

# GRAPHIC TRANSCRIPTIONS LE CORBUSIER AND THE BOLOGNA ENIGMA

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## ESSAY 13/01

REDRAWING  
HISTORY  
UNBUILT

The “architectures in the drawer” turn out as real thermometers of the culture of their time. The digital model, continuously swinging in motions of History, Representation and Design, is the catalyst of the representation, the starting point for the construction of new images of possible architectures. The drawing is a knowledge process

that intervenes both on the field of project making and processing, and on that of interpretation and critical analysis of the work. The redrawing of *Église pour Bologne* wants to reconstruct the path that those ‘eyes’ had seen to forment knowledge of an architecture of which remain few graphics clues.

## INTRODUCTION

When we are about to represent the work of Le Corbusier, which has profoundly influenced the history of architecture and whose thought is both complex and, in some ways, enigmatic, we are rightly afraid of both the greatness of the Master and the words written around his vast and articulated work. If precision, according to Gregotti's thought (Gregotti, 1991), is one of the characteristics of critically representing, one can comfort oneself, in an absolutely consolatory way, with the conviction that 'patient representation' is, after all, analogous to Le Corbusier 'patient research' and that a study of a project by the Swiss master through redrawing explores only a small part of that vast territory of his design and theoretical production. Representation is therefore a process of knowledge that intervenes both in the field of training and design elaboration, and in that of interpretation and critical analysis of the work. Representation therefore indicates both a graphic-visual result, *Darstellung*, and a theoretical and conceptual aspect, *Vorstellung*, a hinge between theory and construction (Ugo, 2004).

In the critical analysis of a work, carried out through the drawing, the notion/problem that allows the interface between *Darstellung* and *Vorstellung* is the *mimesis* that is not a trivial reproduction, imitation or copying, but, according to the Aristotelian meaning, a process of improvement, transcriptive and translatory knowledge of an object, composed of form, structure and content.

Mimesis finds in representation a vast field of investigation because, through critical analysis, it selects those elements that define the work in its precise essence.

In 1994 Vittorio Ugo wrote: "The challenge, the main problem of representation, in architecture, consists [...] in this: in being able to account for all its statutes, all its metrical, material and qualitative determinations by means of its simulacrum; to allow the experience and knowledge while it is not present, while it remains in the perceptual distance

or in the virtuality of the project: in (*léthe*), the Greeks would have said; that is, in that oblivion or in that concealment from which (*alétheia*) –truth or unveiling– is extraction.

With some simplification, it can be said that history unveils itself by opposing oblivion or selecting memory, while theory does so by opposing concealment or selecting sense; (*tékhne*), finally, unveils the truth of physical laws by selecting evidence and balance and opposing natural material degradation, but also by elevating the work to the level of *ars*.

In a certain sense, then, like history, theory and technology, representation must also have a truthful function: not only it is not allowed to betray the “truth” of the work, but it must also reveal it to us, demonstrate, and obstruct it, placing itself in relation both to history and to theory and to technology; and its truth must unfold on a double level: with respect to the work, as fidelity of the “copy” produced with respect to an “original” currently absent; and with respect to the representation itself as internal coherence of the re-productive process. In other words, the following question arises: if it is certain that representation is a “double” of reality (existing or planned), what relations it establishes and maintains with this one, what codes can guarantee its veritative character, the analytical and cognitive results, the heuristic value, the integrated participation in the process of knowledge and architectural design?” (Ugo, 1994, pp. 10-11).

## MATERIALS AND METHODS

On the basis of these considerations, the ‘theoretical’ choice of the digital model as a representation in which the elements of the analysis converge is based on the conviction that the construction of the model is not the production of a simple image, an operation often practiced for the representation of the project, but is the hermeneutical and critical outcome of the drawing which tends substantially to the analysis of the form, the real object of imitation.

The digital model is the tool used by architectural critics to investigate an unbuilt project by Le Corbusier; the graphic investigation *in absentia*, moving between the thought and the work of the Swiss architect, tries to trace a coherent path of the design process.

In February 1963 Le Corbusier received a letter from the Cardinal of Bologna, Giacomo Lercaro, in which he was invited to evaluate the possibility of designing a church in the Emilian capital as part of the program '*Nuove chiese di periferia*'; the *Èglise pour Bologne* is one of the most enigmatic projects of the Swiss master, above all because of the limited iconographic documentation existing. Although the project has remained at the stage of aphorism, it has already been investigated and 'restored' in its form by Andrea Bertolini and Marco Prodi, through orthogonal projections, plan-elevations-sections, and with a *maquettes*, representations that allowed Giuliano Gresleri to further describe the intricate Bolognese rebus (Gresleri, Gresleri, Berolini & Prodi, 1998).

