

Within the Folds of the Detail

Reflections on the form in the work of Francesco Borromini

GIOVANNA SPADAFORA¹

Abstract: Starting from reflections on the theme of the fold in the Baroque, in the sense given by Gilles Deleuze, as a starting point we go on to trace, within Francesco Borromini's work, a figurative continuity between the small and the large, between the detail and the whole work of which it is but a part. Numerous of his original drawings show how the definition of detail takes on a central role in his work, and it may be possible to read in the folds that shape the architectural surfaces of the interior spaces, or of the external façades, the same linguistic values that articulate the individual moldings. In Borromini it is evident that the drawing is an instrument of the formation of his language, as it is in his study of antiquity, and has a heuristic function within the design research. The text focuses on an ascalar (here the term ascalar has been coined to signify invariant on any scale) reading of some drawings, in which one can interpret the folds that shape the moldings, as the equivalent articulations of the architectural walls: whether spaces or fragments of imaginary spaces. The perception entrusts to the moving body, and to a new canon of perception, the comprehension of space, but in the detail one must entrust the sense of touch, to follow and perceive, in its entirety, the fold.

Keywords: Borromini, Deleuze, folding, Merleau-Ponty, Cesare Brandi.

In an apt definition, Gianni Contessi² wrote that “the drawing is the idea, the writing of the mind”, thus highlighting the tight connection between thought and graphic sign. The relationship between mind and writing, on the one hand refers to the calligraphic origin of the drawing³, on the other emphasizes the personal, private, nature of the operation, as described by Cennino Cennini in his *Libro dell'architettura* (ca. 1390), in which he writes that the practice of the drawing “ti farà esperto, pratico e capace di molto disegno entro la testa tua” (“will make you an expert, practical and capable of much design in your own head”). In other words,

1. Giovanna Spadafora, Associate Professor of Architectural Drawing, Department of Architecture, Roma Tre University; email: giovanna.spadafora@uniroma3.it.

2. CONTESSI 2000, p. 9.

3. Manlio Brusatin writes that “the tirocinio scriptorio” was considered basic towards acquiring the qualities essential for drawing, namely ease and accuracy (BRUSATIN 1993, p. 61).

we see in the exercise of drawing the function of creating a virtuous circle, in which the progressive acquisition of drawing skills allows the construction of one's own figurative repertoire and generates new ideas. Two aspects of the same workings emerge: the practice of drawing as an individual instrument of knowledge – that is, referring to the drawing of what exists and the antiquities – and the drawing in which one recognizes a maieutical function, a dialogue with oneself, in which ideas are made clearer, refined in an addition and subtraction process. When the process is mature the thought form emerges and takes shape. But in the drawing one also usually recognizes a heuristic function, when in the continuous overlapping of signs, in their adjacencies and variations, is the form to be *found*. This drawing and redrawing architectural elements or figures with slight variations, almost lost in thought, may be read, in agreement with Brusatin⁴, as an “expression of a graphical unconscious” that evokes images and visual impressions accumulated over time.

Borromini builds his own language by studying the ancient monuments, redrawing, rarely from life but most frequently from the treaties that enriched his library⁵, details, formal and tectonic solutions. He conducts his personal research in the folds of the architectural order, identifies exceptions and makes them his own, transforming and declining the elements of the past according to his own poetics. In his turning to antiquity to search for a new architectural vocabulary, Borromini joins the ranks of those who, before him, had reinterpreted the classical orders. In some ancient examples that could not be reconciled with the systematization that treatises, beginning with Vitruvius, had established as precepts, Borromini gathers ideas and suggestions that he repropose in new guise.⁶

In the note *Alli Benigni lettori (To the Benign Readers)*, which begins the *Opus architectonicum*, Borromini begs, whomever will read, to remember that «quando talvolta gli paia che io m'allontani dai comuni disegni di quello che diceva Michelangelo, prencipe degli architetti, che

4. BRUSATIN 1993, p.64.

5. Paolo Portoghesi (PORTOGHESI 2014) identifies, among the 914 books listed in the inventory relating to property owned by Borromini at his death, some certain titles and others probable. Among the certain, numerous treatises on architecture and the volume *Antichità di Roma* (Antiquities of Rome) by Pirro Ligorio.

