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# From Bulimic Cannibalism to MasterChef: Practical Notes on Visual Architectural Analysis †

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**Abstract:** Aim of the paper is the study of how architectural representation changed in the digital age, focusing the relationship between the two following opposing aspects: on one hand the idea of progressive loss of any referentiality with the real world—as suggested by the concept of "Hypereality" defined by Baudrillard at the end of the Seventies, i.e., a simulated reality more real of reality; on the other hand computer-based visualization as tool for measurement, interpretation and understanding of the world. Through a reading of "The measure of the World" by Daniel Kehlmann and—in parallel—the telling of the laboratory educational work made in the Architectural Drawing Couse at L'Aquila University, the paper presents an experience that puts together the lines of "New Realism" and "Digital Videocultures", aiming at a revaluation of perception and architectural representation, as antidote to bulimic cannibalism of digital images, and as critical tool to analyze , interpret and undergo them to a validation/falsification process.

**Keywords:** architecture; drawing; modelling; perception; design; communication; education

## 1. Introduction: On the Visual Gaze

The so called "Second Digital Turn" has grown the phenomena typical of "Digitality" [1] and "Hypermodernity" [2], where the multimedia nonlinear, multidirectional, and ubiquitous communication through images has become an integral part of everyday life. In fact, with ICT rise, information pervades the current reality, and the world representation is not any more related at the period of virtuality—the time dedicated by the observer to television or workstation screen—, but the media environment brings us and enhances reality with information. Up to now, glasses lens have helped the eyes to focus the world, today they participate in the interpretation.

The "Hypereality" of Baudrillard [3] changed, simply becoming part of reality: reality and virtuality collaborate together as different aspects of our environment. At the same time, the participatory approaches [4] spread out, based on interactive and bidirectional media, where sharing and individual collaboration enable and strengthen the diffusion and adhesion to participatory cultures. The result is a strong creative tension, with an interpretative cooperation, rooted on an open-ended process of updating and on skill development for sources, accessing, creative reworking and distribution. Follows that people are ever and ever more screwed in understanding the "augmented reality" that surround them.

Without prejudice to the post-modern lesson, the line of the so-called "New Realism" [5] focuses on the observation of reality intended as actual presence.

There is a revaluation of the function of perception: "the function of perception is comparable to Popper falsification, but here it has an ontological role and an epistemological like in Popper [6] (p. 154). Therefore, perception is the reference of an exterior with which the observer is called to

confront. According to the rules of digital visualization, the lesson of New Realism suggests how vision becomes a critical tool for analysis, interpretation, validation, and falsification of images (Figure 1). The nihilistic approach leaves room to a direct and disenchanted relationship with digital images, renewing the concepts of "virtual reality" and "augmented reality". Moreover, day by day, media change according to a pervasive and continuous interrelation. The on-line state [7] blurs the concepts of "digital native" and "digital immigrants" [8,9], not only for the successions of generations, but because tools and apps are ever more smart and diffused.