The errors and traps that can be made by interpreting the drawings of others, in this case those of Le Corbusier and those of Bertolini and Prodi, are manifold: from *horror ambiguitatis*, to the almost romantic presumption of trying to be contemporary to the author, thus crossing a temporal abyss, to the fear of being arrogant in translating something that has already been translated.

The awareness of providing new keys to interpretation through graphic criticism helps to overcome fears when one is convinced that new interpretations (representations) are useful for the knowledge of a work whose construction has been precluded and that the drawing "is not finished" because, as Gadamer says, understanding "is never just a reproductive act, but also a productive act" (Gadamer, 1983, p. 346).

## RESULTS

The aim of this study is to explore the directions that those eyes had seen and to reconstruct the path from which

they had started in order to increase, through new representations of the project, the knowledge of those unbuilt architectures which have fallen into unjustified oblivion.

“The key is this: ... to look, to observe, to see, to imagine, to invent, to create”. In this memo of August the 15th, in 1963, written a few months after receiving the letter of Cardinal Lercaro, Le Corbusier indicates, in the essentiality of the message, a way to practice the knowledge of architecture, the relationship between thought and things, or the world of objects and facts that surround us and accompany our artistic experience.

In the triad watch-observe-see is the secret of those who do not want to be surprised by the phenomena of reality, which investigated and analyzed becomes the heritage of our knowledge.

Looking implies the education of the senses to the multiplicity and difference of forms; observing captures the reasons for differences by revealing their rules; seeing traces meanings and values.

The second Le Corbusier's triad, imaging-inventing-creating, uses terms that bi-univocally determine not only the production of the work but also clarify a condition of being, its social project and the eccentric position it had with respect to the dominant thought within that revolutionary atmosphere characterizing that mutable period.

Paraphrasing the Le Corbusierian will, in particular the terms of the second triad, and transferring its meanings almost exclusively in the discipline of representation, it seems possible to re-structure the synthetic message of the Master in “the key is this: ... look, observe, see, imagine, represent, draw” in which the second triad uses terms that, in a bi-univocal way, determine not only the representation of the object but clarify a condition of being through the putting into form of the relationship between the I-investigator and the object investigated. How does this putting into shape happen? With the drawing, absolutely.

Imaging, including and excluding, mixes the multiplicity of forms, representing traces the rules of the imagination

and prepares the mind/hand to the 'gestures' of drawing, which manifests new meanings and values; our own.

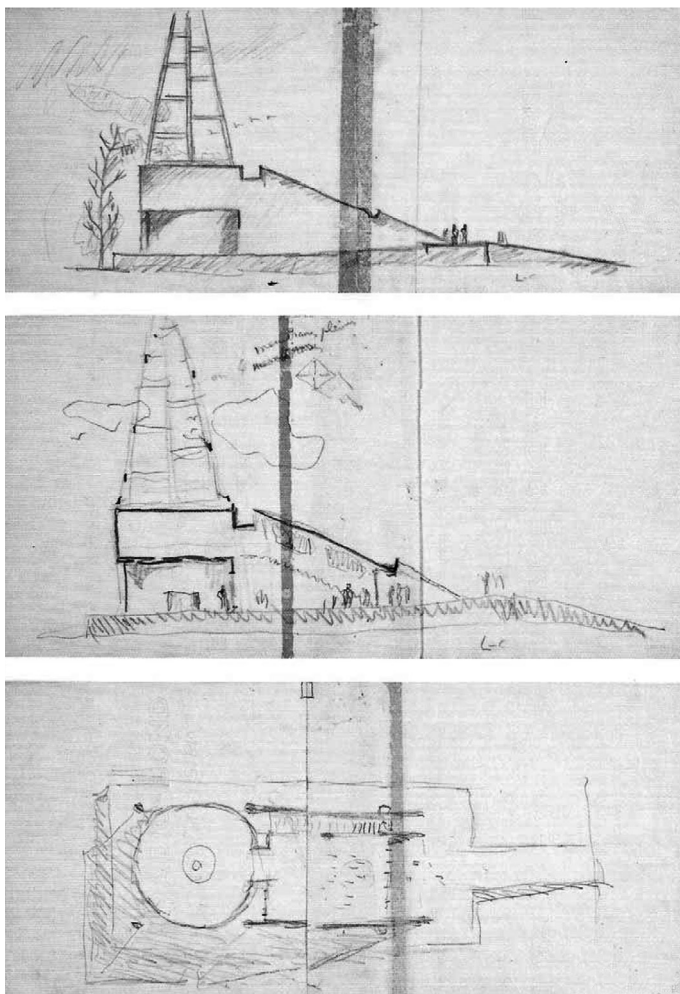
After all, the drawing sheet behaves metaphorically in the same way as the intellect: it stratifies, sediments from techniques to intentions, lets large quantities of materials accumulate, runs through the landscapes of the imagination. There is no drawing without imagination because there is no thought that does not explore its indeterminate boundaries.