6. The bibliography is extensive. At the end of the text I have included some title of texts which analyze the question of the relationship between Borromini and the Antique, as well as the influence of Michelangelo on the formation of his language. The texts analyze his propensity to seek new and unusual forms starting from a rereading of the formal solutions used in ancient times to provide a new interpretation. This continuous search for the new is also made explicit by Borromini, whose statements on the subject are often cited in various studies.

chi segue altri non gli va mai innanzi. Ed io certo non mi sarei posto a questa professione col fine d'esser solo un copista, benché sappia che nell'inventare cose nuove non si può ricevere il frutto della fatica se non tardi; siccome non lo ricevette l'istesso Michelangelo⁷) («sometimes when they see that I have departed from common designs, what Michelangelo, prince of architects, said that those who follow others will never go forward. And I certainly I would not have undertaken this profession with the aim of being simply a copyist, although I know that in inventing new things you do not receive the fruits of hard labor if not only late; as Michelangelo himself did not receive them»). In his drawings of antiquities and the numerous sketches of the project, both building floor plans and individual architectural elements, insisting on the definition of the most minute details (Fig.1), one clearly reads the combined maieutic and heuristics function of drawing.⁸

The graphite lines, with which Borromini draws in succession moldings that give form to bases and entablature, as a matter of fact highlights, more than the objects, the thinking that subtends them⁹, in a graphic planning process that defines a form on the plane by its outline. And in tracing the the profiles of the moldings, Borromini dwells on some points in order to highlight the change of direction, applying greater pressure; he exasperates and emphasizes the corners as a carver would but with paper and graphite, even so revealing his training as an artisan. The contour line does not exist in the real world, it is the ideal limit, according to Merleau-Ponty, “towards which the planes of the objects flee in depth¹⁰”: it is an abstraction, but in reality it can be the generating element of a form, by extrusion or by rotation. Thus, in the detail drawings, the profile marks on paper the limit that models space: in this sense we can interpret the dashed crosshatches that most often shows the void and not an architectonic section¹¹ (Fig. 2). The drawing is a plastic instrument of the project, equal in stature to the wax material

7. DE BENEDICTIS 1993, p.30.

8. Numerous studies have dealt with the theme of the drawing by Borromini, some of which have been reported in the bibliography.

9. Giuseppe Di Napoli writes that «The line does not have a physical entity (as a thing), it is not seen directly in things or between things; you must first think it rather than see it [...]: the line resembles thought and not things. [...] So much so: the line that draws the world does not belong to this world; it belongs to another world, the world of ideas, concepts and abstraction». DI NAPOLI 2004, p.387 ff.

10. MERLEAU-PONTY 2003, p.159, note 41.

11. We refer to some survey drawings, especially those preserved in the Albertina in Vienna and cataloged AzRom920, AzRom761 and AzAntike155, in which the hatching intends to highlight the contour characteristics and the figure-ground relationship more than indicate the shadow.

