



## **Clichés and intentions: reflections on the creative process in the digital environment**

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### **ABSTRACT**

The purpose of this work is the investigation of the nature of the creative process establishing a parallel, in art and architecture, between analogue and digital through a critical reflection on the digital environment in the creation process and possible research methods. As we leave the analog environment and we enter the context of the digital environment, can we establish differences in these environments relative to the cliché in the creative process? How the creative process within that world of binary code establishes relationship with the form, and especially in your desired escape the clichés? The architecture since the 1990s according to Israeli architect and Professor Rivka Oxman (2006) has directed the perspective of creative architecture in the design process in the digital environment in an increasingly integrated manner. So, how to identify the intentions of the creative process in the digital environment, as in the case of the creative processes of contemporary architecture? What documents these processes also known as records creation process in the digital age? If the documentary records of new creative processes within the digital environment exist outside the world encoded may be able to establish this dialogue even if only partially through the inferential method with the digital work. Otherwise, when diving only in the complexity of risking binary information networks cannot produce a relevant historical description of the work or its process, or even your own action intended to trace or effect because they will be submerged in the long tail of the information age digital. On the other hand, addressing the study of the

creative process of the digital work by the method of genetic criticism, there is greater success, since the method allows observing the work of manufacturing routes between all your records and relevant materials associated with it.

## KEYWORDS

parametrization, creative process, digital work, inferential criticism, genetic criticism

## 1. CLICHÉS

Important to make clear at this point that the direction in this article from the word "cliché" and not as obvious as it seems this choice is justified to see it much more as a sign of that meaning. We are interested in taking it as representing a multitude of ways in the pursuit to investigate the nature of the creative process by establishing a parallel in art and architecture, between analog and digital.

Based on the analog, let's start with Gilles Deleuze (2007) essay entitled "Francis Bacon - the logic of sensation". In this essay, the French philosopher produces the analysis of the Irish painter thought singularity on neutralizing illustration, narration and figuration in his work. Deleuze (2007) tells us how the form loses power of information to make the registration of manipulated accidents and accidents used and leads us to an artist who invests against the clichés in a structural view of the creative process through the diagram design.

According to Deleuze (2007), the clichés are already on the screen and thus are played daily a profusion of images on TV, in movies, on billboards, on computer screens and expanded this chaos of images with the self-portrait (or selfie). When we are aware - and it seems that it is in this state of constant awareness to dealing with the creative process, such as the punishment of Atlas, we must fight to escape the possibility of sensorial anesthesia. Our perception is activated every second, and usually we have ignored this fact.

The Deleuze diagrams inform us about these clichés. In his analysis of the artist Francis Bacon, Deleuze argues about of the diagram with a blank space pervaded figurative preset images to which no human remains untouched, is structural. Without sensitive acuity of the creative act, we may be led to the perception of patterns that would not pass the pictorial transformations.

Through this diagram, there is a possible release from these forms that permeate our existence. He demonstrates this by the artist's creative process. The screen, with its edges and center is a certain surface that Deleuze (2007) describes as a space of equal and unequal probabilities, and it is because of this that the painter has the privilege to carry out the project you want to perform.

The free marks are accidental, not representative, and depend on the act of random marks, configured as a kind of choice by the hand of the painter. They will only serve to be used or re-used also by the hand of the painter. "This is the manipulated chance [...]"<sup>1</sup> (Deleuze, 2007, p.98).

As we leave the analog environment and we enter the context of the digital environment, can we establish differences in these environments relative to the cliché in the creative process? We think yes and no.

The creative act is not restricted to mere pleasure in carrying out a project. It is an act of resistance to the figurative, the declared image. Its essence lies in the absolute necessity to confront the clichés. In the digital environment, the figurative is in binary code, a probability in fact, between zero and one. It is a new code, and we spent the painter's hand to hand

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<sup>1</sup> Free translation of the authors. In the original: "é o acaso manipulado [...]" (Deleuze, 2007).

