

Design and design projects from the perspective of semiotic epistemology

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Abstract

This paper¹ will examine the role of semiotics in teaching design and guiding design projects. Specifically, we will consider the contribution of semiotics as an important discipline for all the aspects of analysis in design and project organization. The focus will be on *reception* of meaning (analysis of tangible and intangible products and practices) on one hand and, on the other, the *production* of meaning (*conception*). In this regard, Michel de Certeau's work on *tactics* and *strategies* is inspiring when it comes to understanding the need for a designer to maintain a dual posture throughout design projects. In conclusion, we will consider *design culture* in social design, a culture that is also characterized and nourished by the contribution of semiotics when it comes to identifying the *specificities* and *values* that define this culture.

Keywords: semiotics, social design, design culture, tactics, strategies.

Introduction

Semiotics has become an established tool in teaching design at institutions of higher learning. In this article, we will address several questions that we have examined throughout our teaching and research experiences in the design field. Specifically, we will consider:

- The intertwining of semiotics and design.
- The contribution of semiotics as a major discipline for all aspects of analysis in *design* and project *organization*. On one hand, it is about focusing on observation in the field before considering the *reception* of a project's meaning and on the other, it is about examining the *production* of meaning when a project takes shape.
- The usefulness for a designer to maintain a dual posture throughout a project in light of Michel de Certeau's reflections on *tactics* and *strategies*
- *Social design*, which is also nourished by semiotics
- *Design culture* in social design

1. Semiotics and design, a long and discontinuous history

Without going into the details of how design and semiotics overlap (cf. Deni 2015a and 2015b), we would like to recall a few key moments. Associated with a specific event or publication, they will allow us to review the basics of semiotics in design.

Between 1937 and 1945, Charles Morris taught semiotics to future designers at the *New Bauhaus* in Chicago (cf. Poisson 2001). In Europe in the late fifties, Tomás Maldonado introduced semiotics and other human sciences to the *Hochschule für Gestaltung* in Ulm. His efforts paved the way for a new teaching philosophy in design schools and universities some thirty years later. After moving to Italy in 1967, he helped introduce and establish the teaching of semiotics. The late fifties also saw the publication of Roland Barthes's *Mythologies* (1957), with a focus on the signification, values and connotations of everyday objects (toys, cars, etc.). A decade later, Umberto Eco published *La*

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struttura assente (1968). In the chapter “Sezione C”, devoted to crafting the semiotics of architecture, he expanded his reflection to include semiotics in design, with a focus on the relationship between the functions and communication of architectural and everyday objects as well as their *denotative* and *connotative* functions, which he designated as *primary* and *secondary* functions. That same year, without any connection to Eco, Jean Baudrillard published an important sociological work—whose very title, *The System of Objects* (1968), evoked questions similar to those raised by semiotics—in which he examined the *utilitarian* and *symbolic* functions of objects.

In any case, it was in the nineties that the semiotics of design and everyday objects became a *specific field of semiotics* in its own right, particularly in Italy and France. On one hand, designers like Andries Van Onck in his work dedicated to the “meaning of the forms of products” (1994) began using the discipline as a way of thinking and a tool for inspiring design; on the other hand, semioticians paid growing attention to design and everyday objects where the production of “meaning” linked to usage and the production of individual and interactional practices were concerned.²

Work published prior to 2008 mainly addressed the *reception* of everyday objects, facilitating the analysis of values, practices, contexts and users. This was coherent with a field like semiotics, which traditionally examined meaning and signification through the analysis of “texts” (cf. Greimas, Courtés 1979). Generally speaking, a “text” in semiotic terms is any circumscribed portion of reality that a semiotician seeks to analyze according to a pertinence: this allows him or her to identify the elements that, in relation to one another and a specific context, generate significations that in turn lead to the texts—be they objects, interfaces, services or spaces—being interpreted and used.