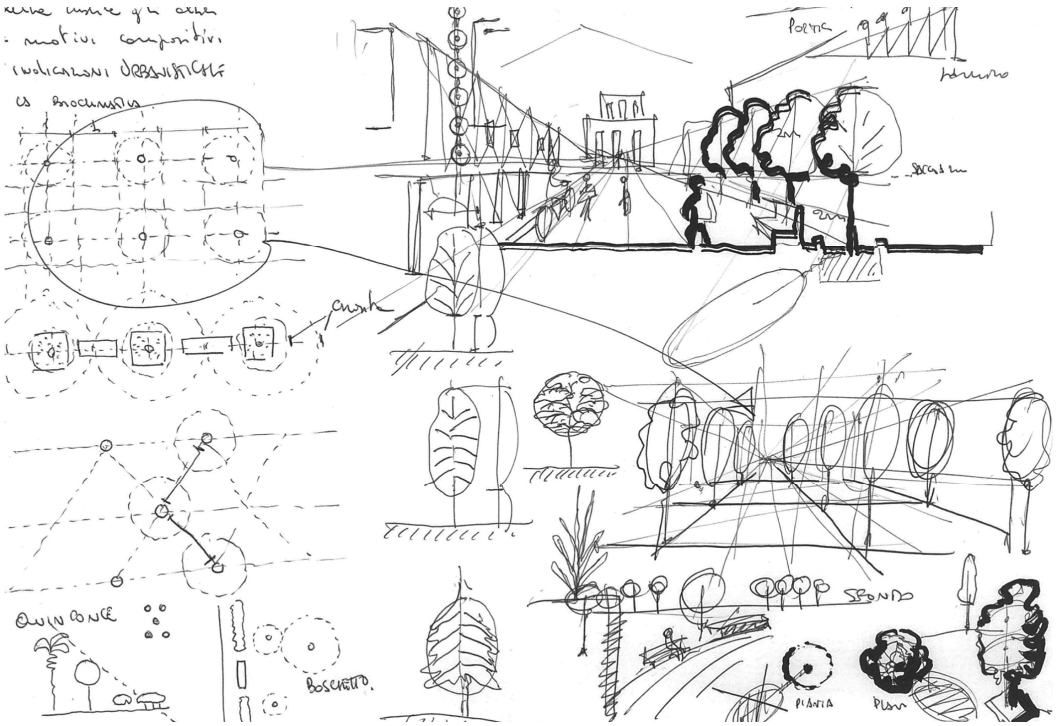

**Figure 1.** Architectural studies and sketches (by tutor Giuseppe Maria Antonio).

At the beginning of the digital age, Baudrillard [1] said that reality was under the threat of digital simulation, more convincing of the real. This would have brought to "hyperreality", i.e., the more real than reality. Then, in the Eighties Baudrillard underlined that the instantaneous proximity of the digitality would have produced the world's transparency for excessive visibility. Hence his idea of "Obscenity": When everything becomes immediately visible, transparent, and then coded and transmitted, the illusion ceases to exist. The Baudrillard's cry of alarm is that we would have been no longer in the drama of alienation, but in the ecstasy of communication [10]. Although this did not happen, the idea of "Obscenity" should be used to evoke the new approach of people towards digital visualization: an "anatomical" attitude, rather addressed to the complex articulation and interaction of data. The attention moves from the observation of synthesis render to the process. The shift between reality as "mise en scène" and its authenticity requires a position that brings to the recovery of the language of representation, of analysis skills, and of cognitive processes related to direct experience.

## 2. The Measure of the World

Design has always been an instrument to watch and study the world: it historically has taken on a form and it has specified a language "able to think" and "able to organize" reality better than a simple activity of mimetic copying. The challenge is introducing into the design the famous Hellenist appreciation for Language: the "megaloi logoi" (the great speechs) that takes precedence over thoughts and, as in the "Antigone" by Eschilo, becomes a "teach thinking". And exceeding the well-known platonic mistrust for figurative art. In order to plan and manage a didactic experience of design as "writing" and "knowledge" exercise, the reading of the book "The Measure of the World"

by Daniel Kelhmann [11] can be useful. The writer interwines from the XVIII to the XIX century the lives of the geographer and explorer Alexander von Humboldt and of Carl Friedrich Gauss, mathematician and astronomer, in order to introduce us in a special language, where the image works as representation and interpretation of reality. First, Humboldt "measures the world" steeping in it through a direct exploration; second, Gauss does the same thing but with mathematic and scientific instruments. Humboldt makes his most important discoveries when he was young but at last, in the years of his maturity, he sees the progressive shrinking of the exploration land: through the years there are less places to discovery and to explore, and the world turns smaller.

