Design Thinking and design-enabled innovation processes are actually related to the frantic search of new tools to support strategic decision making, in an attempt to cope with the progressive decline of traditional predictive models. The impossibility to rely on a linear progress from past, to present and future leads to the necessity of coping with an unpredictable future and fast-changing markets, challenging established innovation practices and making strategic decision making much more complex. This is where Design Thinking comes into play as a powerful solution that companies can introduce to become more capable of facing uncertainty, managing existing businesses and generating new one (Boland/Collopy 2004; Osterwalder/Pigneur 2009).

Design Thinking starts being interpreted as a way of reshaping managerial competences (Dunne/Martin 2006), leading to

the opportunity for design to scale up within companies and take part in strategic conversations. This must surely be seen as a mostly positive phenomenon, which made design increasingly popular in fields where it was almost unknown. Nonetheless, the point that we would like to raise is that this popularisation may easily lead to turn Design Thinking into one of the many managerial formulas (and fads). The apparently simple structure that stands behind Design Thinking is actually leading to the widespread idea that organisations can easily integrate it and leverage on it to become more effective and capable of serving their customers. To prevent simplification, we would then like to compare (and combine) the idea of Design Thinking with that of design culture (Julier 2000; 2006), explaining how the introduction of design in an organisation implies the change of its culture, or else a long-term process that cannot be replaced by easy formulas.

2 | Design Thinking as a managerial formula

While theories of organisational change recognise the complexity of the phenomenon of change within organisations and therefore display a systematic and holistic attitude, organisational management is often characterised by the adoption of models and techniques that seem to be derived from a reductionist way of thinking, thereby producing formulas that can be easily synthesised and turned into slogans and procedures that can be applied to a variety of situations with minimal adaptation. The rise and growth of large managerial consultancies can also be associated to this phenomenon in that their business model is based on the standardisation of service, which is possible when there is a methodology and a set of procedures that can be replicated (Suddaby/Greenwood 2001).

The development of these models is normally based on the idea that in a certain period there is a winning practice, which can be abstracted and extracted from the context that generated it through a process of generalisation, modelling, and operationalisation that offers the possibility to transfer and apply it to other sectorial and geographical contexts. The "best practice" is then turned into a supposedly transferrable model that is ready to be adopted in a number of different situations.

Japanese models and techniques, such as time-based competition, lean manufacturing, total quality management, kaizen and quality control circles, can be connected to the success of the Japanese industry during the 1980s and 90s. As Nonaka and Takeuchi (1996: 97) used to tell us: *"Much as manufacturers around the world have learned from Japanese manufacturing techniques, any company that wants to compete on knowledge must also learn from Japanese techniques of knowledge creation."* Considering the wide cultural distance expressed by Japan, the case of Japanese managerial techniques can be seen as paradigmatic in revealing the difficulty of transferring models from one context to the other. Their adoption is often documented as a misleading practice that would have required a deep process of cultural change in the hosting organisation (Lillrank 1995). Even in the best cases, enterprises went through a process of adaptation that changed their very concepts and goals, and, in the worst cases, they simply failed due to non-acceptance. While the methods' success in their original context can be measured and proven, their portability and ability to be replicated are difficult to demonstrate.

Studies on the differences in the values and behaviour of people working in organisations located in different geographical contexts (Hofstede, 1980) tell us that the cultural specificity of a context can deeply affect the operation of a model or a program, and we must take into account that some models and techniques work because of the individual capabilities or character of people, a situation that is impossible to reproduce.

Nevertheless, Japanese models are just one example: the increasingly shorter lifecycle of the organisational and managerial models can be coupled with the shorter lifecycle of products and the frenzied search for change that affects many companies and markets. Even if there has been harsh criticism of the fast turnover of managerial models and techniques that led to describe many of them as fads (Miller/Hartwick 2002), the practice still seems to prosper.