The analytic portion may suffice for semioticians, but it remains incomplete when it comes to the competencies required in the field of design, where considerations of *conception* take precedence. This has led certain researchers, while teaching semiotics in schools and university design departments, to come up with individual methods to develop and improve design strategies, both to guide students and participate in design projects. In the context of their work for the Italian journal *Ocula*,³ researchers from Bologna’s semiotics community were able to confront their approaches. The group decided to take stock of the semiotics of design projects and pool their progress (Deni, Proni, eds., 2008; Bianchi, Montanari, Zingale, eds., 2010). Research in the semiotics of design and the semiotics of design projects has since continued to advance.⁴

2. Analysis in the semiotics of design and metacognition in the semiotics of design projects

There is an important distinction to be made. In order to fix the main concepts of this paper, we will use “semiotics of design” as part of a *reception*-centric approach to refer to theoretical and analytical semiotic studies of tangible and intangible products that are the result of a design project. And we will use “semiotics of design projects” as part of a *conception*-centric approach to refer to methodological studies and semiotic tools focused on the processes of a design project.

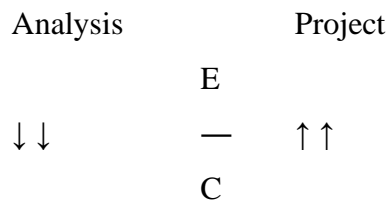
In design and in teaching design, for pedagogical purposes, the analytic process will be considered separately from the process around the project’s conception.

Let us first review the fundamentals to understand how and why semiotics is important both for analysis and projects, as represented by the following formula:

² See also: J.-M. Floch 1990, 1995; A. Semprini 1995; B. Latour 1993; M. Deni 2002, 2005; Deni ed. 2002; J. Fontanille and A. Zinna eds. 2005; A. Zinna 2002, 2005, 2010; E. Landowski and G. Marrone 2001; A. Beyaert-Geslin 2012, 2015; Darras and Belkhamza 2010; G. Proni 2002; S. Zingale 2008; D. Mangano 2008.

³ www.ocula.it

⁴ See also: Deni 2010, 2014, 2018, 2020, 2022; Zingale 2012, 2016a, 2016b; Zinna 2020.



An analytic approach begins with *Expression* (E) (the specificity of a concrete object, for example) to understand how *Content* (C) (its functions and values, for example) is organized, whereas a *conception*-centric approach begins with *Content* (project objectives) in order to produce the most adapted concrete solution (deliverable).

For example, and to simplify things, an object, space or service coincides with *Expression* whereas the reality of how it is used, which we seek to realize through the product, coincides with *Content*. A chair and a throne (E) provide different levels of comfort and ways of sitting: one is comfortable and the other serves to seat a person with a certain dignity, which connotes “regalness” (C) (cf. Eco 1968). The interest in *reception*, in what an object signifies concretely (functions, communication of functions, values, etc.) leads to questions about the reverse process, that of *conception*, while keeping the intentions of the project and their concrete transposition in mind. That said, the two approaches are not pure opposites in methodological terms,⁵ and designers must be fluent in both to develop the most objective awareness possible of how their work is received and the different ways in which they may achieve the results they seek.

The design process is comparable to what semioticians refer to as a *strategy of enunciation* in communication.⁶ For designers, it is about implicitly or explicitly operating through *design strategies*: in this case and in any given situation, it involves organizing content (functions, values, etc.) to transpose it concretely (in forms, materials, services, etc.) to obtain results through which reality may be created or modified (a space, a theoretical usage or the reality of how a product or service is used, the way in which users access a service, etc.). In designers’ professional routines, this process is often intuitive and implicit, given the habits and procedures they have developed over time. In teaching, the design process deserves special attention in order to highlight each detail of a process that, once made explicit, allows designers to foster metacognition in order to gain awareness of and master their abilities and potentialities to *design projects*. Among other things, this involves outlining the different phases of a strategy to identify “the meaning” (the project’s *raison d’être*) and manage “the signification” (the production of meaning) to transpose the meaning in a concrete and effective manner with regard to the issue at hand or according to a reality that we wish to transform through a design project.