On the opposite, Gauss widens his personal viewings and studies, expanding his imagination. The first is comparable to process of direct knowledge related to the architectural project, through the representation of reality, the surveying, and the direct experience. The second recalls the work of analysis by an analytical acknowledgement of sizes, proportions, the study of types and historical data, etc. The two processes seem antithetic but in another way, they are complementary: the first is repetitive but repeatable; the second is expansible according to lines ever different. Both of them mark out the way that from architectural knowledge leads to the project. Focusing on the use of representation in architectural studies and education, an important tradition is the one of the so called "graphical analysis". Vincenzo Fasolo, teacher of Drawing and professor of "History and Styles of Architecture" at the School of Architecture of Rome from 1925, in 1954 published his essay titled "Guida metodica per lo studio della storia dell'architettura" (Methodological guide for the study of architectural history) [12]. In this book drawing plays an essential role, implicitly intended as a methodological tool for the analysis, comparison, and interpretation of the architectural characteristics and values of historical buildings.

To look critically at the architecture, Fasolo intended "drawing" (i.e., representation) as an ineludible tool: "[…] Observation and interpretation of monumental characteristics is entrusted to the young architect through a graphical summary. We demand that he practically translates into drawings those that are the elements or characteristic and essential factors and of the architecture that he is studying. Not "copies" more or less brilliantly and nicely drawn from photographic models, like the real, as at the first time one is tempted to do, for a bad interpretation of the goals of these drawn observations, instead they have to show how much and what part in the study of the program the young student has had" (p. 11). In the second half of the Fifties, Fasolo wrote another book titled "Analisi grafica dei valori architettonici" [Graphical analysis of architectural values] [13].

The wording "Graphical Analysis" evokes the idea of structural analysis and an analytic approach to architecture. Fasolo says: "A history of architecture—it could be said—designed, rather than spoken" (p. 3). And he adds: "Acquisition of culture and, especially, educational workout for the training of the quality of the architect" (p. 3). In this way drawing is a methodology related to history and—inevitably—to architectural design. In 1989 Mario Docci published a paper titled "Disegno e rilievo: quale didattica?" [Drawing and surveying: what didactics?], in the first issue of the journal "Disegnare Idee Immagini—Drawing Ideas Images" [14], concerning a methodology for architectural analysis, tested by the author and his staff in the Course of Drawing and Survey held at the Faculty of Architecture of the University of Rome "La Sapienza" from the academic year 1975–1976. The paper recalls what he already published in 1983 in the book "Disegno e analisi architettonica" (Drawing and architectural analysis) [15]. Recalling Fasolo's lesson, and in particular referring to the structuralism lesson, "drawing" is intended as a graphical meta-language for the study of the architectural language. Thanks to drawing, the scholar makes an ideal segmentation and selection of the architectural work, to represent its constitutive elements. Although in the educational, he develops a method of critical study, believing that the drawing and the re-presentation of great masters' graphic—past and contemporary—are a useful tool to understand the values and therefore a pre-requisite for the project. This tradition has continued over the years, with recent major achievements [16,17]. Considering this background, the computer based visualization poses new challenges: on one side these is the temptation of completely replace the freehand graphic design act with spatial modeling, on the other side it is fundamental the maturing of a critical awareness: the scholar—far from being overwhelmed by the self-representativeness of the digital image—has not to

be passive following to the open-ended stream of images but he has to understand the methodological principles and be aware in reading and producing images.

## 3. Like in a Laboratory

In the contemporary era, people are used in new simultaneous, open-ended and ubiquitous communication modalities through images. Images bombs by, and continuously we create, re-elaborate and share images. In our smartphones there are several app for image processing, and the very fact is that people are able in using and consuming images, but we have to develop skills for a critical aware understanding and production. The work made in the courses of Architectural Representation at Building Engineering Courses of L'Aquila University (Figure 2)—teacher prof. S. Brusaporci, tutor G.M.A. Romeo—starts from the study of projects of important contemporary architects, and develops through the following conceptual phases:

- Re-Presentation of data—drawings, images, etc.—(i.e., an exercise of "visual re-writing");
- Visual Analysis (explanation of geometries, historical values, kinds, etc.),
- Building a New Representative Model
- Communication for New Architectural Telling.

