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Design culture: from organizations acceptance to society unawareness

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Abstract: This article analyses the evolution of the concept of design from the perspective of its definition and its consideration in the Oslo Manual, a reference document for measuring innovation in organisations. This analysis allows us to establish an updated conceptual framework in the consideration of design, which highlights its understanding as a process, its role as a strategic resource, its contribution to competitiveness in organisations, its link with innovation and its close relationship with society through its analysis and the resolution of the needs of people and users. The paper examines the acceptance of this conceptual framework from two perspectives: the organisational and business perspective, and the social perspective. To this end, the paper analyses reference documents that highlight the value of design, as well as a detailed study of the answers to the question "What do you understand by design? Translated to students of industrial design and their close social context.

Keywords: design culture, design and innovation, design value, design understanding, design definition.

1. Introduction

Throughout history, there have been many efforts to promote a direct link between design, business and society (Martínez, 2022b; Fernández-Gago, 2022). Design's claim to play an increasingly relevant role in the conception of a company's visibility vectors and in its competitiveness, as well as to position itself as a key activity for society, has been reflected throughout the definitions and in the consideration of the role of design in each context (Doherty, Wrigley Matthews and Bucolo, 2015).

Outside the field of design, we can also find a redefinition of its contribution through the analysis of the different versions of the Oslo Manual, a reference document in the measurement of innovation and the development of more effective innovation policies and strategies.

From the definition of design proposed by Henry Cole in 1849, in which he warns about the identification of design with the embellishment and ornamentation of objects, to the current definition of design proposed in 2015 by the World Design Organization (2023), which refers to design as a strategic problem-solving process that drives innovation, there has been a profound

revision of its capacities and attributions, always with the aim of accurately framing the virtues of a discipline subject to multiple interpretations.

In parallel, Guy Julier (2008) proposes the concept of Design Culture, as a proposal to understand design in several contexts at the same time and at a deep level, reflecting on the role of design and its professionals in the generation of solutions, production and consumption. Julier also reflects on this construct from different points of view, linking it to the way in which design activity is carried out, taking into account its geographical context or the inclusion of this activity as an organisational key. Understanding the evolution of design is therefore an essential task when it comes to understanding the role played by this discipline in a specific context (Calvera, 2000).

However, the understanding of the concept of design culture as a construct that refers to the knowledge, understanding or mastery of the discipline of design and its contribution to the development of industries and societies, has had an unbalanced impact, working in depth in its understanding from the organisational and business point of view, but not in its transmission to the general public.

Referring to the etymology of the concept of culture, we can translate design culture as the capacity to recognise the value of design in a specific context: within an organisation or company, in a sector or collective as a whole, or in a specific social and geographical framework (Martínez, 2022a). The value attributable to design by an individual, a collective or a system. This vision opens up a discussion beyond the existence or not of a design culture at any of these levels, giving rise to the questioning of the existence of design culture in a specific company or industry, but also to ask whether in a defined geographical context, and in a specific society, its individuals understand the relevance and role of design.

From a business point of view, and from the understanding of design as a discipline at the service of the competitiveness of organisations, we can affirm that there is a consensus on the need to establish the concept of the value of design (Viladás, 2010; Fernández-Gago, 2022; Martínez, 2022c). However, what does society in general think about the role of this discipline? What does the average citizen understand by design?

2. Evolution of the design concept

2.1 Evolution of design definitions

Design is a discipline for which it is difficult to find a satisfactory definition. There is currently a multitude of definitions and nuances, specific developments in areas of knowledge and subfields of the profession. However, the design profession is commonly defined as a research and development activity, structured and planned with the aim of achieving previously established objectives. This definition, current and valid today, is a far cry from the early definitions that limited design to its aesthetic and formal contribution. Taking as a reference the definitions of industrial design proposed by the ICSID (International Council of Societies of Industrial Design), due to their relevance over time and their validity in terms of their traceability, we can find the following definition, proposed in 1951:

> The industrial designer is a professional who, through training, has acquired all the technical knowledge, experience and visual sensitivity necessary to determine the materials, mechanisms, shape, colour, surface finishes and decoration of objects that are mass-produced by industry. The industrial designer can be dedicated to providing solutions to all aspects and/or can be immersed in the whole process or only in some specific parts of it.