The design process is also doubly dependent on the analytic capacities of the designer, which facilitate initial observation to identify a *pertinence* (an issue) and then allow him or her to anticipate how the result of the project will be received (*reception*). Analytic competencies are thus the foundation for understanding how *meaning* functions and how *signification* is produced.

3. The semiotics of design projects: an awareness of preconditions

Work from the nineties on the relationship between objects and users brought to light interesting approaches in areas including semiotics and design research. Since 1988, D. Norman has demonstrated that the everyday object is a “system” of interaction between the designer and the user. A few years later, B. Latour examined the “attribution of roles” and “built-in users and authors”:

⁵ cf. Deni 2002, 2008, 2010.

⁶ cf. Deni 2019.

“This attribution of roles and action is also a *choice*. The best way to understand this choice is to compare machines with texts, since the inscription of builders and users in a mechanism is very much the same as that of authors and readers in a story . . . I built up an inscribed reader to whom I prescribed qualities and behavior, as surely as a traffic light or a painting prepare a position for those looking at them. Did you *underwrite* or *subscribe* this definition of yourself? Or worse, is there any one at all to read this text and occupy the position prepared for the reader? . . . *Nothing in a given scene* can prevent the inscribed user or reader from behaving differently from what was expected . . . There might be an enormous gap between the prescribed user and the user-in-the-flesh . . . On other occasions, however, the gap between the two may be nil: the prescribed user is so well anticipated, so carefully nested inside the scenes, so exactly dovetailed, that he does what is expected.” (Latour 1993: 160-161).

Bruno Latour (1993) refers to the man-made speed bump as a seeming manifestation of this hypothesis, explaining that, to obtain an action (that of slowing down), engineers use forms of expression other than language (road signs, for example) in a process in which an injunction (to slow down) is displaced onto an object (made of concrete and stone). In the same way, his example of keychains (Latour 1993) draws attention to the passage from a signifying plane (language) to another signifying plane (material). This occurs when a solution is chosen from among a series of possibilities that are always available within the realm of the signified. In other words, designers address questions of signification and are required to juggle different semiotics on a daily basis.

So considering design in semiotic terms requires an awareness of the fact that a project is first and foremost a process of organizing meaning (*content*) that produces a signification through its concrete transposition into a (tangible or intangible) product that is the result of a project. The deliverables that result from a project may therefore be considered true *forms of expression*.

In semiotics, these epistemological approaches draw on Umberto Eco’s concept of “text” as a process of communication involving a Model Author and a Model Reader (1979). According to Eco, the term “model” does not refer to the best author or reader possible but rather to a theoretical concept describing an “average” role that results from the textual strategies of an Empirical Author (whether this occurs consciously or unconsciously is not the issue at hand). Furthermore, a Model User is neither a design *Persona* nor an exemplary user. In semiotic terms, through the choices made by a designer in producing a deliverable in response to a specific problem, the design process engenders a veritable *construction* of the user (a Model User, if we were to transpose Eco’s approach, 1979) that includes behaviors and practices. According to choices made during the project’s design (relationships between objects, spaces, forms and colors and the hierarchies and layouts of interfaces, etc.), the designer inevitably constructs an anthropological model of the user. The anthropological framework of this enunciative/design posture inevitably leads to the construction of the ethics of a project, its users (stakeholders, beneficiaries, etc.), practices and experiences.

When it comes to design, as in strategies of enunciation in language, it is not enough to consider the posture of the (individual or plural) enunciator/designer and that of the (individual or plural) enunciatee/user; we must also understand the implications (in terms of values, functions, etc.) of concrete choices made within the context of the project. The designer’s posture will modify these choices as well as how the final project is received and embraced. This is why postures when conceiving a design project must be chosen consciously because they represent the *preconditions* of a project whose stakes and outcomes can be managed by reducing the gap between the designer’s *intentions* and the user’s *reception*.