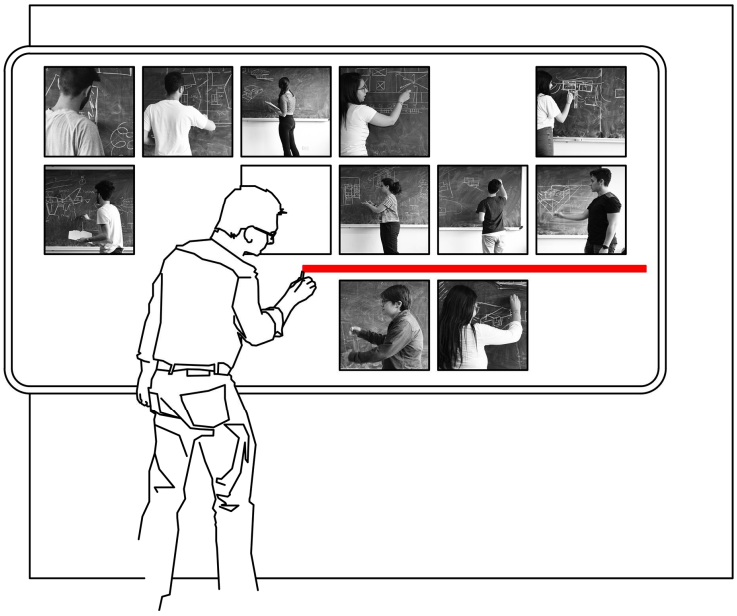

**Figure 2.** Images of students invited to describe architectures using sketches (photographic processing and design by tutor Giuseppe Romeo).

The Re-presentation (Figures 3–5) is a dialog with selected drawings and photos that is with an existing image-telling of the building. Students have to follow two rules: the design has to be made by free hand drawing; the lines have to be drawn with attention. "A good hand" is not a prerequisite: it is necessary to learn using hands. This is a useful approach to acquire technical methods and to potentiate the own knowledge abilities. This exercise leads to an improvement of the practical aptitudes and cannot be separate from the "knowing how to see" capacity. It is like playing music written by another musician. We need to have a "photographic" eye, to catch everything through the image and to let others to reach understanding by "assonance" [18]. It is necessary to understand what we have to represent. Because in re-drawing, the representation rises from the vision of the designer, over elements and shapes, putting in order ideas. The most important aspects are what and how drawing. It is useful ask some questions: is the design I am making meaningful?

**Figure 3.** Graphical analysis. Study of Levene House Eduardo Arroyo—San Lorenzo de El Escorial, Madrid (student Marco Ricchiuti).