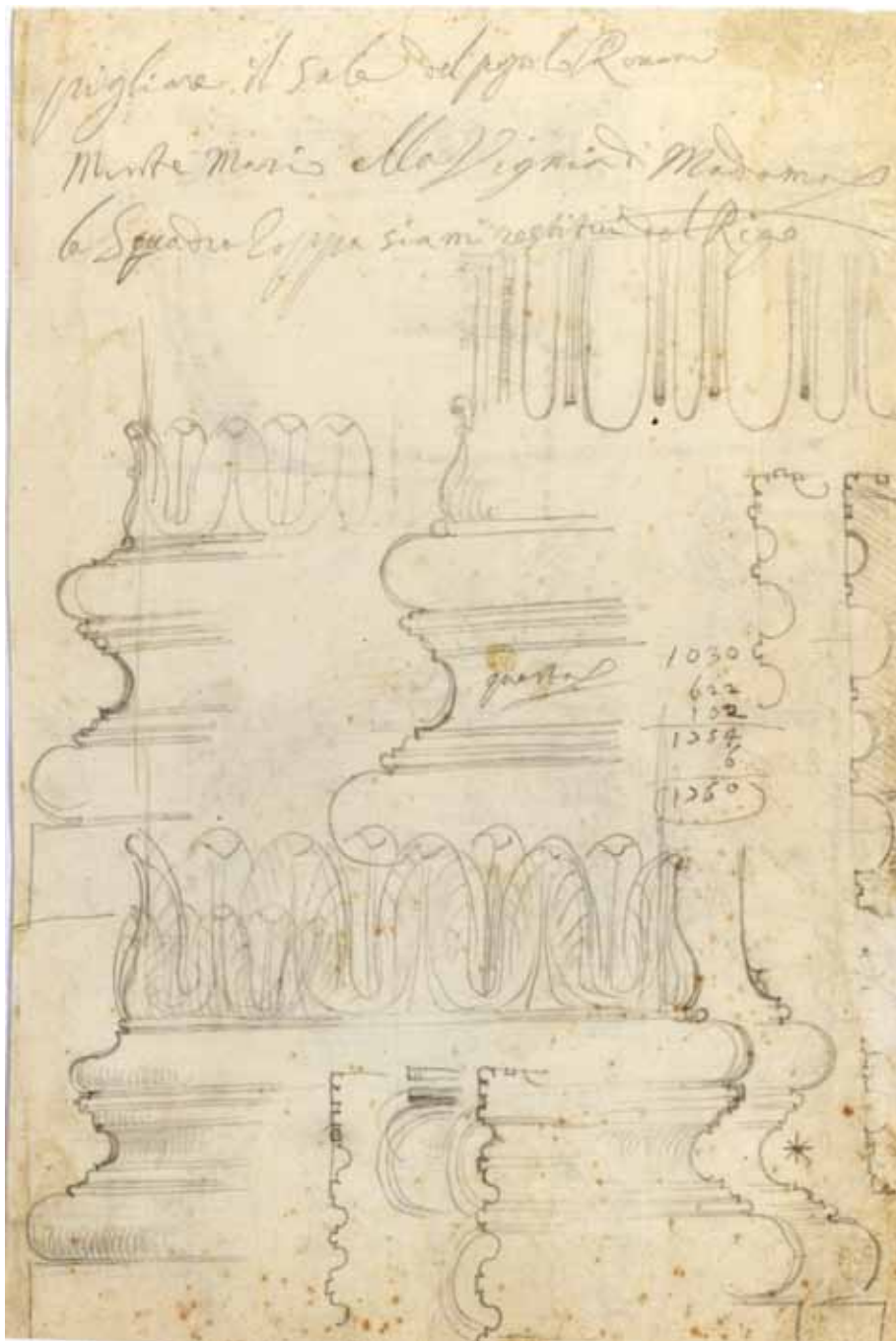


Fig.1. Studies of bases of columns and pilasters based on the Antique.
Vienna, Graphische Sammlung Albertina AZRom416r (© Albertina, Vienna)