And so from the start of a project, even the very consideration of a preposition can sometimes modify the designer’s anthropological stance and therefore also that of the user, as is demonstrated by three different approaches: designing *for* the user (this approach best favors the user), designing *with* the

user (who is involved in the design process); designing *from* the user (in a way that is generated from the user's life experiences).⁷

Going back to the fundamentals, as early as 1968, in "Sezione C" of his *La struttura assente* (Eco 1968: 295-297), Umberto Eco identified the responsibilities of architects and designers for the forms of life produced through their projects, which he defined as *architectural influence* acting upon several dimensions with effects that vary according to connotations that change over time:

- *Persuasive* architectural discourse: users live as suggested (and imposed) by a space
- *Psychagogic* architectural discourse: a "gentle" and unconscious violence impels us to follow the architect's instructions
- An architectural discourse received by *inattentive* users (who sometimes do not even imagine the existence of an underlying intent to communicate)
- An architectural discourse loaded with *aberrant signifiers* without awareness on the part of the user (who may for example seek refuge from rain in a church)
- An architectural discourse that shifts between a *maximum of coercion* (we must live this way) and a *maximum of irresponsibility* (we can live however we like)
- Architecture that is subject to rapid *obsolescence* that includes changes to its resulting *connotations* (values, significations)
- Architecture that is subject to codes of fashion and the market

4. From tactics to strategies

In this section, which represents the pivot of this paper, we will take another look at the analytical and conceptual competencies required of designers, this time drawing upon the work of Michel de Certeau, whose focus on observing practices and forms of life is highly inspiring. Specifically, his considerations of *tactics* and *strategies* allow us to understand the usefulness of maintaining a dual posture—analytic and project-based—throughout a design project.⁸ As we have already indicated, this dual posture is essential to understanding and embracing *reception* and *conception*.

Analyzing *tactics* allows us to understand the individual practices that people use to best embrace their actions in daily life (routes, use of objects, etc.). Developing *strategies* allows us to further our consideration of metacognition and our awareness of the meaning of actions and practices. This constitutes an important phase to put into place when carrying out a project.

This is to say that "tactics" take shape among the details of daily life and are the result of a *dispersed and makeshift creativity* (de Certeau 1980: XL). They represent a fragmented form of action with "no base where it can capitalize on its advantages, prepare its expansions and secure independence with regard to circumstances" in which specificity is "the victory of place over time" (1980: XIX) whose intelligence is inseparable from daily enjoyment. In other words, tactics are specific, comfortable adjustments made in everyday activities. "Strategies" take into account the balance of power between isolated elements within a temporal framework to make *objective calculations* (1980: XX). In other words, strategies are rational, skilled enhancements of the creative, dispersed, ad hoc process of trial and error typical of tactics.

When carrying out a design project, observing tactics in practice reveals the abilities of users to imagine and invent while adapting to constraints of milieu. These tactics include combinations of actions related to specific or conflictual situations (1980: 23) and circumstantial adaptive practices generated by a reaction.

By analyzing the organizational practices of a usage or a way of moving through a space, Michel de Certeau taught us to observe tactics that are the result of intuitive knowledge implemented in an ad hoc fashion by occasional users. This then allows us to understand strategies that will be used by experienced users that can then be integrated into the design process. These strategies make it possible

⁷ cf. Ménard 2023.

⁸ On tactics and strategies in design projects, see also: Bødker, S., Korsgaard, H., Lyle, P. and Saad-Sulonen, J. 2016.

to distinguish users according to typology, an approach suggested by J.-M. Floch, for example, drawing on the work of Lévi-Strauss, who contrasted *bricoleur* and *engineer* according to how they operate, the former embracing an adaptive approach, and the latter, an anticipatory approach.

Analyzing implemented tactics in this way reveals *repetitive structures*, or recurrences that evolve into strategies that can guide us in developing the semiotics of design projects. Among the human sciences, semiotics addresses the *individuation of systems* and the *processes of systemization* by identifying recurring signifying elements according to a given pertinence. It is for this reason that the ethnographies of Michel de Certeau (1980) are useful in analyzing design in practice and especially in revealing processes of systemization that can be leveraged during the design phase. An explicit understanding of these skills, both cognitive and pragmatic, is the foundation for developing metacognition, an attitude essential to designing in a conscious, sustainable fashion.