Leopardi, in *L'Infinito*, "advances for the first time, in the shipwreck of reason only reasoning, a noesis of imagination, which is not mere illusion. Illusion is a second nature that allows us to overcome the harshness of nature itself. Imagination is what protrudes, on the edge of a hedge, beyond the last horizon and thus allows us to know what is taken away from the 'usual' eyes and minds. In this sense Leopardi can say that if 'imagination becomes attached to illusion' it is not identified with it, and that 'without imagination' life 'is carnage, desert, hell'. Baudelaire will say: a prison" (Rella, 1997, p. 71).

Each drawing contains a mystery, a sign that refers to something whose boundaries cannot be drawn, something that belongs to the subject, an enigma that can only be intuited with the audacity of the reader's imagination.

In 1998 the interpretative drawings of the project of the church for Bologna were published, carried out by Andrea Bertolini and Marco Prodi as part of a design course held by Francesco Venezia at the University Institute of Architecture in Venice; the aim of this course was to make the students work "in the manner of". The interpretative process of this study has as its starting point also the works of Bertolini and Prodi. Reconstructing the lines of LeCorbusier's thought from the three 1:100 scale sketches produced by the Swiss master (Figure 1) is not an easy task because one can easily fall into the error of using quotations relating to other projects of the Master himself that, decontextualized, lose their intrinsic value of univocal solutions.

**Fig. 1** Le Corbusier, Sketches for *l'Église pour Bologne*, 1963.



The sketch is the tool with which the architect fixes the idea and in which he clarifies, first to himself, which are the possible ways from which to trace the path to define the project.

In the project for the church in Bologna, the tools of the Modulor and the skillful orchestration of the volumes are combined with a process that sees the re-emergence of ancient teachings, travel impressions and sketches of his *Carnet*; the trajectory is then traced. A trajectory that refers to elements of sedimentation that the Master uses to respond to theoretical research; the use of these sedimentations is well



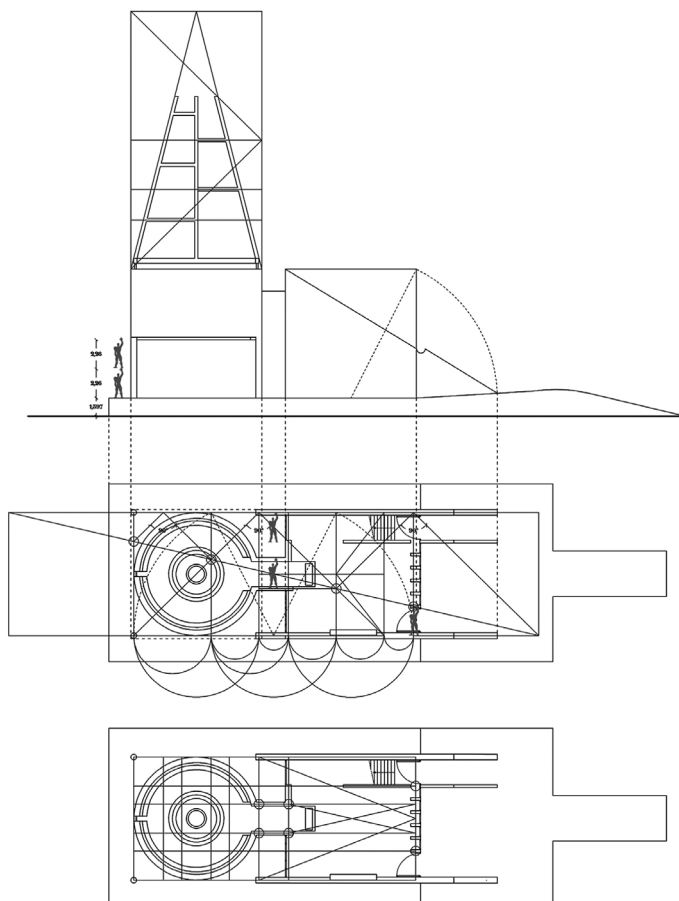
highlighted by Gresleri in the analogy between the plan of the Chiesa Santo Sepolcro and the *Eglise pour Bologne*. A further analysis would have been possible if the *Carnet Voyage d'Italie*, in which there were certainly studies and notes on Bolognese monuments, had not been lost. The interpretative work begins, therefore, with the analysis of a sketch that indicates the possible creative directions with the awareness of moving with caution, knowing that interpretation, however personal, is only a hypothesis. As suggested by the notes in the *Carnet*, Bertolini-Prodi's interpretation finds its geometric rule in the Modulor and in the golden ratios; this study has been accompanied by two other possible interpretations.