From a certain point of view, design thinking can be seen as one of these fads: it could be associated with the growth of large design consultancies, just like many managerial models and techniques are bound to the growth of large managerial consultancies. During the last two decades, a sort of middle ground seemed to take shape: the design consultancies moved towards strategy and entered the area of management while the managerial consultancies moved towards innovation, new product/service development and interaction, and entered the area of design. Design thinking was born within this framework. Although it was initially meant to introduce research on design and new product development processes, it was subsequently turned into a managerial approach through the process of abstraction from its original context that we described.

Many consultancies are today focused on sustaining innovation in companies through a focus on design, and many organisations are embracing the idea of Design Thinking as a way to accomplish this goal. Following the expansion of its scope, design thinking is moving away from design practice by employing formalised processes and techniques that can be applied by professionals of all disciplines, not necessarily by designers. Within this framework, design thinking is now separating the process of conceptualising ideas from that of actually making things while enforcing the idea that there exists some sort of capability or competence (i.e., the often abused term "creativity") that precedes or can be divorced from a knowledge on how to make things.

Defined at the beginning of its introduction in the consultancy business as a new robust method to explore and exploit market opportunities to produce customer value, Design Thinking is expanding as a promising approach for dealing with problems in different fields. Some authors go further and suggest that design thinking can produce massive change that will improve our lives and solve the wicked problems our society faces (Berman 2008; Tackara 2008).

Behind the success of Design Thinking stands the idea that there is something new to be learned from designers and that managers should apply it to improve business (Kelley 2001).

According to Brown (2009), thinking like a designer can help managers and organisations to develop innovation in products, services, processes and strategy.

Some common places characterising the debate on design are frequently drawn from these positions:

- The contrast between design thinking (also defined as intuitive, creative, integrative, abductive, and right-brained) and analytical thinking as the dominant problem-solving approach of managers and organisations;

- The equation according to which Design Thinking is the way in which designers think (while we would underline that to design something we do not need just a creative and synthetic approach, but the integration of deductive, inductive and abductive thinking);

- The definition of creativity as a profession (while we would underline that creativity is an attitude that everyone manifests and can cultivate);

- The separation between thinking and doing (while we would suggest that one of the major traits of originality of design is that of assuming a bottom-up perspective on problem solving).

For these and other reasons mentioned, we think that it is necessary to take a critical look at Design Thinking. The ways in which it is evolving show all the typical characteristics of managerial fads: an easy-to-communicate formula, straightforward implementation, not so radically novel as to discourage adoption, and quite a few gurus.

In our perspective, the de-contextualised nature of Design Thinking led to its introduction into companies as a set of (mainly) synthetic tools that can be adopted to generate many potential solutions, rarely crossing the threshold of real development, production and exploitation. The gap between the phases of generation of new ideas and those of development is, in our practice of applied research, one of the most critical aspects of the design activity.

The generation of new ideas is in fact pretty simple whenever we reduce the number of constraints: we might produce a great number of innovative ideas, but we miss the point that the design processes (just like the managerial ones) can be effective only through the necessary mediation and negotiation for dealing with different situations and stakeholders and the constraints they bring about. This point was well defined by Betty Vandenbosh and Kevin Gallagher (see "The role of constraints", in Boland/Collopy 2004): while contemporary managerial practice is fraught with the idea of out-of-the-box thinking, what should be learned from design is not a further push towards creativity but the capacity of staying "inside the box" and consider all the constraints.

The lack of contextualisation and situatedness, combined with the split of the ideation and the development processes and the idea of a top-down practice that principally affects the management rather than the whole enterprise, are in our opinion the main faults of Design Thinking as it was extended to the management.

3 | Connecting Design Thinking to Design Culture

In our view, to become effective within organisations, design must become part of their culture: enterprises and other organisations should develop their own design culture by integrating design through continual processes of negotiation and

alignment. This calls for a different perspective, where design culture can be described as a system of knowledge, competences and skills in use within a situated context to develop new solutions and pursue innovation (Deserti/Rizzo 2014).