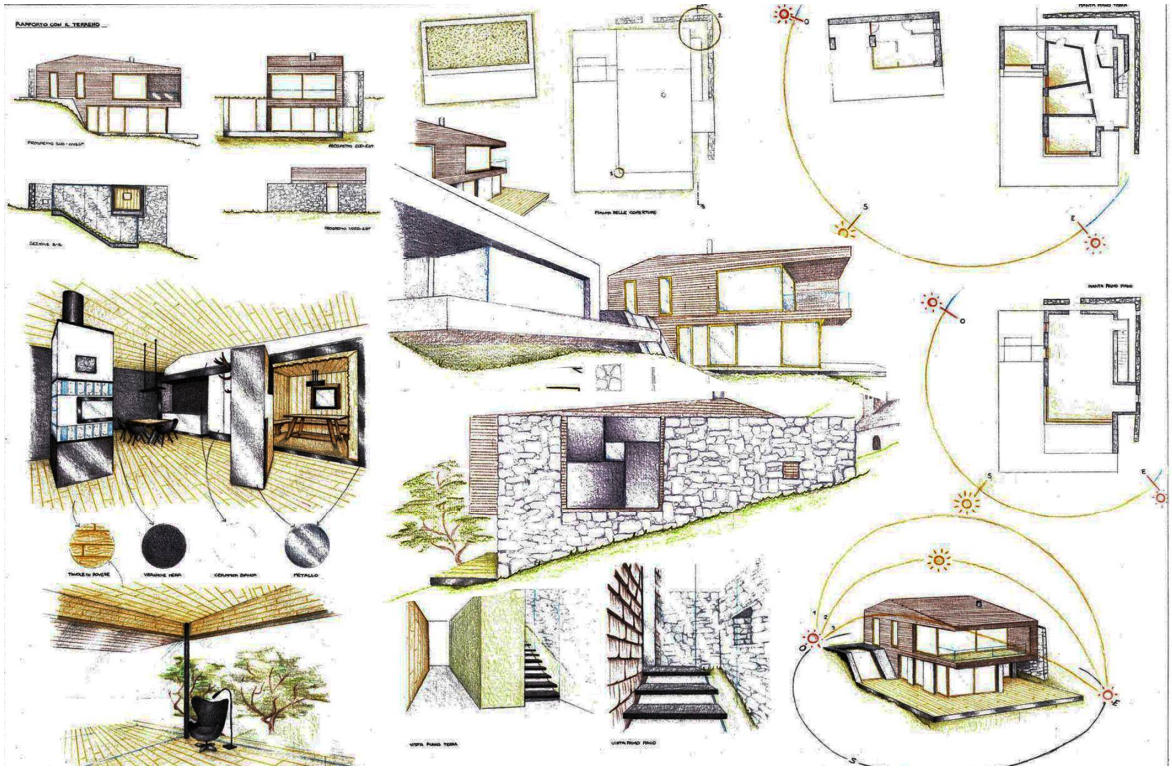

**Figure 4.** Graphical analysis. Study of House in Vipiteno, architect Bergmeisterwolf (student Francesca Marion Rapiti).


**Figure 5.** Graphical analysis. Study of Levene_House Eduardo Arroyo, San Lorenzo de El Escorial, Madridn (student Marco Ricchiuti).

Is it necessary? Does it say something more and different from those already available? Therefore, with re-presention follows the Visual Analysis.

The matters are: what are the choices from which grows the specific project? Is there an esthetical formal logic? Are there proportional relationships between elements? Is there any generator typesetting? The geometrical analysis can get a deeper knowledge of the subjects, reaching into a new explanatory level.

The knowledge of architectural history is fundamental. For example, we think to the use of architectural orders, during centuries as a constructive instrument rather than a composition instrument; or to the rational architecture and its language; or to the cultural discourse in the post-modern architecture or in structuralism. Think also, to how it is necessary to understand languages in order to splitting up and decode architectures, and interpret and communicate them.

At the same time, dealing with buildings, the aesthetical aspects is not enough, and the analysis of the context and of construction technologies and systems are important. We can operate for graphical layouts, each one deep a special point of view. The layouts can be combined by themselves in order to show connections and interactions. In free hand drawing, instruments we need for the representation could be conventional visualizations, such as orthogonal projections, maps, elevations, and sections, axonometric and perspective drawings, etc. The purpose is to reproduce a graphic model of architecture. A complete measured re-design of real architecture. By the study, interpretation, and understanding of the building, and from the rise of an ideal concept of the building, the rise of new representations follow. Therefore, we begin to rebuild wanting "images", and to represent them to tell the real nature of the building. We are new designers engaged in the project of the existing building under analysis and we are building a New Representative Model. Nevertheless, we are facing with an existing building, therefore, the mental idea (and the graphics) have to be compared with the architecture (the external reference with an own ontological immanence) and critically verified and validated. Students are invited to "narrate" each other the building they are studying by explaining it through drawings made on the blackboard.