In social design in particular, this finesse of observation is that much more essential given the complexity of the issues addressed by projects (public policies, public services, common goods, etc.) whose designers may draw upon competencies from different areas of design to fulfill the requirements of the project at hand. This in turn implies that social designers must master a variety of skills (graphic, communication, service, UX, experience, space and product design, among others) upon which they may draw according to project needs and that they will need to work with multidisciplinary teams.

5. Social innovation by design, working between the *individual actant* and the *collective actant*

5.1 – Didactics and research at the University of Nîmes

In the University of Nîmes's DIS (Design, Innovation, Society⁹) Master program and the Projekt research lab¹⁰, human sciences play an important role, especially given that the projects in question address social innovation by design. In social design, design methods and deliverables differ somewhat from those of other design fields, as the integration of the user and expected results depend on communication (How do we get stakeholders to collaborate? How do we produce tools to foster dialogue? How do we promote access to a service? How do we get the different disciplines to come together? How do we involve users by highlighting the meaning behind an approach? etc.). In certain cases, the project might consist of developing tools that modify relations and lead to “conversations” to reveal an issue or regenerate a place or a community (cf. Manzini 2015, 2018, 2021). The goal of numerous social design projects is thus to yield *favorable conditions* to accessing public services, engaging in community practices and regenerating social and urban fabric. The social innovation and increased effectiveness of the common goods that result from such projects are achieved through the creation of both favorable conditions and systems that enable their very existence. The impetus for these projects comes from institutions but can also emerge directly from the needs and ideas of citizens who play a role in virtuous circles, either because they are geographically part of a “community of place” or because they share a common purpose that makes them part of a “project-based community” (cf. Manzini 2015, 2018, 2021). *Common goods* include several categories relevant to all citizens: physical and natural (water, air, etc.), social and non-tangible (mutual trust, diffuse skills, perception of security) and social and tangible (streets, squares, gardens, etc.). The goal of these social innovation projects is one of “radical change” (cf. Manzini 2018) requiring multidisciplinary competencies in which human sciences play an important role beyond the usual technical skills required in design.

⁹ <https://dis.unimes.fr> (visited on 8/01/2024).

¹⁰ <https://projekt.unimes.fr> (visited on 8/01/2024). Projekt research programs contribute to developing interdisciplinary competencies to address these complex themes. Transversal Axis: Design epistemology / Ethics and methodology of design; Axis 1 Design, Politics and Audiences (Vulnerability -Territory – Critical teaching - Involvement); Axe 2 Design, Culture & Media (Critical making – Digital and multimedia publishing – Design mediation – Emerging forms).

Semiotics also plays an important role in this panorama, thanks to tools from *narratology* and *narrativity* (cf. Propp 1928, Greimas 1983) that foster communication and the organization of the phases of the design processes and help stakeholders embrace the different stages.

5.2 Social design methods: the collective actant and appropriation¹¹ strategies

To summarize, social design therefore addresses:

- 1- Large-scale social issues (poverty, accessibility, emergencies, risks, etc.)
- 2- Specific issues that concern categories of users defined by public policy

It relies on design methods that emphasize project-grounded research and collaborative design, with the goal of collectively improving quality of life.

The specific projects mentioned above include institutional and community projects geared towards the common good that seek also to improve individual well-being, beyond the scope of market logic. Transversal design skills are required in order to manage all the different design phases, which include ethnographic immersion (habits, real-life user practices), to identify aspects to be modified or improved by the project (problem framing, problem finding, problem making), and collaborative design with project stakeholders.