> The industrial designer can also provide solutions to packaging, advertising, exhibition and marketing problems as long as they can be solved by means of the knowledge of the visual aspects for which he has been trained. He/she can also do so on the basis of technical knowledge and experience.
>
> In turn, the "craft designer" who has a clear market purpose will be considered an industrial designer when the works he produces have a commercial character and are made in batches or small productions, thus losing the personal character of the artist or craftsman. (Ozestudi, 2023)

Shortly afterwards, this same organisation proposed the need to include a vision of design linked to the development of societies, proposing the following modification in 1960, which includes the allusion to the generation of tangible and intangible solutions:

> The function of the industrial designer is to give form to objects and services that make it possible for the everyday life of human beings to be efficient and satisfactory. The scope of action of the industrial designer today (1960) covers practically all types of man-made artefacts, especially those that are mass-produced industrially. (Ozestudi, 2023)

Tomás Maldonado (1993), in his book, "Industrial design reconsidered", highlights the importance of the ambiguity of the existing definitions, and in 1969 the International Council of Societies of Industrial Design proposed a third definition of industrial design that denotes a broadening of the discipline previously suggested by other authors:

> Industrial Design is a design activity that consists in determining the formal properties of industrially produced objects. By formal properties we should not only understand the external characteristics, but, above all, the functional and structural relationships that make an object have a coherent unity from the point of view of both the producer and the user, since, while the exclusive concern for the external features of a given object entails the desire to make it appear more attractive or also to conceal its constitutive weaknesses, the formal properties of an object are always the result of the integration of various factors, whether they are functional, cultural, technological, economic or any other type. (Ozestudi, 2023)

The ICSID, aware of the evolution and changes in society as we find ourselves today in a post-industrial society, modified in 2005 its definition of industrial design in accordance with an immaterial society, such as the society of the beginning of the 21st century, in which the disappearance of the term "industrial" stands out:

> Design is a creative activity whose aim is to establish the multi-faceted qualities of objects, processes and services as well as their systems and their life cycles in a holistic way. Therefore, design is the central factor for innovation and humanisation of technologies and a crucial factor for cultural and economic exchange. (...) Today we understand design, even the one that keeps the epigraph "industrial", as a broad-spectrum profession related to many other professions involved in the new complexities of needs that seek an improvement of life and societies. Therefore, the term designer refers to a professional who actually practices an intellectual profession beyond offering a service for a company. (Ozestudi, 2023)

Finally, the latest definition in force proposed in 2015 by the ICSID, renamed in 2017 as WDO (World Design Organization), emphasises a transversal vision of the design activity:

> Industrial Design is a strategic problem-solving process that drives innovation, builds business success and leads to a better quality of life through innovative products, systems, services and experiences. Industrial Design bridges the gap between what is and what’s possible. It is a trans-disciplinary profession that

> harnesses creativity to resolve problems and co-create solutions with the intent of making a product, system, service, experience or a business, better. At its heart, Industrial Design provides a more optimistic way of looking at the future by reframing problems as opportunities. It links innovation, technology, research, business and customers to provide new value and competitive advantage across economic, social and environmental spheres.
>
> Industrial Designers place the human in the centre of the process. They acquire a deep understanding of user needs through empathy and apply a pragmatic, user centric problem solving process to design products, systems, services and experiences. They are strategic stakeholders in the innovation process and are uniquely positioned to bridge varied professional disciplines and business interests. They value the economic, social and environmental impact of their work and their contribution towards co-creating a better quality of life. (WDO, 2023).

This definition also alludes to a change of focus in the contribution of design, moving from the vision of design as a tool for configuring products or services, to the enhancement of the design process itself. However, this consideration was not included in this definition until barely a decade ago.

2.2 Evolution of the role of design in the Oslo Manual

Leaving aside the evolution in the definition of design, the Oslo Manual, a reference guide for measuring the level of innovation in the different European productive sectors and regions, has also been an excellent witness to the evolution of the contribution of design in the field of innovation. Specifically, from the non-inclusion of design as an innovation activity in companies, to its distinction as a specific key resource in the understanding processes of users and consumers, considered as an activity independent of technological development or R&D (OECD, 2018).