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programmer. As Flusser (2007) says, "[...] we can consider the tools, machines and electronics as imitations of hands, as prosthesis that extend the reach of hands"<sup>2</sup> (Flusser, 2007, p. 36). The creative act is independent of the support.

Flusser (2007) walks through the 'codified world' showing us the passage of material culture to materializing culture. Before, the mattered was set up existing material to make it visible, according to the Theory of Ideas, conceived from the classical philosophy in Plato. From the Industrial Revolution the objective is projected shapes to create alternative worlds - fill with raw material forms generated by technological equipment.

We can illustrate this view of Flusser (2007) by resuming the cliché etymology of the word. The French word cliché designated a matrix made generally in metal embossing for the reproduction of image and / or text - technical resource used in linotype process and also called the photographic negative of calotype process. In figurative sense dating back to the copy of the context just by the technical function of reproducing a shape, as an idea.

The technical apparatus or, more currently, the digital devices inherently possess this characteristic marked by the Industrial Revolution - serial production - which ensures the ability to reproduce the form and fill it with matter.

What qualifies and distinguishes the analog painting environment is the main feature of the digital environment, the technical reproducibility. We established at that time the difference even partially. In the analog environment of painting, the hand has its own way of printing: the slope of the trace, the intensity with which the brush is pressed on the paper or in the pigment saturation level.

The art has experienced the time in which the eye perceives more quickly than drawing hand by some artistic techniques such as lithography or wood engraving which, in turn, become technically reproducible drawing. In art we can find its authenticity through the vestiges of its unique existence in space and time in which the artwork is found.

In the digital environment, according to Flusser (2007), the tools are imitations of the hands and in the computer screen are the algorithms (mathematical formulas) that form color images (still images and moving images) that are different from designing channels on boards Mesopotamian or a plane from calculations. By the hands of the programmer, the human who builds the algorithm (Binary information form), the mechanical reproduction allows the production of so-called "artificial images". Breaking the paradigm established between the here and now of the original and that identifies the object as always being equal and identical to itself (the contents of authenticity) still restless us today with the question of the relationship between matter and form this configuration.

How the creative process within that world of binary codes establishes relationship with the form, and especially in your desired escape of the clichés?

As Flusser says (2007, p.32), "[...] it is not the case to ask if the images are surfaces of materials or electromagnetic fields contents. Good to know to what extent these images correspond to the way of thinking and seeing the material and formal"<sup>3</sup>.

We will analyze this question knowing the "intentions" of the digital code in architecture from the 90s in processes such as parameterization and biomimetic.

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<sup>2</sup> Free translation of the authors. In the original: "[...] podemos considerar as ferramentas, as máquinas e os eletrônicos como imitações das mãos, como próteses que prolongam o alcance das mãos" (Flusser, 2007).

<sup>3</sup> Free translation of the authors. In the original: "[...] não é o caso de se perguntar se as imagens são superfícies de matérias ou conteúdos de campos eletromagnéticos. Convém saber em que medida essas imagens correspondem ao modo de pensar e de ver material e formal" (FLUSSER, 2007).

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## 2. INTENTIONS

*Of the pattern for the repetition and from the parameter to performance*

Since the Industrial Revolution the concept of informing (enforce shapes of matter) is set in the discourse of functional designation. The architecture and design as well as art, are impregnated this ideological language (moral and political) and position themselves as adhesion response or resistance to its time from that development of data context.

The architecture since the 1990s according to Israeli architect and Professor Rivka Oxman (2006) has directed the perspective of creative architecture in the design process in the digital environment of an increasingly integrated manner.

Her analysis on the contemporary context of the project and consequently of the creative process in the digital age shows us that we cross points starting from the design aesthetic and end with the potential materiality of the idea (shape) through the digital manufacturing technologies.