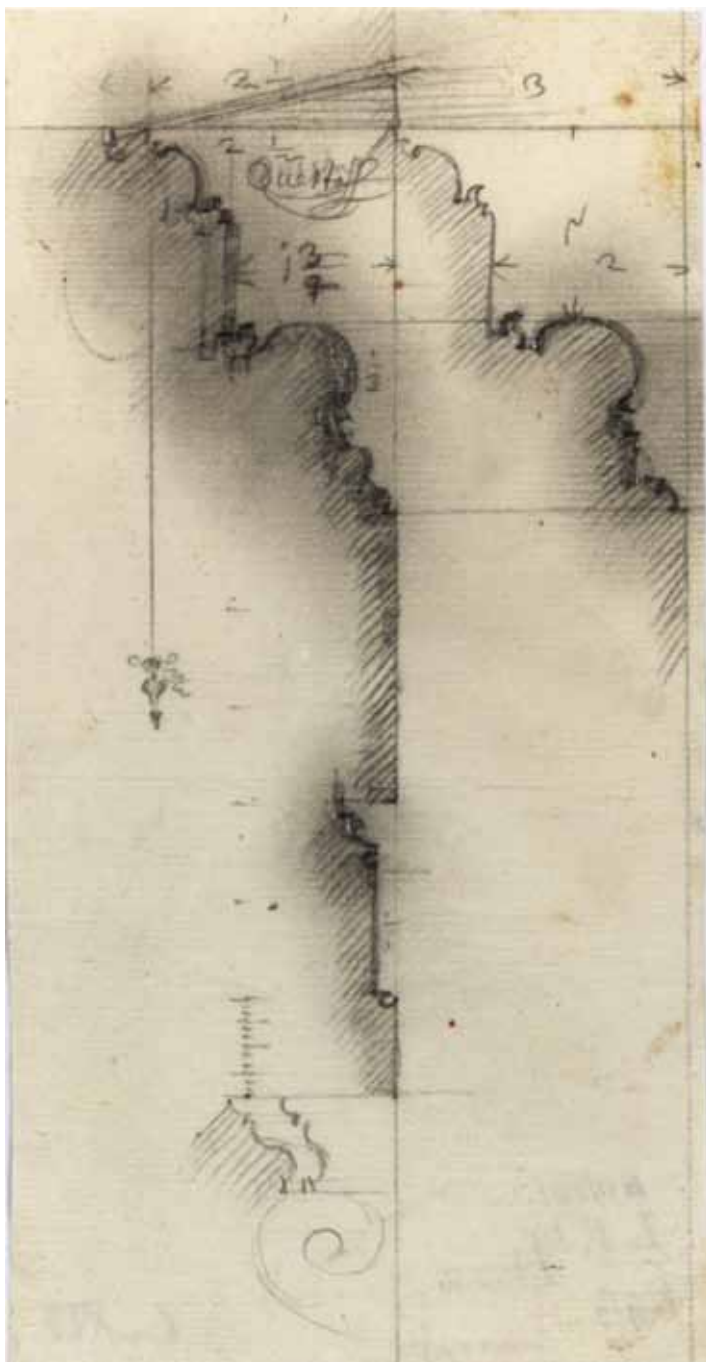


Fig.2. Palazzo Falconieri, entablature.
Vienna, Graphische Sammlung Albertina AZRom1061 (© Albertina, Vienna)

with which he created various models¹². And Borromini uses both to give shape to the thought forms, to design space as a sculpture; in one case following a process that assumes a linear, two-dimensional view and therefore “abstract”, which works on the section and therefore on the intaglio of a profile; and in the other case through the mediation of a physical model that is shaped and carved, and along which the eye no longer needs to imagine the shape, but simply follow the folds. These two aspects, the intaglio and the sculpture, overlap continuously in the design process and are finally revealed in the finished works. In the project sketches, in fact, rarely the depths of the entablature profiles are developed in the usual pseudo axonometries. Only in the survey drawings, the orthogonal projection expands into a three-dimensional view by means of some elements in the central perspective.

As part of an architectural project, the detail is a part complete in itself and can condense into a few signs, unlike the fragment, more general meanings, representing the whole¹³. But in the work of Borromini, you can grasp an interscalar figurative continuity, full and fully conscious, that binds the detail to the whole of which it is part. The folds that shape the exterior and interior architectural surfaces pursue the same linguistic values and that articulate individual moldings, so much so that the continuity between the small and large can almost take on the role of “guide” in the reading of his work.

His original drawings reveal the same care in defining the form of the detail and of the whole. Sometimes the line curves to draw the horizontal section of a façade (Fig. 3) over and over again, on the edge of the paper, searching for the most harmonious relationship between the columns and the background, and the profiles, separated from the image of the whole, become ascalar: do they refer to the elements of the façade or are they minute moldings of the cornice for a door? In this process, the relationships of scale that distinguish the part from the whole are annulled: the folds model, with the same formal intensity, space following ever more minute curves, which Borromini studied with the same mastery and dedication. Sometimes the drawing of the details graphically are placed above the drawing of a façade (Fig. 4),

12. The use of models in red wax, in addition to those of wood and plaster, is testified in the inventory of his property.

