

Reflexive Design and the Consumer's Expectations

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Abstract: Design is a term that is paradoxically (or not) harder to define these days. Its often-theoretical ramifications make a clear and univocal definition even more difficult to state. In 2005, Donald Norman mentioned three levels of design: visceral, behavioural and reflexive in his book *Why We Love (or Hate) Everyday Things*. *Design hybrids* is yet another term that has been introduced into the specialized vocabulary lately as a result of designers' attempt to go above and beyond product design, graphic design, environmental design, furniture design, interaction design, etc. In 1896, Louis Sullivan formulated the principle “form comes after function”. After WWI, theorists such as Theo van Doesburg, Walter Gropius and Le Corbusier, suggested a more radical tendency: “form comes after utility and meaning”. The new context suggests a more complex approach, *i.e.* “form observes expectations”, as a follow-up of Raymond Loewy's MAYA (Most Advanced Yet Acceptable) principle. The present study is based on the transdisciplinarity of design¹, on reflexive design as a means of approach as well as on their relationship.

Keywords: reflexive design; design process; transdisciplinarity.

In an Ever-Changing World, Design Should not Follow a Trend, but Challenge It Instead

Design as a rule counts among the human activities that are in permanent search for solutions and answers to specific issues and needs. Another perspective on this matter is that design maintains a balance between art and technology. Both art and science aim at fulfilling human needs. It is therefore legitimate to attempt a differentiation between design and other processes that have a similar goal. An important aspect is that the design process counts primarily on the user's experience (Justice, 2019) while the art-science-design synergy makes the last offer not only practical and useful solutions, but visually impressive as well. Along with architecture,

design goes beyond the art-science-technique trinome; the specificity of architecture (design, A/N) does not originate in art, science, technique or even in the three put together.²

¹ Alex Coles, *The Transdisciplinary Studio*, London, Stenberg Press, 2012.

² Gheorghe Săsărman, *Funcțiune. Spațiu. Arhitectură* [Function. Space. Architecture],

Its specificity lies in the culturality of a specific geographical zone that has distinct needs.

Therefore, we can think of design as a comprising subject where creativity, science, technology, culture and real-life experiences are interdependent. A practical approach to design involves reasoning as a superior cognitive process that can extract basic logic characteristics by abstract-formal processes to understand, explain and predict a series of real causal relations and develop concepts, notions, theories, cognitive systems as mental models of reality.

The mix between analytical thinking and intuitive thinking provides a balance between trusting and viability of solutions. Analytical thinking resides in voluntary mental activities that involve even complex calculations while the intuitive thinking is based on impressions and feelings, usually belonging to automatic thinking. The design thinking represents an important move of particular cognitive activities toward general cognitive activities, from accidental to necessary, from acknowledging an object to interpreting it and offering a logic-causal explanation. This is the passage from mental cognitive-sensory processes to superior cognitive processes³.

We cannot imagine a world without the two basic sources of knowledge, brain and sensitivity, nor a world without one of the two.

The lack of sensitivity would deprive us of object possession, and without our brain we could not think of any object. The lack of content would make our ideas bare, and intuitions without concepts are blind. So it is equally important to turn our concepts into sensitive concepts, i.e. to add the object into intuition and to make our intuitions intelligible, i.e. to subordinate them to concepts. These two faculties or capacities cannot change their function. The brain cannot make suppositions and the senses cannot think. Only their merging can result in knowledge. (Kant)

Combining intuition with analysis opens the path toward the designer's reflexive approach at all levels of his creative process.

There are basically three levels of reflection in design that ensure an efficient practice. The first level would be that in which reflection takes an active part in the design process, "a reflection in action"⁴, as Schön puts it, while Grocott calls it "a project-based reflection" (2010). A second level

București, Editura Meridiane, 1979.

³ Emanuela Dobra, *Gândirea – Proces cognitiv superior* [Thinking – A Superior Cognitive Process], 2009, retrieved from <https://www.scribd.com/doc/23034228/gandirea>

⁴ D. A. Schön, *Designing as reflective conversation with the materials of a design situation*, "Knowledge-Based Systems", Vol. 5, issue 1, 1992, pp. 3-14, retrieved from [https://doi.org/10.1016/0950-7051\(92\)90020-G](https://doi.org/10.1016/0950-7051(92)90020-G)

would involve a reflection on action and draws much on Schön's reflection in action or Grocott's reflection in practice, approaching the process of design retrospectively by iterative reflection.