These, in turn, are numerical control machines (digital-analog) and three-dimensional materialization that goes beyond the software for designing the shape. These technologies are also the hardware for the production of matter, the increasingly personal and individual way.

These technical devices together has changed the conventional logic of representation and changed the relationship between the shape and matter, not only in the speed of this transformation, but in the ways of this process. The architect, as the hand of the programmer, has thought that the objective non-repetitive, non-standard, non-normative associated with the performance, functional designation based on high ecological efficiency ratio for the manufacture of the artefact.

It is an interesting way to think that the creative process in contemporary architecture to generate the non-repetitive representation, non-standard and non-normative is based precisely on analyzing and interpreting what is repetitive, standard and normative.

The architect has the language of binary code that creates and interprets the form generated artificially, and that belongs to the visible world, and transformed into model (two-dimensional and three-dimensional) to generate the shape in an alternative world.

The shapes are not as discoveries (the true shape) or as fictions (impossible to be carried out), as Flusser (2007) says, are models which, in turn, are composed of parameters manageable shape data.

Thus, first is generated the model from the cliché (figurative) and then, by the structured creative process and the fluid capacity of reconstruction, the Deleuze diagram (2007). From the deconstruction and reconstruction of the binary code for the data of the shape (parameters), it started to escape this cliché. So it can be to be generated from non-repetitive, non-standard, and non-normative, in the digital environment. This is the Deleuze diagram (2007).

Indeed, whatever the techniques used in generating a shape, it becomes important to address their representation as a direct result of material concerns which govern the design process, whether in architecture, design or art.

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Schumacher (2009) to claim the Parametricism as a style that has its roots in certain techniques, including parametric and algorithmic techniques. He argues that the definition of such a style cannot be reduced to the techniques employed. For him these techniques applied by the use of hardware and software have inspired "[...] a collective movement with new ambitions and values [...]" in relation to the design process and defining the Parametricism the context roots (Schumacher, 2009, p.15).

For Rivka Oxman (2006), the Guggenheim Museum Bilbao project marks the meeting of the architect with the coded vocabulary of advanced digital technical capabilities. The museum was built between 1992 and 1997, it consists of a structure of stone and curved frames coated with titanium plates. The idealization and construction of this work was only possible due to the use of powerful computer equipment and advanced software.

We can also cite as example application some work of Zaha Hadid architectural firm that present a more systematic approach in his works in the use of parametric model both in terms of its theoretical assumptions and in terms of aspects related to the practice of digital projective process in architecture.

One of that office works is the MAXXI, Museum of Arts of the XXI century, in Rome, which was completed in 2009, after ten years of the project. Flows and museum paths overlap and connect in order to create a dynamic and interactive space. The continuity of the spaces makes it a location for any type of movement and temporary exhibitions, without redundant wall divisions or interruptions, such as a campus to the art. The main design elements are the concrete walls with suspended black curved stairs and open roof to capture natural light.

The Iraqi architect Zaha Hadid (2009), through these parameters, defines this project as a representation of chaotic fluidity of modern life through the spatiality of various points of view and fragmented geometry. We observed, however, a process that acts as validation of a theoretical project built to represent the new architectural values associated with the Parametricism proposed by Schumacher (2010). For it is the search to organize and coordinate social life, not only through differentiation and internal cohesion through an ordered complexity of the project, but also looking to create continuity between the urban context and building.

A creative process as the biomimetic method produces a functional designation which is based on performance in which, through analysis and interpretation of elements of nature proposes up the search for eco-efficiency model presumably present in its fundamental and deeper structures. Also, looking at this method the subjectivity that involves the complexity of the shape to transform it into matter.

Inspired designs in the shells of insects and cellular and organic structures microorganisms allow you to adjust the structural components of an architectural complex to open or close according to the sun orientation or the weather, working reactively to the environment and adjusting to the different conditions. As a concrete example, we can mention the Pabellón Quadracci the Milwaukee Art Museum's Santiago Calatrava, which opens and closes during the day, like the wings of a butterfly or the opening movement of a flower.