The discourse on the relation between design and culture is usually based on the idea that we should link design to the cultural context where it occurs/operates to better understand or guide it. The cultural context is then interpreted as a recipient for the design of products or services, which will be better conceived (if we look at the process from a professional perspective) or interpreted (if we look at the process from an historical perspective) by linking them with the cultural context. Therefore, culture is referred to the end-user at an individual or at a social level: products can be interpreted as the result of their context of destination in its multifaceted dimensions, including the cultural one.

Some scholars introduced the concept of "culture-oriented product design" (Moalosi/Popovic/Hickling-Hudson 2010), assuming the idea that designers should not just focus on needs but also on the culture of the end-user. The concept explains that culture can be seen as a catalyst for designing innovative products if and when designers are able to incorporate a specific culture into the design of products thereby giving space to the interpretation of local characters in contrast with the globalisation of solutions. This line of thinking can be associated with the vast literature on the reasons and modes of making design interact with the context of destination, primarily but not only represented by the end-user, leading to solutions that properly solve a specific set of problems and fit a specific context (Norman 1988; Bannon 1991; Jordan/Green 1999; Frascara 2006).

While we do not want to neglect the importance of the cultural context of destination, we would like to note a gap: a product can be interpreted not just as the result of its context of destination but also, and in some cases primarily, as the result of its original context. If this is true, as we will try to note, a new product or service must also be seen as the result of the culture of the organisation that produces and delivers it. If we look at the context of destination as the main force that influences the design process, then we are primarily driven to consider the culture of the end-user, but if we look at the original context as the main force that influences the design process, then we are primarily driven to consider the culture of the organisation.

In our view, new products and services result from the complex interaction between these two levels: the user-centricity of contemporary design is in constant tension with the fact that organisations do what they are able to, and what they believe is right to do. Quite often this is not perfectly correspondent to the needs and wants of consumers, but introducing a more user-centred perspective is not always simple and fast, as it calls for the transformation of the culture of the organisation.

Conclusions

Design can (and should) be interpreted as part of the culture of an organisation, or of a place and time. We can thus discuss about Apple design culture in opposition with Samsung design culture, or about Italian versus Scandinavian design in the '70s.

Both Design Thinking and design culture can be described as concepts, but while the first tends to be fixed, the latter is variable and constantly changing. The concept of design culture is based on the idea that design is not only an attitude, but also and first of all a system of knowledge, competences, and skills that operates in a specific context to develop new products and services (Julier 2000; Deserti/Rizzo 2014). This system must be acquired, integrated and combined with the processes of organisations to lead to the improvement of innovation performances (Bertola/Teixeira 2003).

In other words, the notion of design culture is context-dependent, and emphasises the peculiar "way of doing things" of an organisation or system. By consequence, there is not one design culture, but many different cultures that depend on a variety of factors that characterise a particular organisation, the place where it is located, and the overall culture in which it is embedded.

At the same time, the concept of Design Thinking should not be seen only in opposition with that of design culture, but as potentially integrated or embedded into it.

What is important, particularly for non-designers, is that Design Thinking as the promise of an easy formula to cope with the difficulties of innovation in contemporary markets should not be seen as serious and realistic. Considering the recent evolution and expansion of the field of application of design, the same can be said for the introduction of design in public bodies to cope with the transformation of public services and the need of making them more user-centred. As many cases and research reports show (Design Council 2015), design and Design Thinking can actually be powerful engines of innovation, but their integration in organisations is complex and requires time and commitment.

Here, it is important to consider the constant tension between exploitation and exploration, and the need of finding that difficult balance that makes organisations able of relying on efficient and profitable solutions, while continuously searching for new and better ones.

Design is often projected towards exploration, while companies are often in search and in need of exploitation, which makes the tension stronger. Becoming aware of these tensions, and capable of coping with them, is in our view the main challenge that design must overcome to be integrated in organisations. At the same time, becoming aware that design is a much more complex and stratified concept than what is commonly perceived, and that there is no easy formula to integrate it as a source of value, is the main challenge that organisations must overcome to include it as a stable and relevant part of their culture.

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