Going into detail in the analysis of the different versions of the Oslo Manual - 4 to date (1992, 1997, 2005 and 2018) - we observe both an evolution of the role of design and a correlation with the evolution of the so-called paradigms of innovation. While in 1992 the Oslo Manual essentially included a consideration of innovation linked to technology, a vision typical of the technology push model, design appears in this edition as a support for production tasks, such as graphic representation or drawing. The transition towards a market pull model and the coexistence of this with the previous technological relevance is reflected in the second edition of the manual, in which design, differentiated between industrial and artistic, has a place in stages other than production. However, it is not until the third edition that non-technological innovation is fully considered, where its role is qualified, on the one hand, with regard to the generation of products and services, as opposed to the aesthetic contribution considered in the typology of innovation in marketing. The current edition of the Oslo Manual (2018) makes explicit the consideration of design as an innovation activity, differentiating between engineering design, product design and Design Thinking. The latter consideration is directly associated with improvements in competitiveness and economic performance from an organisational point of view. Furthermore, in the latest version of the Oslo Manual there is a fact that should be highlighted: In the definition of innovation, the word user appears for the first time.

2.2 Common conceptual framework

This double look at the evolution of design, taking as a reference, on the one hand, the definitions proposed by a reference body such as the ICSID, as well as the analysis of the Oslo Manual, allows us to observe a parallelism in the evolution of the role of design and its contribution to organisational development, and in its role at the service of society.

The analysis allows us to establish a series of conclusions regarding the consideration of design today. On the one hand, the discipline is seen as a process and not as the result of a creative process or the design practice of a professional in this field. Furthermore, design is viewed as a resource capable of bringing competitiveness to organisations, even extending to its consideration as a strategic resource, essential for maintaining the competitive advantage of organisations and therefore of special relevance in the elaboration of plans and strategies. The inclusion of design in the Oslo Manual also denotes the important role that this discipline plays in the promotion of innovation, and it is not in vain that design, hand in hand with creativity, is considered an essential activity in the proposal of new products and services. Finally, it is worth mentioning the importance of design in the development of societies and in the task of proposing solutions that improve people's lives. Attention to people, to users and clients, is another of the recurrent elements that we can observe in the evolution of its definition, as well as in the understanding of a typology of innovation that is distanced from its almost exclusive link with technology, in favour of a new form of innovation centred on the attention to people's needs and on the meaning of new proposals (Verganti, 2009; Ferrás 2014; Silva 2016; Hahn 2020).

Therefore, the evolutionary analysis of the definitions of design, as well as the study of its consideration in relation to innovation, allows us to identify a common framework of understanding at present, in which 5 variables stand out: Design as a process; Design and the contribution of competitive advantages; design as a strategic resource; design and the link with the user; and design and the link with innovation.

3. Assessing design understanding

In order to assess whether there is an understanding of design aligned with the evolution and the proposed framework both in organisational contexts and by society and its individuals, an analysis exercise is proposed below from two perspectives. On the one hand, the first line of analysis proposes to find a correlation between the semantic framework of the proposed design and a set of reports proposed by different authors and entities, in the time frame of the last five years. These reports have popularised the relevance of design at the business level. The second line of analysis proposes assessing the understanding of design in the terms proposed in the previous section from a social point of view, through an exploratory exercise in which young designers and their close social context respond to the question "What do you understand by design?

3.1 Organisational perspective

The documents used for this analysis were the latest edition of the "Design in Tech" report published in 2023; the report "The Design Economy" published in 2022; the report "The New Design Frontier" published in 2019; and the report "The business value of design" published in 2018.

The analysis of this documentation has been done in terms of acceptance of the defining framework proposed in the previous section, taking into account the relevance in these reports of the understanding of design as a process; the relationship between design and the contribution of competitive advantages; the inclusion of design in organisations as a strategic resource; the linking of the activity with the user and the challenges and needs of society; and finally, the express link between design and innovation. Table 1 (below) shows how each report alludes to the proposed variables.

Table 1. Analysis of the conceptual framework according to reference reports.