13. The detail was always recognized as having a foundational role in the construction of architectural language. This is confirmed by the numerous publications in which there is a vast repertoire of doors and windows designed in elevation and plan but, above all, profiles on a large scale useful for their realization.

a base is depicted with the same dimensions as the façade, the profiles are repeated with only minor variations, and everything manifests the urge to reveal how the figurative poetics of the whole invest even the most minute parts. To these latter, indeed, he dedicated unceasing work until the folds of the profile are placed such that he could finally say *Questo (It's this)*, to seal the end of the search. A feverish search, in which the proportions of classical language are deformed and lose the reassuring harmony of relationships between the parts that had hitherto characterized the sequence of the moldings, to follow the folds of a course that Deleuze describes as unlimited:

«For the Greek fold [...] presupposes a common measure between two terms that mix and therefore operates by means of circular movements which correspond to the repetition of the proportion. This is the reason that the Platonic forms enfold, but never reach the formal element of the fold. The latter can only appear with the infinite, in the incommensurable and the extravagant, when the variable curve has unseated the circle. So it goes with the Baroque fold, with its corresponding status as power of thought and political force¹⁴». And the fold by its nature is variable in its movement, it contracts by gouging deep shadows or smooths out to almost disappear¹⁵.

We can then associate the definition, that Cesare Brandi gives of the architectural space in Borromini, even to the details, when he writes that to «the Renaissance isomorphic space [he] replaces a space now condensed, now rarefied, now accelerated, now slowed down¹⁶». So do some of the door cornices appear, if we follow the folds that stretch, deform, crush the moldings of the classical tradition, in which some studies have detected anamorphic construction procedures. Could these moldings so exasperated, these grooves so elongated, be the result of a graphic process aimed at optical effects? Perhaps to ensure that all the moldings be perceived so that none escapes our observation, consumed by light?

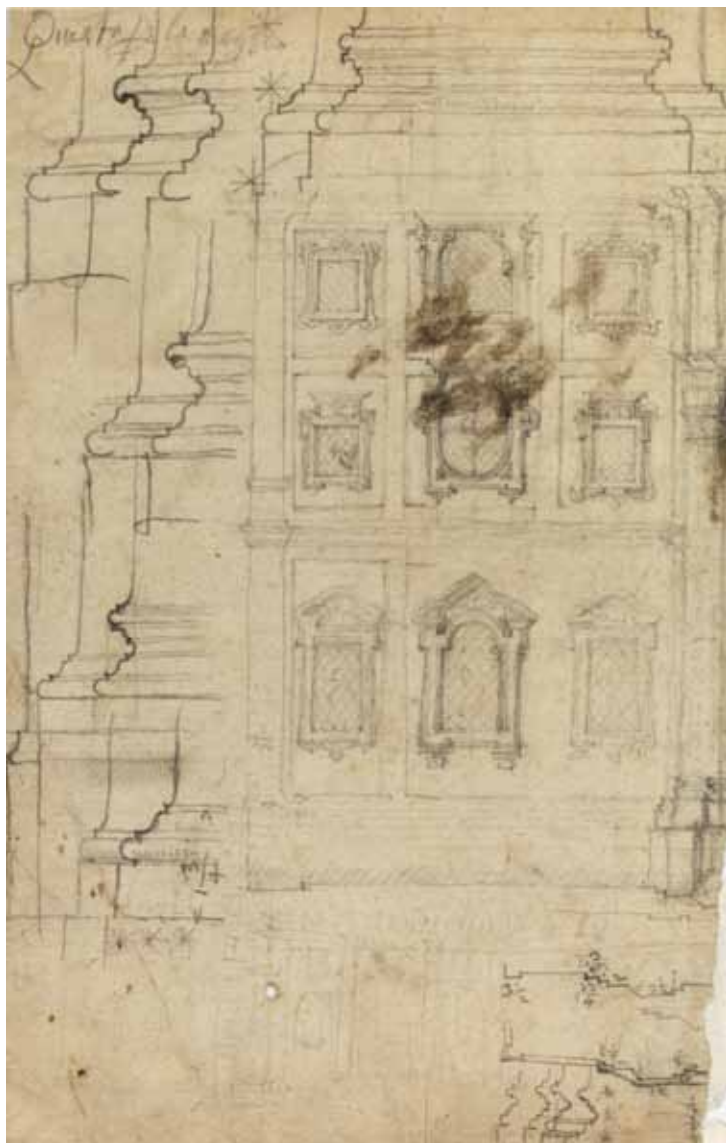
14. DELEUZE 1991, p. 246.