But the New Models have to be all inclusive, three dimensional, navigable, and contemporaneously made by free hand drawings and digital spatial systems, able to show the real deep architecture meaning (Figures 6 and 7). Follows the topic of communication: to realize new synthetic images to allow an easy understanding for them who did not study this subject before. Different storytelling can be developed: perspective views (sketches or renders) or interactive applications in order to give the real meaning in the space of the project (Figure 8).

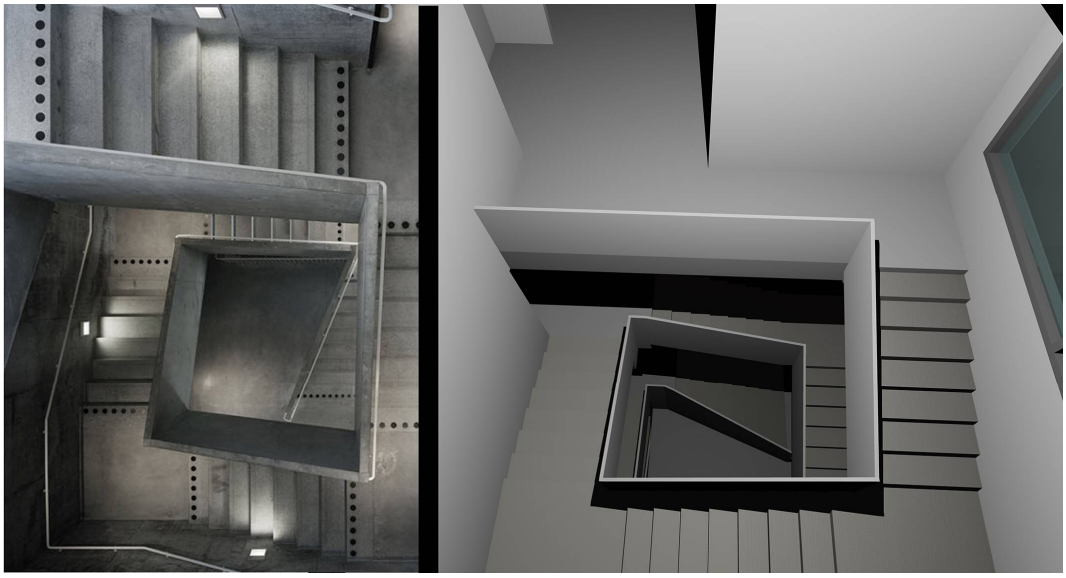

**Figure 6.** Renderings vs reality. Tham & Videgård Arkitekter, Kalmar Museum of Art—Sweden (Student Sonia Sacchini).

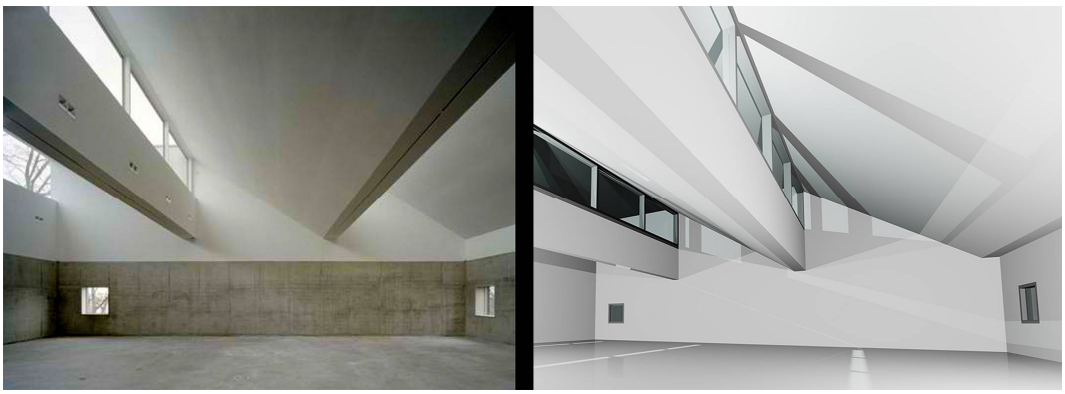

**Figure 7.** Renderings vs reality. Tham & Videgård Arkitekter, Kalmar Museum of Art—Sweden (student Sonia Sacchini).

**Figure 8.** 3D Modeling and rendering. Mathias Klotz, Casa Ponce—Martínez San Isidro, Buenos Aires (student Nilo Cordoni).

Modeling cannot be limited to architectural geometries. For example, every architecture has a specific physical context and it is used according to its characteristics. It is not simple to be represented. About using natural elements as architectural elements, it's necessary to start from two points: (1) the rules are the same for every element of the design; (2) inserting things in a scene or in a landscape is a project operation. For example, vegetation is not only an element to insert in the project, every tree is made by the same elements (roots, trunk, branches, leaves), but there are many kinds of tree. First thing to do is to choose the kind of tree in order to the utility in representation and architectural communication. Geometrical placing is also important. It is an adaptation between true realism and critical highlighting of architectural characteristics (Figures 9 and 10).

**Figure 9.** 3D Modeling and rendering. Mathias Klotz, Casa Ponce—Martínez San Isidro, Buenos Aires (student Stefano Di Carlo).

**Figure 10.** 3D Modeling and rendering. Bioclimatic house by architect Carlo Barbieri, Santorso Italia (student Stefano Di Carlo).

Moving from the eclectic but strict postmodernism view, Architecture could be lost in the plurality of different points of view. However, if images are referred to the real buildings, this narration adds its critical importance with a real useful attitude for skills development.