	Design as a process	Design and competitive advantage	Design as a strategic resource	Design and user engagement	Design and the link to innovation
Design in tech report (Maeda, 2023)	Designers must be willing to experiment and learn from mistakes, and that the design process must be flexible and adaptable to accommodate changes and improvements to the product or service.	Design can help companies create more attractive and user-friendly products and services, which can increase user satisfaction and improve brand loyalty.	Design can help companies differentiate themselves from competitors and create value for users, which can drive long-term success.	Successful companies in the future will be those that focus on design and user experience to differentiate themselves from the competition and offer attractive, user-friendly products and services.	Design and innovation are closely related and crucial for success in the digital age.
The Design Economy (Design Council, 2022)	Design is not only an aesthetic activity, but also a process that involves solving complex problems and improving the user experience.	Companies that invest in design have superior financial performance compared to those that do not.	Design can help companies differentiate themselves in an increasingly competitive market by providing added value that can be difficult for competitors to imitate.	The user is central to the design process and that user-centred design can improve the user experience, generate economic and social value, and address some of the world's most pressing challenges.	Design can be a catalyst for the generation of new ideas and solutions.
The New Design Frontier (InVision, 2019)	Collaboration between design teams and business stakeholders at all stages of the design process, from research and discovery to product or service implementation and launch.	Design can help companies differentiate themselves in an increasingly competitive marketplace by creating exceptional user experiences that meet users' needs and desires.	Design is a key strategic resource that companies can use to differentiate themselves in a competitive marketplace and create meaningful and relevant solutions for users.	Design involves understanding user needs and wants, prototyping and testing solutions with users, and using user feedback to iterate and continuously improve the user experience.	Design has become a key force for business innovation and that companies that adopt a mature and sophisticated design strategy have a competitive advantage over those that do not.
The Business Value of Design (McKinsey & Company, 2018).	Design is presented as a process that enables the creation of innovative and cost-effective solutions that can be used to improve the efficiency and productivity of the company.	The contribution of design to product and service differentiation is highlighted, as well as its ability to improve user satisfaction and company image.	Design is presented as a strategic resource that can be used to achieve business objectives and improve market position.	The importance of user-centred design and the need to understand and satisfy user needs and wants is emphasised.	The contribution of design to innovation is highlighted, both in terms of creating novel solutions and improving existing solutions.

The documentary analysis carried out allows us, from an organisational perspective, to endorse a link between the proposed defining framework and the key variables extracted from the analysis of the evolution of the definition of design and from its change of consideration reflected in the different editions of the Oslo Manual. The different focus of each of the reports also allows us to contrast how there is a shared vision with respect to the proposed framework. Although the "Design in Tech" report focuses on the link between design and technological innovation, it shows us relevant data regarding the inclusion of design capabilities in different organisational contexts and sectors. On the other hand, "The Design Economy" explicitly focuses on the user variable, defending the relevance of the discipline not only in business contexts, but also in the service of public administration and the development of policies with social impact and improvement of people's quality of life. Finally, "The New Design Frontier" explicitly explores the relationship between design practices and business performance, in the same way, the "The Business Value of Design" focuses on translating the use of design into performance and competitiveness.

3.2 Social perspective

The analysis from a social perspective has been carried out by university students enrolled in the subject "Strategic Design and Competitiveness" in the third year of the Degree in Industrial Design Engineering at the University of Deusto, in Bilbao, Bizkaia. Within the framework of a subject that delves into the vision of design as a discipline that can be conceived beyond the operational and the provision of specific design and product development services, before starting to develop the contents, during the first teaching session, the students are invited to propose a word with which they link the term design. Then, in the following weeks of the course, students are asked to analyse the degree of understanding of design in their geographical and social context by asking anonymous people in their environment: What do you understand by design?

It should be noted that the students are people with an incipient training and background in the field of design, who have studied the basics of design methodology, design subjects in which different kinds of challenges are faced, and theoretical subjects on the relevance of design in industry and contemporary society. In contrast, the people invited to respond to the second part of the exercise are people who state that they have no apparent connection with the field of design, and therefore have no information or educational experience of design activity other than their own personal experience and understanding.

Furthermore, this exercise is not intended as an exhaustive statistical study of the social context of the students and specifically of the area of geographical influence of the University, but rather as a practice that invites reflection and analysis of the context in which these young designers will develop their professional practice.