15. The contraction of the overhangs apparent in some Borromini's moldings were highlighted by Paolo Portoghesi (PORTOGHESI 1967, p.25) regarding the analysis of the linguistic affinity with Michelangelo. Moreover, such variations of overhangs, sometimes strongly pronounced, sometimes almost nonexistent, can also be seen in the portal dedicated to Orazio Falconieri, in Palazzo Falconieri on Via Giulia in Rome, noted by the writer in an essay entitled *Geometry and drama in Borromini's architectural details. The moldings in the Palazzo Falconieri* (SPADAFORA 2016).

16. BRANDI 1967, p. 193.



*Fig.3. San Carlo alle Quattro Fontane, the façade project.
Vienna, Graphische Sammlung Albertina AZRom187r (© Albertina, Vienna)*



*Fig.4. San Carlo alle Quattro Fontane, "facciatella" in Via Sistina.
Vienna, Graphische Sammlung Albertina AZRom292 (© Albertina, Vienna)*

The exaltation of plastic¹⁷ values of the whole prevails over individual elements, whose formal value is precisely due to the reciprocal relations of position and size. Leafing through his many original drawings, therefore, the importance of small scale project within the whole structure can be recognized, so much so that one can begin an ascalar reading in which it is possible to interpret the folds that shape the moldings as equivalent to the articulations of the walls in the architecture¹⁸. Spaces and fragments of possible spaces, imaginary; continuous dimensional references among shapes that extend into space, modeling it according to a new canon of vision that no longer depends on vanishing lines that continue indefinitely¹⁹.

Here then it is that the profile of a cornice recalls the profile of a façade, and the articulation of an interior refers to the successive moldings of a cornice; when in the drawing of those elements, traditionally composed of half a circumference curve go beyond the half circle, deeply digging into the material, it defines the space of a niche and, vice versa, in the enclosure of a church the articulation of niches and columns recall the design of door and window cornices.

With this key, which compares real and imaginary spaces, one can see references, for example, between the profile of one of the cornices that frame the doors of the main floor of Palazzo Falconieri²⁰ and one of the two short curves on the façade of the Chiesa di Santa Maria dei Sette Dolori [Church of St. Mary of the Seven Sorrows], arranged symmetrically with respect to the entrance leading into the vestibule.

It is in this spirit that I have drawn the horizontal profiles and vertical frames, the architraves, the bases of pilasters, façades and some of the plans, and have juxtaposed the large and the small, the

17. By plastic value I intend the final effect of the composition created, however, strictly by the use of ruler and compass. The curves and the fittings, in fact, are never separate from a geometric view, which may be more or less complex, but in fact can always be recognized and reconstructed.

18. Martin Raspe favors the hypothesis that Borromini has placed at the base of the dome of Sant'Andrea delle Fratte, the layouts of a capital. «It seems that he may see realized, in small measure, the fundamental ancient architectural principles», RASPE 2000, p. 83.

19. Cesare Brandi defines the spatiality of Borromini's architecture as "compressed and squeezing", and adds: «To suggest the idea of this compression and this envelopment, the terminal edges of a building are a major obstacle: the vanishing lines must stop, not continue indefinitely. And that's why he avoids at all cost to "*fare cantone*" (align the corner of a building with a street corner) with his buildings, Borromini delineates rather sharp and vivid edges, like blades, to his profiles, more like steel than stone or terracotta». BRANDI 1967, p. 186.

20. The cornice being referred to is the one that frames the gateway to the wing towards the Tiber. The study of cornices is treated in an essay, cited in footnote 15, which presents the first results of a recent study of Palazzo Falconieri by the writer, referred to for further details.

concave and the convex, the horizontal and the vertical, not to create non-existent categories, but to observe how, independently from the size, empty space is shaped by the folds which follow, turn back on themselves, expand and extend. I have not emphasized the section: the black silhouettes, in the picture (Fig. 5), are empty space and accentuate the abstract character of a biased representation, which describes the negative, interstitial, space. A transcription that is not intended to emphasize the objectivity of the individual elements but the “different aspects of the true²¹” and that, despite being ascalar, highlights the tactile character of Borromini’s detail. The size of some moldings seem to underline the close relationship that the detail establishes with the body that observes it. The body can not rely solely on the sense of sight to understand them fully, but needs to traverse the folds relying on the touch.