A third level lies in the discursive act of result negotiation where specific elements that transcend the designer's understanding and practical experience complete the process of design. At this level, the user's experience and his expectations play a fundamental role more often than not.

Forlizzi and Katja (2004) developed an understanding frame for experimenting with the product user. The frame was intended to act as a tool that emphasizes the type of experience contained in a product and has three basic components or experience dimensions: the subconscious, the knowledge and the story. Understanding their relationships and exchanges is essential for the designer as it gives him the opportunity to analyse the type of experience he will create.

The concept of *design* appeared before that of *industrial design*⁵ and one of its founders, Henry Dreyfus (2018), asserted that: „Industrial design was the result of eliminating excessive decoration; it started to function when it focused on product analysis and inventing means to make it more evident and attractive”⁶.

The aesthetics of the industrially designed product may now be approached in a different manner. A specific type of present-day design, the commercial design, is more focused on profit than on quality, which is more evident when applying the Design Thinking approaches to management and marketing strategies. While the concept of *design thinking* appeared in the 1950-1960, it became more popular around 2000 when a consortium of companies offered design consulting services (IDEO) that presents its design process starting from design projects and thinking. They refer basically to the set of cognitive, strategic and practical procedures used by all designers and to the specific notions the latter have to be familiar with to approach design issues. But the new social, cultural and technological conditions introduced a new key element, the user's emotional well-being, a novelty of the modern concept. The writings on this topic (Tim Brown, David Kelley from IDEO, Roger Martin & Rotman, etc.) rely on the idea that in the long run design thinking will have a bigger impact on industrial design than the designers themselves can imagine. In fact, the information used to approach the design concept is continually changing.

The *design thinking* approach offers the opportunity to re-evaluate and accommodate a new conceptual perspective which breaks the apparent

⁵ Victor Papanek, *Design pentru lumea reală [Design for A Real World]*, translated by Cristina Sabău and Roxana Aneculăesei, București, Editura Publica, 2018.

⁶ Henry Dreyfus, *Designing for People*, in Papanek, Victor, *Design pentru o lume reală [Design for A Real World]*, *op. cit.*, 2018.

linearity of the process. The rethinking of empathy and its placing in a top position in the design process represents a very important step forward. Empathy needs to be applied to all factors that interact with the design product, the product itself included. Though at first the approach or set of tools was meant only for the designers, it was soon adopted into the business world, marketing or even creative industries. When applied to business, it makes very little use of form aesthetics, it does not count on the process of achieving it, and it does not take into consideration its multiple failures.

However, the *design thinking* is defined first as a type of research – action approach that originates in iterative and failure friendly prototypes to be found in specific immersive social research contexts⁷. Accepting the *design thinking* as a design work methodology we take a further step toward considering design a “way of thinking” (Herbert A. Simon, 1969; Robert McKim, 1973; David M. Kelley, 1987; Richard Buchanan, 1992, Tim Brown, 2009), which is basically the starting point of the present study. We have now reached Tim Brown’s definition of this “way of thinking” as: a “process” deeply connected to the user centred notion (Louis L. Bucciarelli, 1994; Dym and Little, 1999).

Every design process starts with defining its issues. Project devising, context needs, requirements and solution limitations should also be taken into consideration. (Grocott, 2010 with references to Dieter & Schmidt, 2013; Dym, Little, & Orwin 2013; Fogler, LeBlanc and Rizzo, 2014; Ulrich & Eppinger, 1995; Yock, *et al.*, 2015). Beyond its financial efficiency (see Bauhaus school), novelty and practicality are also basic to differentiate the design product from other products that fulfill similar needs and have similar functions. In his work *The Psychology of Emotion*, Sartre (1939) stated that “When we change the form and proportion of a triangle, we actually get to its ‘core’, no matter its particularities.” To paraphrase Heidegger’s words *on the essence of truth as a truth of essence*, we can connect the idea of simplicity in design to the public’s needs and expectations. Simplicity does not mean superficiality, but deep implication and hard work. Nelson Goodman states that:

In search for a true system, you are actually in search for truth itself. A collection of specific truths could not be considered a science in itself. Science means systematisation, and systematisation – simplification. There is no simplicity without science.⁸