Beyond sociological and anthropological skills, semiotics plays an important role in organizing and setting up the identification and production of *meaning* (objectives, values, stakeholder involvement) and appropriate means of communication. Semiotics thus plays a central role by:

- 1- Providing methods for supporting users with appropriation strategies
- 2- Facilitating the transition from the individual mindset typical of industrial design projects (it is the user who must adapt to a chair designed according to standard ergonomics) to a collective mindset in which everyone must rethink his or her individuality in terms of others and with “the common good” in mind (services and public spaces, for example), while identifying with the project and becoming part, de facto, of a *collective actant*, as a result of negotiation, mutual recognition and the fusion of alterities.

E. Manzini underscores the fact that a “public good” belongs to no one whereas “common goods” foster a social dynamic by nourishing it and regenerating and forming a community around the goods in question (cf. Manzini 2018). This is why social innovation by design focuses first and foremost on improving common goods and collective benefits.

We refer to *Semiotics and Language: An Analytical Dictionary* by A.-J. Greimas and J. Courtés (1979) to distinguish between an *object of participative value* and an *object of exclusive value* in semiotic terms. For social design, in the case of a project focused on common goods (physical, social and intangible or social and tangible), rather than constructing an object of *exclusive value* (which benefits someone while excluding others), it requires considering how to indicate and incorporate the need and the possibility of creating *participative value* (that benefits all without losing value from one individual to the next) from the very start of the project. Concretely speaking, for example, this might mean designing a public space in a way that makes it possible to accommodate different realities of usage, even when they are based on contrasting values (calm vs. festive). It is thus possible to articulate, modulate and incorporate a negotiation of differing values—even when they are contrary—within the context of a project so that each individual may identify with it.¹²

The practices of collaborative design involve different phases when it comes to social design. In the first phase of a project, participants become aware of their status as *individual actors*. Representing and concretizing others and themselves is one of the objectives of participatory methods (which take into account the background, values, needs and aspirations of each individual). The designer helps the user embrace the project by activating a trajectory that emphasizes the project’s deeper meaning for all those involved, even though they may not have the same objectives (for example, co-housing,

¹¹ “Appropriation” in the context of and throughout this article refers to the ability of a user to embrace a project.

¹² An interesting example of a concrete case can be found in Djemel, Ye, Bousbaci and Lizarralde 2019.

shared spaces, individual spaces, etc.).¹³ The final project must incarnate these complementary and sometimes opposing values. This is even more true when the participatory process results in a new form of valorization that is specific to this *complex collective actant*.

The effectiveness of the *narrative path* that allows the project to be embraced, aided by mediation tools and measures, depends on a process of gradual involvement of four fundamental phases that corresponds to a *narrative path* whose own rhythm is driven by stages (cf. Deni 2018):

- *explanation* (for awareness)
- leads to *understanding*,
- which includes *familiarization*,
- before concluding with *appropriation*.

The temporality of the objectives and challenges to be met sets the pace for each phase in order to transform a collective project coinciding with individual values into a project that, at the end of the process, will “belong” to each individual involved.

Designing services implies a contrary approach, however, for the final result can be more easily adjusted within the designed product: the personalization of a service according to our interactions with it reinforces the purely individual process of how we appropriate it (for example: Amazon, home banking, Airbnb, social. networks, etc.). These services *know* who we are, and this makes it easier for us to embrace what they are offering since their offer matches what profiling algorithms have identified for us. This process places the user—through marketing strategies—in the more immediate sphere of the individual actant, motivated by desires and values that are his or her own, at least in appearance, and come closer to the goals of industrial design.

When we consider the various methods of applying semiotics to design, it is interesting to examine similarities between the design processes in areas of design that are very different (individual, collective, commercial, focused on the common good, etc.).

6. Design culture, specificities and values

The role of semiotics in design has evolved alongside the complex panorama of *design culture* and we have tried to identify the distinctive *specificities* and *values* of design culture, from industrial design to social and service design.¹⁴

Since its first days, design has seen a series of phases: at the start of the twentieth century, form followed—and created—function; then came a phase in which design aimed to create for a *real world* (Papanek 1971) that was yet to be realized; the 1990s saw user-friendly interfaces that guaranteed *usability*; and the 2000s, a phase of *inclusive* design and *universal* design. We currently find ourselves at a moment when everyone is designing (*When Everybody Designs*, Manzini 2015). The main objective is to improve the *habitability* of the human world (Findeli 2005). More generally, it is a question of design of *living beings* (Zinna 2022) as well as designing for a *better world* (Norman 2023). Where people are concerned (entrepreneurs or public policy makers), it is always about *user-centric design*, a contemporary slogan whose tautology derives from the fact that the user is one of the reasons why design came into existence in the first place.

