THE DESIGN THINKING PROCESS

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Designing results of a process.
In “Design in Mind,” Byran Lawson first declares that design consists of the, “creation of something new and original”. A common definition of the word “creation” is “The divine act by which, according to various religious and philosophical traditions, the world was brought into existence”. This definition is unsuitable for representing the act of designing.

The word “creation” is confusing because it could mean that the designers are able to produce without any material. This concept refers to the stereotype of the genius who magically finds his ideas without any basis in reality. The association of the word “creation” with the act of designing might be one of the reasons why analysts were focused on the result of the design rather than on the design process. The following articles we will discuss deal with the design process itself and not the end product. We will see that designer’s ideas are a result of a process where he will assemble and compose accumulated knowledge. For those reasons, the world “composition” seems to be more appropriated.

Research in the design thinking process.
The interest in design thinking is relatively recent. Several methods were implemented to access the designer’s mind. According to Nigel Cross, in “Research in Design thinking”, the following techniques were used for this purpose: interviewing designers, observing, studding protocol, making test controls or by simulating the phenomena.
In “Design thinking”, Bryan Lawson reports the same kind of method. According to him, several techniques were employed to understand the design process: “observing the designer at work”, conducting “laboratory experiments”, or asking “the designers to tell us what they do”. Those researches enables us to identify several methods the designer implements to generate solutions.

Nigel Cross (5) notes that designers make use of several tips. The first step of a methodology designer often implement consists of formulating an interpretation of the problem. While designing, one has to make choices among infinity of solutions. A strategy consists of imposing additional constraints that will result from the interpretation
of the program. A self-imposed constraint that Nigel Cross did not mentioned is the style. Some designers would like to be recognized and therefore, they use a vocabulary that is personal. Designers will develop their own vocabulary and reuse what they already experienced in previous projects. By “narrowing the solution space” (5), a concept will be rapidly established. Nigel Cross reports that the designers will “exercise considerable freedom in changing the problems goals and constraints to take advantage of opportunities that emerge in the developing design solutions, and partly to avoid having to change the original concept.”

We could wonder if the designer’s methodologies are logical. W.J. Rittel (1) identified recurring patterns and declared that the “designer’s reasoning appears as a process of argumentation”.

Donald Schon thinks he could analyze the “Reflection in action” in “The Design studio.” He tries to understand the “design thinking” by analyzing the discussion between a teacher and a student. This way, he identifies what he calls the “language of design”.

I am skeptical with the idea that the design’s solutions can be analyzed by debating. The analysis method consists of a breakdown: the problem is divided in several subsets. Each part is resolved separately and then the hole is be reassembled. This technique can be implemented to study complicated objects that can be modeled as a tree, which mean the object is composed by several subsets that are independent. The various issues in design are interconnected, and a solution that will resolve a question could engender other problems. All the subsets of the problem are interconnected. We can not access the designer’s mind using the analysis. For this purpose, new tools have to be implemented. Science progressed thanks to new devices that enabled to study infinitely small objects: the microscope enabled to discover the DNA last century. The telescope that enables to visualize infinitely distant objects enabled to understand our place in the universe. Joël de Rosnay’s thesis “The Macroscope” demonstrates that new tools have to be invented to study infinitely complex objects such as the designer’s mind. The “Macroscope” consist on “a new world scientific system”. Computers will probably enable to study complex systems.

**Design as a skill.**

Are designer artists or scientists? Even if it is difficult to analyze them, designers employ methods that help them finding ideas and making decisions.

“Design” is a very large field that represents a multitude of situations. The end product determines the labeling of the design categories. Architects would deal with build spaces only; graphic designers would be competent in 2Dimensionnal productions… In “How designers think” Byran Lawson demonstrates that this classification is arbitrary: in design, a problem can be treated by different ways. And even if some productions require expert’s skills, the designer should have the ability to have different approaches of a same question. One of the negative effects of this cataloging is that it reduces the designer’s
competences and interests. Today, in several architecture studios, projects are led by multi-discipline teams that associate sociologists, architects, painters, philosophers… This way, different approaches can be embraced in the conception. Horst WJ Rittel declares that the “knowledge employed in design is very diverse, ranging through all aspects of human experience”. Byran Lawson thinks the designer is “more a social scientist than he is an artist or a technologist[..] who embraces many different kinds of thoughts and knowledge”. Byran Lawson declares that “design is a skill”(2), that must be learnt and practiced. By practicing, the design methods will become reflexes. As a result, the designer will be able to focus on his ideas more than on his technique. Donald Schon also tries to access the designer’s thinking by analyzing how one can teach how to design at a design studio. Those texts confirm that designers are not creators and that they have acquire as various knowledge’s as possible to compose.