If we start from a principle that is thought to belong to “the father of

⁷ Cameron Tonkinwise, *A Taste for Practices: Unrepressing Style in Design Thinking*, “Design Studies”, Vol. 32, No. 6, November 2011, retrieved from doi:10.1016/j.destud.2011.07.001

⁸ Nelson Goodman, *The test of simplicity*, “Science”, No. 128, October 31st 1958.

modern architecture”, which asserts that “Form comes after function” (Louis Sullivan, 1856-1924) as well as from Sartre’s variations, we soon notice the similarity to the Bauhaus promoters (Theo van Doesburg, Walter Gropius and Le Corbusier) that consider form to “come after utility and meaning” and later on, in *Don Norman* (2010), reception takes place at three levels: visceral, behavioural and reflexive. When we take a closer look at the principle that was first stated by Sullivan and originated in Roman architecture, dealing basically only with architecture, we see that it was introduced into the world of design and turned into a rule. Moving from a mere craft to a real art, design was the result of industrial revolution. The craftsman was emotionally involved in his work and made it very meaningful while industrial technologies would not. Given the circumstances, the appearance of such a domain in which projects turned meaningful before turning into industrial mass productions was of greatest importance. Such was also the case of the term “significance”, promoted by the Bauhaus school. However, the socio-cultural expansion and the public’s increase in expectations and needs lead to the reinvention and repositioning of design.

Chronologically speaking, *Don Norman* mentions in 2005 the perceptible characteristics of objects and the way they make the user/observer feel, defining this form of interaction between the object and the contemplator/consumer/user *Visceral Design*. It is followed, in his view, by *Behavioural Design* that refers to practical and functional aspects of the product or any other usable component. A third level would be *Reflexive Design* that refers to the rational and intellectual aspect of a product, approached by rational thinking arising from personal experiences, value systems and cultural level.

From this perspective, in which an object means every construct that bears a message, and that of MAYA principle (Most Advanced Yet Acceptable), formulated and put into practice by designer Raymond Loewy (the father of the industrial design), let us consider two different examples: In 2001 the Apple company launched its first iPod that belonged to the classical iPod line. Its rectangular form with a square screen and a round button was not modified until 2007 when the Touchscreen technology took its place and was to be perfected with the launching of smart phones. In 2014, the Apple company announces its market withdrawal. The second example is that of Google Company that launched Google Glasses, a type of smart glasses that are withdrawn from the market less than a year after, in January 2015.

The above examples are used to illustrate two different approaches in terms of strategies of implementation. The iPod contained many elements the customers were not yet familiar with, but its design met their expectations. They had to press the same round button that was very similar to the classical radio button. Consequently, its simple form and functioning turned it into a

quickly accepted product. The Google glasses, instead, were not as quickly accepted because the consumers were not prepared for such a huge technological change. The launching of the glasses into the market was very little prepared and their rejection was quite predictable as it proposed a very unusual interaction between the user and environment.

To conclude, through scientific approaches we identify and define all parameters that provide useful design solutions, choosing the appropriate methods for better results. In other words, thinking design solutions counts on intuition, inspiration and emotion. However, the three elements have to take into consideration all limitations the design process involves. They are superimposed and interconnected⁹, defining every idea that is essential for a successful implementation. Artists and scientists together operate with real world elements, be it symbolic or palpable, while designers are permanently asked to treat imaginary things as real, which makes their work uniquely special in terms of approach and solutions (John Chris Jones, 1970). *Design thinking* is yet not only the designer's concern; it has to be the responsibility of decision-making factors as well.

The present study has been entirely focused on the identification, analysis and introduction of new approaches or conceptual platforms to implement a new perspective on the teaching process of young undergraduate designers. With all the privileges that present-day design has as a subject matter, it needs a restart where innovation and creativity are very important and a strategy for survival. When analysing the reflexive approaches, it has been noticed that the synergy of the creative forces is much more efficient than individual work.

The identification of a new type of customer, *the pro-customer* (producer and customer at the same time) as a basic element in design marketing represented a better reason to change this paradigm through empathic approaches. To develop strategies that can turn the customer into a pro-customer is a step forward in the evolution of traditional design and calls for more reflexive approaches. I think that design studies should adopt this concept as part of present-day reality.

When brought together, *conceptual thinking, focus on human needs* and *collaborative activity* accommodate a new conceptual platform or even a new science of anticipation originating in reflexive design.

⁹ Tim Brown, *Change by Design*, New York, Harper Collins Publisher Press, 2009.

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