From the detail to the realization, the drawing confirms its heuristic role in Borromini’s work within his formal research, where it was a tool to plan and constantly verify the coherence of the solutions on different scales. The small and the large in the same sheet express the linguistic unity that drives the research of the design; the graphite lines that overlaid on each other reveal the steps of a continuous refinement, an idea that it is clarified and takes shape. In this research where detail seems to take on a key role in the configuration of the entire structure, the theme of the architectural order and its variations find surprising new meanings.

Bibliography

BLUNT 1983

Anthony Blunt, *Vita e opera di Borromini*, Laterza, Roma, 1983.

BÖSEL, FROMMEL 2000

Richard Bösel, Christoph L. Frommel (eds.), *Borromini e l’universo barocco*, (Vols. 1 and 2) Electa, Milano, 2000.

BRANDI 1967

Cesare Brandi, *Codice e struttura nel Borromini*, in Accademia Nazionale di San Luca (Ed.), *Studi sul Borromini* (Vol. 1, pp.175-195), De Luca, Roma, 1967.

21. The quote is from Luigi Vagnetti included in QUICI 2004, p.176.

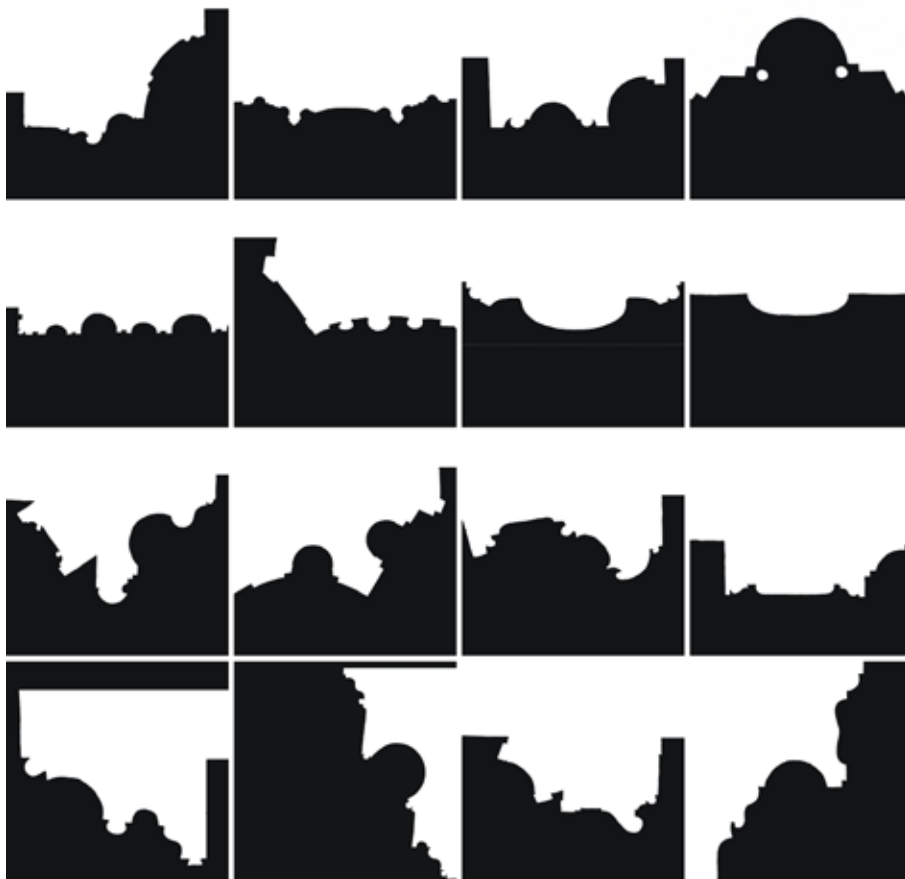


Fig.5. Legend relating to the images, for subsequent rows, starting from the first to the left. With regard to the drawings preserved in the Albertina, the captions added in the digital archive has been translated.

Door of the Church in the Collegio di Propaganda Fide. Moldings of door jambs (DE ROSSI 1702).