## 4. Conclusions: Perception and Representation in the Present Society

Is the image a mirror about its real reference or it is a fantastic representation? This question on knowledge capacity of art, and between platonic disavowal and aristhotelic believes, is actually fighting with the Nietzsche's prediction about the "twilight of the Idols": what remain of the power of image representation in a world become a tale? Is the image technically drawn a real world shown into a mirror, or it is a false representation?

Very complicated processes bond human being and his actions to a pervasive use of the image, to a world took in order to produce a lot of artificial images, a world that see us like inert observers, don't be able to realize a real critical reading.

By a way, Bauman [19] describes—as highlighted by Darley [20] (p. 236)—that post-modern viewer is a hermit who has to work playing at absent-mindedness game; a lone home player that enjoy himself because lives in a media tamed world (stereo, TV, video, etc.). By another way, Darley

deals with cultural criticism of a "productive public" which proposes polisemantics text-books, they are viewers that are active theory workers, and a public that is like a consumer which knows and looks for media because needs delight [21–24]. This is could be an educational way for reading and showing images.

Since he was born, human being try to organize signals mimetically and according to recognizable shapes in physical space outline: they are the first bricks, the first matters of a formal logic about structural rules that take us in an individual thought, and after, going on, it becomes universal and stereotyped.

The learning processes of childish design are codified. It goes from a simple marks of motorial expression to a symbolical-graphic alphabet. The kind of representation in the first years of a child is bonded to the need to explore and to have basic knowledges. Children are not able to communicate consciously and draw specially because they need to be listened into the family.

World remains out of the specific limits and the best way to represent it is using bi-dimensional or less-axonometric techniques. A car is a car when it has four wheels, everyone like the others. Every time in these processes are very important the rules that guide visual language. Every time the design is discovered one again, the process begins again and there will be a new picture of the space.

This process does not change with technology, with the risk of losing reality in communicative avoid flows. In the actual role of media, it is very important to mark out a critical road that let us to take critical awareness/knowledges of images. Especially in the field of architecture, rooted on representation.

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