So how can we determine what is specific to design and all the nuances that manifest themselves when it comes to design? In general, design is the result of processes of conception whose methods and/or results can be replicated; it is the result of a *creative* process¹⁵ of one or more authors and one or more entrepreneurs, be they individual or collective.

But what is the specificity of design and what are the elements that allow us to recognize the different fields of design, such as industrial or social design, for example?

¹³ However, for an ethical approach that allows us to evaluate the interests that will be prioritized, certain remarks by O. von Busch and K. Palmås (2023) on *corruption in collaborative design* should be considered.

¹⁴ A first article on this subject was published in Deni 2020.

¹⁵ To distinguish between *creation*, *conception* and *creativity*, cf. Munari 1981; for the opposing notions of *conception* and *creation*, cf. Deni 2016.

Identifying the *specificities* and *values* related to each area of design allows us to define what we mean by design culture.

6.1 Characterizing specificities and distinctive values

From a methodological perspective, semiotics requires beginning with an analytical approach in which we look for recurring elements to determine if they characterize and are distinctive in terms of content (like values). Below is a summary of what we mean by design culture:

Design culture:¹⁶

Characterizing specificities (non-exhaustive / requisite):

- 1) Design methods
- 2) Replicability (of processes, methods and/or results)
- 3) Transversal skills and interdisciplinarity
- 4) Creativity
- 5) (Direct or indirect) integration of stakeholders and context.

Distinctive values:

- a- Ethics
- b- Sustainability
- c) Quality of life (in practical, esthetic, esthetic, emotional and identity-related terms).

6.2 Methods and replicability

In defining design culture, the first specificity is that of design methods and the second, the replicability of results or design methods.

We have already examined other specificities in recent years: creativity in design (cf. Deni 2016), the integration of the user in projects (cf. Deni 2018; Deni and Catoir-Brisson, eds. 2019) and the professional and theoretical competencies put into play by designers (cf. Deni 2020).

Design methods associated with design culture allow designers to manage *creativity*, which Bruno Munari distinguishes from *creation*. For Munari, creation is based solely on the imagination and pertains to art and the applied arts, fields that he sees as being very different from design: “Creativity is a productive capacity where imagination and reason are connected so the result that one obtains is always realizable in practice” (1971: 87, my translation). In other words, “The design method is nothing more than a series of necessary operations arranged in a logical order dictated by experience . . . Creativity does not mean improvisation without a method” (1981: 16-17, my translation). Munari goes into further detail: “The series of operations in the design method consist of objective values that become operational tools in the hands of creative designers” (1981: 17). So creation belongs to the realm of the artist, in which the product is almost always a work of authorship, whereas design belongs to the creative realm of designers who base their approaches on *rational* methods. Furthermore, according to Munari (1971), the artist creates in a subjective fashion, asserting his own style, whereas designers base their methods on their research and knowledge of other methods, while carefully examining earlier approaches.

The difference between (creative) *design* and *creation* depends largely on the methodological approach, in which *method* concerns a way of acting (the *how*) that presupposes a strategy implemented over time (the *when*) according to a sequence of operations that are characterized by the designer’s awareness and capacity to analyze his or her own practices. When combined with metacognition, awareness and an analytical capacity allow designers to respond to each problem (from industrial to social design) in a specific fashion.

¹⁶ A first version of this work was published in Deni 2020.