Façade of the Chiesa di Santa Maria dei Sette Dolori, entrance to the vestibule (AZRom641).

Other window on the second floor of the façade of the Collegio di Propaganda Fide (DE ROSSI 1702).

San Giovanni in Laterano, the plan of the entrance wall in the central nave (AZRom377r).

Studies of column bases profiles and pilasters based on the Antique (AZRom416r).

San Carlo alle Quattro Fontane, the façade project (AZRom187r).

Cornice at Palazzo Falconieri (survey drawing).

External profile of the side of the Chiesa di Santa Maria dei Sette Dolori.

Door of the Convent of Padri del Riscatto della Nazione Spagnola, Moldings of door jambs (DE ROSSI 1702).

Sant'Ivo alla Sapienza, indoor plan (AZRom499b).

Collegio di Propaganda Fide. Studies for the portal (AZRom908v).

Porta della Casa de PP Congregazione the Oratory of San Filippo Neri. Moldings of door jambs (DE ROSSI 1702).

Oratorio dei Filippini, profiles of the main portals (AZRom318).

Gubbio, Santa Maria del Prato, profile of the entablature (AZItalienunb.1409).

Window of the third floor of the façade of Palazzo Berberino of the Sig.re Principe di Palestrina. Window moldings (DE ROSSI 1702).

Sant'Agnese in Piazza Navona, archway profile of the niche (AZRom72r).

BRUSATIN 1993

Manlio Brusatin, *Storia delle linee*, Einaudi, Torino, 1993.

CONTESSI 2000

Gianni Contessi, *Scritture diseguate*, Dedalo, Bari, 2000.

DE BENEDICTIS 1993

Maurizio De Benedictis (Ed.), *Francesco Borromini. Opus Architectonicum*, De Rubeis, Roma, 1993.

DELEUZE 1991

Gilles Deleuze, *The Fold*, in *Yale French Studies*, No. 80, 1991, pp.227-247, Translated by Jonathan Strauss.

DE ROSSI 1702

Domenico De Rossi, *Studio d'Architettura Civile*, Parte Prima, Roma, 1702.

DI NAPOLI 2004

Giuseppe Di Napoli, *Disegnare e conoscere*, Einaudi, Torino, 2004.

FROMMEL, SLADEK 2000

Christoph L. Frommel, Elisabeth Sladek (eds.), *Francesco Borromini*, Proceedings of International Conference, Electa, Milano, 2000.

HEMPEL 1924

Heberhard Hempel, *Francesco Borromini*, Schroll, Wien, 1924.

KAHN-ROSSI, FRANCIOLLI 1999

Manuela Kahn-Rossi, Marco Franciulli (eds.), *Il giovane Borromini. Dagli esordi a San Carlo alle Quattro Fontane*, Skira, Milano, 1999.

MERLEAU-PONTY 2003

Maurice Merleau-Ponty, *È possibile oggi la filosofia? Lezioni al College de France 1958-1959 e 1960-1961*, Cortina, Milano, 2003.

PORTOGHESI 1967

Paolo Portoghesi, *Borromini. Architettura come linguaggio*, Electa, Milano, 1967.

PORTOGHESI 1982

Paolo Portoghesi, *Borromini nella cultura europea*, Laterza, Roma, 1982.

PORTOGHESI 2014

Paolo Portoghesi, *La biblioteca di Francesco Borromini*, in V. Cazzato, S. Roberto, M. Bevilacqua (eds.), *La festa delle arti*, Gangemi, Roma, 2014, pp. 358-365.

RASPE 2000

Martin Raspe, *Borromini e la cultura antiquaria*, in BÖSEL, FROMMEL 2000, Vol. 1, pp. 83-93.

QUICI 2004

Fabio Quici, *Tracciati di invenzione, Euristica e disegno di architettura*, Utet, Torino, 2004.

SPADAFORA 2016

Giovanna Spadafora, *Geometry and drama in Borromini's architectural details. The Moldings in Palazzo Falconieri*, in Giuseppe Amoroso (Ed.), *Visual Computing and Emerging Geometrical Design Tools*, IGI Global, 2016, Hershey PA, vol. II, pp.666-693.