The first, always using the layout of the Modulor, traces the main measures of the building, identifying, in the articulation of spaces, the wise use of the Fibonacci series; the second, instead, is based on the harmonic deconstruction of the generating square according to the Hambidge procedure, taken from the book by Matila Ghyka, *The golden number*, which Le Corbusier certainly did not ignore (Figure 2).

The project is composed of the juxtaposition of autonomous but strongly connected bodies. The layout of the double chapel system is developed along a central axis that contains the spaces of the churchyard, the assembly hall and the baptistery; the base gives the building the character of sacredness. The access to the second level constitutes a new lateral axis and is formed by the staircase and the perforated septum that separates it from the lower chapel; the 'autonomous' position of the staircase could be due to a biblical reference, to the Old Testament allegory of Jacob's staircase.

The elevations and the section clearly show the succession of three elements: the circular shape of the baptistery, the square of the upper chapel and the steeple trellis with unfinished spire.

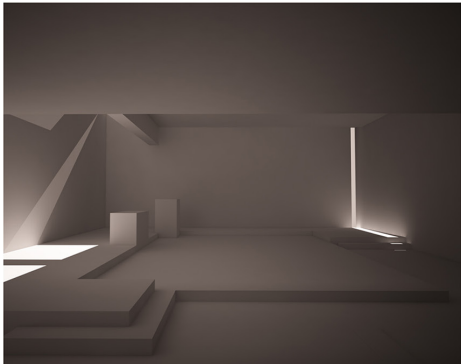
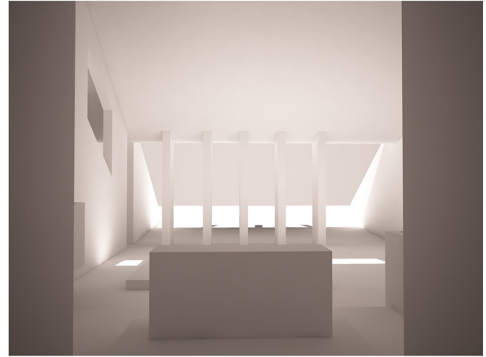
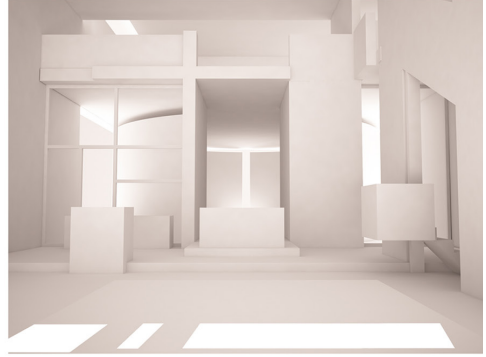
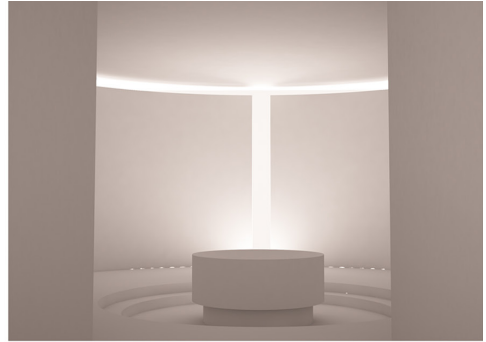
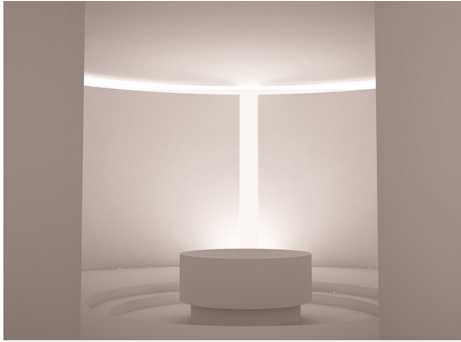
The second level is supported on the base by two pillars that make it independent from the baptistery below; the bodies are separated by a slot that allows a soft illumination of the baptistery. The succession of these elements con-



**Fig. 2** A. Tortorici, Graphical analysis of the plants and of the side elevation of the church for Bologna, 2014.

cluded by the spire has a clear theological meaning in the structure that is lightened upwards, a symbol of the transcendence of God.