During the months of February and March 2023, the experiment was carried out, obtaining a total of 33 responses from students and 151 valid responses from people outside the field of design.

Results obtained

In relation to the question posed to the students, the 33 responses obtained are divided into 5 recurrent blocks. Thus, 18% of the answers allude to the link between design and the capacity to create, creativity and conceptualisation. Also, 18% of the answers refer to the concept of innovation, while 15% refer to the result of the design process as a solution, product or service. Finally, 12% of the responses refer to terms such as methodology, process or method, while 9% of the responses refer to design as a strategy.

The remaining 24% are independent responses including the terms adaptation, form, function, experimentation, market, observation and emotion.

With regard to the students' respondents, the total of 151 responses is divided as follows: 24.5% link design with aesthetics, while 15% of the responses obtained allude to the relationship between design and form. Along these lines, 7.5% of the responses linked design with beauty.

On the other hand, 24.5% of the answers allude to the creative capacity of design, while 14.5% relate it to ideation. 12.5% of the people questioned understand design to be linked to function.

Finally, 8% of the responses understand design as a process, about 6% include an allusion to people and users, while only 2% of the responses link design directly to innovation. It should be noted that none of the 151 valid responses analysed alluded to the ability of design to make a business competitive.

4. Discussion

The role of design is constantly evolving, as shown by the analysis of the definitions proposed by the Word Design Organization (formerly the International Council of Societies of Industrial Design), and also by the inclusion of design as a crucial activity in the development of innovation and society. The passage of time has allowed the conception of a design culture interested by the professional design collective, making visible the role of this activity in the generation of business, the contribution of competitiveness and serving organisations in the exercises of understanding and service to users and clients.

The proposed analysis allows us to establish an updated conceptual framework in the understanding of design, understanding it as a process and not as a result; linking it to the contribution of competitive advantages and its inclusion in organisations as a strategic resource; and linking it closely to its role in the response to user needs and in the promotion and achievement of innovation. This conceptual framework is largely accepted from an organisational perspective, and thus we have been able to verify that in the time frame of the last five years, reports that enjoy great popularity and recognition explicitly and implicitly agree with the variables extracted. We can therefore affirm that from organisational contexts, and more specifically from the business and entrepreneurial perspective, an updated understanding of design activity is being promoted, and that design is managing to establish a definition that is relevant to these contexts.

On the other hand, this work invites us to reflect on the understanding of design from a social perspective. Although young professionals or designers in training are capable of establishing a defining framework of design close to the one proposed in this work, with particular emphasis on the idea of considering design as an activity linked to innovation and problem solving, we have observed a significant gap between the proposed framework and the understanding by society in general. Beyond the representativeness of the sample, the answers obtained from anonymous citizens with no apparent relation to design activity show that their understanding is still linked to aesthetics, form or beauty. It is therefore worth questioning whether design culture from a social perspective is the correct one, or whether it corresponds to the design culture that design professionals would like to promote in a self-interested way.

Again using the realm of definitions, it is worth recalling Henry Cole's aforementioned warning against linking design with ornamentation. László Moholy-Nagy also warned that "Design is neither a façade nor the outward appearance" (Quarante, 1992). It is probably here, in perpetuating a reductionist view of design in society and the reason for the gap between the understanding of design by the organisational and social contexts still lies. André Ricard, a pioneer of Spanish design, referred in the following terms to the responsibility that designers have had in perpetuating this mantra:

> (...) the field of design has also made mistakes. The main one has been to display objects on a pedestal with a spotlight on them, which takes away their everydayness, treating them as art objects. We have encouraged the public to see the designs as something very exclusive, as if they were works of art. So many industries hesitated to come to us to design, for example, a simple hammer, when the truth is that everything deserves to be designed. (Martínez, 2016).

Finally, through this work, a reflection on the consideration of the concept of design culture is raised. Although this construct is used to refer to the role of design in different contexts, we suggest reducing its link with the cultivation, promotion and encouragement of design activity, for which it is undoubtedly essential that both from an organisational and social perspective the transmission of a set of knowledge and factors that influence and enable someone -individual, collective or system- to develop a critical judgement on the value of design activity in their environment be encouraged.

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