Global knowledge and awareness are therefore essential conditions in design, as the “polytechnical intellectual”¹⁷ Tomás Maldonado emphasized as early as 1970 in *La speranza progettuale* with his enlightened and still relevant—even urgent—exhortation for designers to actively embrace a political, social and cultural role through sustainable design to guarantee an adequate “artifactual environment” while avoiding any environmental catastrophes. Design is therefore the management of all these aspects, in which “management is the cognitive and operational behavior by which information is transformed into action” (Maldonado 1970: 101, my translation). To further emphasize the importance of working using design methods, Tomás Maldonado underscored his faith in the “revolutionary function of applied rationality” (cf. Maldonado 1970, my translation). So method is therefore a characterizing and identifying aspect of design culture, from industrial to social design, including all design fields (such as graphic, product and space design).

According to Munari, Maldonado and Manzini, designers do not determine their projects ahead of time but rather concentrate on a significant aspect that they seek to transform into a preferable solution. In the words of Herbert A. Simon (1969: 111): “Everyone designs who conceived courses of action aimed at changing existing situations into preferred ones.” These are the reasons why we should not seek to define *what is* or *isn't* based solely on the produced result and its reproducibility on a large scale. This would amount to comparing the similarities of a citrus juicer and a public service, for example, whereas a good analysis of one or the other would likely also lead us to consider the design methods used and, in this case, the replicability of methods and design processes.

There is another important aspect of design that we place in the category of the distinctive value of “quality of life” (which includes esthetics and esthetics). Bruno Munari defines the industrial designer as a planner with an “aesthetic sense” (1966: 25, my translation) who does not necessarily have a personal style because his sole concern is reaching “the solution for the project according to the elements that the object itself, its destination, etc., suggest” (1966: 44, my translation). But we must also consider the period during which Munari (a Modern designer with a “scientific purpose” according to Paolo Deganello 2019: 18, my translation) was working and writing, emphasizing rational design strategies that translates into an esthetic that is not about “beauty” but “the rule of ‘nature’” and quality of life. In other words, this natural and rational design philosophy comes close to “thinking right” (cf. Findeli 2015), a way of thinking that is deeply rooted “in action” and in the pragmatic context of the project. Bruno Munari cites “natural” objects as models for understanding the foundations of design, including functionality, practicality, esthetics and sustainability, like the famous examples of the orange and the pea (1966), which sum up all the necessary qualities of any *successful project*. Observing nature thus allows us to understand the logic of design, according to Munari, as long as we respect the reality of user practices, the material and its relationship with the environment, form and decoration and finally, the necessary ties between the different components. This approach to design can be summed up by the *specificities* and *values* that we have identified as being specific to design culture (design methods, transversal skills, creativity and integration of human beings by anticipating their usage, followed by ethics, sustainability and the question of quality of life, which combines practicality and esthetics). These specificities of industrial design can easily be transposed into all areas of design, including social design, which also includes a collective dimension both in its methods (through collaborative design) and results (social innovation).

Conclusions

In all these dimensions specific to the culture of design projects, in observing the *tactics* of users in their daily practices and designers in their approach to design at a micro level, semiotics facilitates the necessary abstraction by allowing us to identify the recurrence of distinctive structures. Contextual to specific situations, these structures reveal *underlying strategies* that allow us to ask the right questions. Methodological tools constitute the *forma mentis* (or semiotic vision) and can help

¹⁷ This is how Maldonado (1970) characterizes the designer.

the designer evolve from an intuitive ad-hoc choice to a deliberate choice that remains relevant over time. In the words of J.-M. Floch (1990), we can articulate this *forma mentis* in terms of *pertinence*, *intelligibility* and *differentiation*.

When this methodological approach to design is embraced, it hinges upon awareness and an understanding of different semiotics that allow us to move between *conception* and *reception*. In design, *meaning* is created by a *signification* whose concrete transposition takes different forms of expression, such as, for example, products, spaces, services, etc. The communicative dimension of these elements deserves particular attention because they are less explicit in terms of language despite the values and functions that they express. This special attention to different semiotics is a matter of metacognition that fosters a conscious understanding of design processes in order to distinguish between the designer's intentions and the reception of a project.

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