This study makes some changes to the Bertolini-Prodi interpretation concerning the lighting of the lower chapel, the access churchyard and the orientation of the upper one. The modifications concerning the lighting of the lower chapel and the access square were 'solicited' by the analysis of the Master's autograph sketches in which there is no continuity between the U-shaped element of the upper chapel



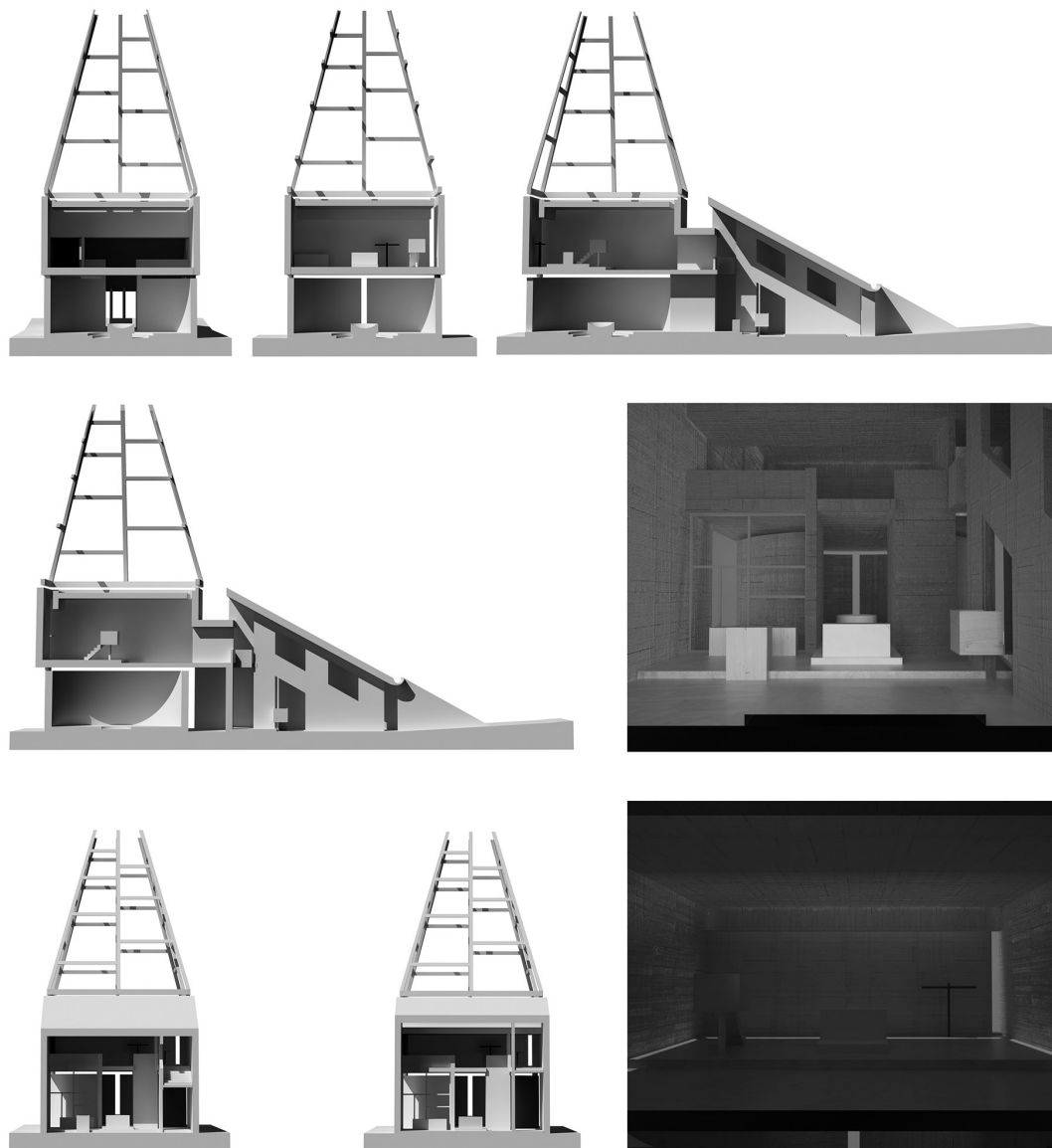
roof and the lower chapel roof, while Bertolini-Prodi, on the other hand, mark only a slender gap between these two elements; the graphic elaboration and the rendering of the two hypotheses show how the first produces light effects that make the environment 'closer' to other sacred spaces created by the Swiss master (Figure 3).