Again the cliché and imitation, as a starting point. Once the observation technique in nature as interpreting element in science is not new, it is a cliché.

### 3. INTENTION TRAILS

How to identify the intentions of the creative process in the digital environment, as in the case of the creative processes of contemporary architecture? What documents these processes, also known as records of the creation process in the digital age?

Perhaps the cinema and photography are media which may establish a relationship with its process' documents in digital production environment (and reproduction) in a more placid way, such as by the records of making off of these productions.

When we speak of lines of code used in architecture that support the search for otherness of shape, as in the case of parametric process (model parameters) we refer to the use of tools and techniques to promote a design aesthetic increasingly homogenized. This is because the globalization of cultural phenomena that generally has as one of its effects the internationalization of projective practices.

As techniques facilitate coordination with an aesthetic standard, the search for a certain aesthetic also drives the development of software tools generating a feedback and 'evolutionary' movement with increasingly complex solutions related to the creative process. How to study the historical remains of this action and its effects in this scenario?

Within certain perspective, the phenomenon of this complexity lies not only in the underlying aspects of architectural design but also in applying creative process techniques such as parameterization and biomimetic. It also influences the relationship between technique and aesthetics around that complexity when the goal is to understand the traces of intent processes in the digital age for the production of shape in architecture.

For this reason we mention the possibility of establishing research frameworks for technical design and aesthetics of shape as a way to generate reflections on the use of processes such as parameterization while "[...] it is ought to know to what extent these images correspond to the way of thinking and seeing the material and formal"<sup>4</sup> (Flusser, 2007, p.32).

The research method of the creative process proposed by Michael Baxandall (2006), the inferential criticism, leads us to construct descriptive from what we can infer when we tell the story of a proposed work.

The concepts of inferential criticism are given the charge and the brief as aspects that must be obeyed and that motivated the creation of something, that is part of the "[...] idea that it is possible to explain historical objects considering them as solutions to problems that appear in certain situations [...]"<sup>5</sup> (Baxandall, 2006, p.72).

In the first chapter the author presents a description of an architectural work: The Bridge of the River Forth, Benjamin Baker. This example serves us well as the analysis proposed, because in addition to the present historical context of the work it lists a number of possible causal relationship to his charge and shows a documentary collection also in conventional

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<sup>4</sup> Idem 3.

<sup>5</sup> Free translation of the authors. In the original: "[...] ideia de que é possível explicar objetos históricos considerando-os como soluções a problemas que aparecem em determinadas situações [...]" (Baxandall, 2006).

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design molds present their guidelines enables a using dialogue to Baxandall (2006), the essential qualities for analysis of a work: the strangeness and remoteness.

If the documentary records of new creative processes within the digital environment exist outside the world encoded may be able to establish this dialogue, even partial, by inferential criticism with the digital work. Otherwise, when diving into the chaos of the complexity of binary information networks, we run the risk of not getting a relevant historical description of the work or its process, or even your own action or effect of intention to trace because they will be submerged in long tail of the era of digital information.

If we approach the study of the creative process of the digital work by the method of genetic criticism, there may be more successful, since the method allows observing the manufacturing paths of work among all its records associated materials pertinent to her as essays and testimonies interviews and studies.

Since this method proposes an interpretative analysis of the work within the aesthetic point of view, establishing the link between what is documented with what is not documented in the process trying to demonstrate in this way a path through trends through the creative gesture of the work, that "dialectical movement between track and vagueness [...]"<sup>6</sup> as Salles (1998, p.38) says.

That would be a difficult task, since the digital environment is a medium and end, shape and matter in techniques such as parameterization; the research about the work's path in its creative process can be long and permeated with uncertainty.

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<sup>6</sup> Free translation of the authors. In the original: "movimento dialético entre rumo e vagueza [...]" (Salles, 1998).

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