The interpretative variants relating to the upper chapel derive from the study and analysis of the architecture of Le Corbusier's religious buildings, their orientations and the arrangement of their eminentialities; the south–north axis of the Bertolini–Prodi interpretation has been rotated along the east-west axis. Le Corbusier, an authoritative expert on the liturgical program, knew the theological meaning of this orientation: "From west to east it is the path of Christ who enters in the midst of his own people that leads down: by his presence in his ministers, in his assembly, in the symbolic signs of the liturgical rituality - astil cross, Easter candle and others - with the entry procession by ministers entering the assembly together with the symbolic signs of the liturgical rituality, and it is the path of his ministers that leads him towards the procession of communion as communion with the symbolic signs of the liturgical rituality, and it is the path of his ministers that leads him towards the procession of communion as communion. It is a path, east west and vice versa, that refers to the apse and the altar and is architecturally generated by the door; in fact, the door is the truly critical threshold of the rising and setting of light in the hall. From south to north, instead, there is no process, there is stasis" (Valenziano 1997, p. 172).

In the new layout light enters, as in the case of Bertolini-Prodi, from 'cuts' formed between the roof of the chapel and the perimeter walls; the pulpit, an element not used by Le Corbusier, present in the interpretation published in "Parametro", is replaced, in the new interpretation, by an ambo, an element that we find both in the church of Ronchamp and in that of Firminy, from which the word of God is proclaimed. The new interpretation of the space of the

**Fig. 3** A. Tortorici, Study of the natural lighting of the Church compared to the spatial interpretations of Bertolini and Prodi, 2014.

**Fig. 4** A. Tortorici, Sections and renderings of the graphic interpretation of the church project for Bologna, 2014.



baptistery concerns the number of steps necessary to reach the baptismal font; according to the Second Vatican Council these must be three and not two as it appears in the Bertolini-Prodi interpretation (Figure 4).

## CONCLUSIONS

The representation assumes a substantial role in this study because it investigates the project of architecture, the central place of its true expression (Ugo, 2004). Graphic analysis is that part of representation which is closest to the sphere of criticism and which approaches the “extensive aesthetic and philosophical treatises which are presented under the title of *Teorie dell'architettura*” (Fasolo, 1962, p. 3).

Vincenzo Fasolo, at the end of the 1950s, in a collection of his own lectures given at the Faculty of Architecture of the University of Rome, proposing graphic analysis as a method of studying architecture, called for “...a history of architecture...drawn, instead of spoken...”. [and wrote that] the method of study that we propose tends to arouse a self-examination of architectural values in what is permanent in them, common, both for the ancient and for the modern. It is precisely a study of the ancient fact in function of the modern that will acquire greater validity even if in it you pass on the experience and nobility of epochs of builders of high secular civilization. What is now proposed is not at the expense of the modern critical method; on the contrary, it integrates it and arouses its interest. Because this ‘drawing’ is an observation, and therefore a thinking” (Fasolo, 1962, p. 3).

Graphic analyses of the past, in which the ‘expression of light’ of a building was highlighted also through chiaroscuro, can now be carried out with rendering techniques that must, however, always refer to the correct use of the modes of the science of representation.

The graphic operations are not intended to replace the elaborations of criticism, made with the use of verbal lan-

guage, but to bring contributions to the understanding of forms analyzed with the same language -the drawing- that serves to communicate the forms of space. Graphic analysis does not replace verbal criticism, it supports it. Graphic analysis is extraordinarily useful in interpreting projects that have never been carried out and for which, obviously, it is not possible to directly verify their formal and spatial values. The three-dimensional model built in digital drawing is not only a virtual image of the building, it is the only possible image and the only existential reality.

This work seeks to verify whether graphic analysis, today, can still be one of the aspects of the form of criticism and add something new to the written word.

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