Athens Journal of Architecture

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The current issue is the fourth of the eighth volume of the *Athens Journal of Architecture* (AJA), **published by the Architecture Unit of ATINER**

Gregory T. Papanikos
President
ATINER

Athens Institute for Education and Research
A World Association of Academics and Researchers

13th Annual International Conference on Architecture
3-6 July 2023, Athens, Greece

The [Architecture Unit](#) of ATINER, will hold its **13th Annual International Conference on Architecture, 3-6 July 2023, Athens, Greece** sponsored by the [Athens Journal of Architecture](#). The aim of the conference is to bring together academics and researchers from all areas of Architecture. You may participate as stream organizer, presenter of one paper, chair a session or observer. Please submit a proposal using the form available (https://www.atiner.gr/2023/FORM-ARC.doc).

Academic Member Responsible for the Conference

- **Dr. Nicholas N. Patricios**, Vice President of Strategic Planning & Analysis, ATINER and Professor & Dean Emeritus, School of Architecture, University of Miami, USA.
- **Dr. Clara Germana Gonçalves**, Head, Architecture Unit, ATINER & Researcher, CITAD (Centro de Investigação em Território, Arquitectura e Design), Lusíada University and Associate Professor, ISMAT (Instituto Superior Manuel Teixeira Gomes), Portugal.
- **Dr. Fatih Rifki, Academic Member, ATINER & Professor, Montana State University, USA**.
- **Dr Anna Hooper**, Academic Member, ATINER, Coordinator, Lecturer, Lead Tutor, Ormond College and Melbourne School of Design, The University of Melbourne, Australia.
- **Dr. Maria João Dos Reis Moreira Soares**, Academic Member, ATINER & Associate Professor, Lusiada University – Lisbon, and Research Fellow, CITAD – Research Centre on Territory, Architecture & Design, Portugal.

Important Dates

- Abstract Submission: **5 December 2022**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **5 June 2023**

Social and Educational Program

The Social Program Emphasizes the Educational Aspect of the Academic Meetings of Atiner.
- Greek Night Entertainment (This is the official dinner of the conference)
- Athens Sightseeing: Old and New-An Educational Urban Walk
- Social Dinner
- Mycenae Visit
- Exploration of the Aegean Islands
- Delphi Visit
- Ancient Corinth and Cape Sounion

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Athens Institute for Education and Research
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**13th Annual International Conference on Urban Studies & Planning,
29-31 May & 1 June 2023, Athens, Greece**

The Architecture Unit in collaboration with the Social Sciences Division of the ATINER will organize its **13th Annual International Conference on Urban Studies & Planning, 29-31 May & 1 June 2023, Athens, Greece** sponsored by the Athens Journal of Architecture. The aim of the conference is to bring together academics and researchers from all areas of social sciences such as urban sociology, urban geography, urban design, urban planning, architecture, etc. You may participate as stream leader, presenter of one paper, chair of a session or observer. Please submit a proposal using the form available (https://www.atiner.gr/2023/FORM-PLA.doc).

Important Dates
- Abstract Submission: **31 October 2022**
- Acceptance of Abstract: 4 Weeks after Submission
- Submission of Paper: **1 May 2023**

Academic Members Responsible for the Conference

- **Dr. Nicholas N. Patricios,** Vice President of Strategic Planning & Analysis, ATINER and Professor & Dean Emeritus, School of Architecture, University of Miami, USA.
- **Dr. Virginia Sisiopiku**, Head, Transportation Engineering Unit, ATINER, & Associate Professor, The University of Alabama at Birmingham, USA.
- **Dr. Jesus J. Lara**, Academic Member, ATINER & Associate Professor, The Ohio State University, USA.
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Gilles Deleuze and Bernini's *Bel Composto*:
From Theatricality to a *Living-montage*

By Maria João Moreira Soares[*] & Clara Germana Gonçalves[±]

In The Fold *(1988), Gilles Deleuze argues that if the Baroque period establishes the concept of total art or the unity of the arts, then it does so in extension. Each art form extends to another art form. To this "extensive unity" – this "universal theatre" – he adds the Elements; we can say the epigene. The philosopher writes: "[t]his extensive unity of the arts forms a universal theatre that includes air and earth, and even fire and water." According to Giovanni Careri, writing in* Bernini: Flights of Love, the Art of Devotion *(1995), the interiors of Gian Lorenzo Bernini's are the most complete realisation of the* bel composto. *In these chapels, the interiors function as complete autonomous organisms in and of themselves. A theatrical dimension is associated with this autonomous operation. Careri adds another insight. He argues that the proliferations of composition components inherent in Bernini's chapels result in a cinematographic montage. Proceeding from Bernini's* bel composto *and Deleuze's thought, this paper proposes a new reading of the Baroque that is relevant to the present-day for architecture, taking the idea of theatrical scene as an organism supported by architecture and advancing to an idea of montage (beyond Careri's) in which the spectator, the one who observes the small world, and the small world itself turning into an autonomous organism, makes the assemblage of the whole. A living-montage – an idea of architecture that is constantly interpreted, reinterpreted and recreated by the beholder.*

Introduction

At the climax of his fame Bernini prophesied that after he had died his reputation would decline. He was right. During the last hundred and fifty years his star has lost much of its brilliance. What Winckelmann, the classicist doctrinaire, had begun, Ruskin, the medieval revivalist, completed. To Ruskin it seemed 'impossible for false taste and base feeling to sink lower'. As if this slaughter of a great master's fame upon the altar of dogmatic ideas was not enough, those who in more recent times fanatically advocated truth to material and functional art regarded Bernini and all he stood for as the Antichrist personified. . . . Basic tendencies of modern sculpture, though not, of course, its formal language, were anticipated by the great Baroque artist. His vision of space, his attempt to draw the beholder physically and emotionally into the 'aura' of his figures, closely corresponds to modern conceptions. It seems that such similarity of approach engenders a willingness to see his art with fresh eyes.[1]

This analysis by Rudolf Wittkower, though it was first published in 1955, still seems to remain relevant today. There is still a certain degree of misunderstanding

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1. Rudolf Wittkower, *Gian Lorenzo Bernini: The Sculptor of the Roman Baroque* (London: Phaidon, 1966), 1. It is important to point out that the first edition of this book is from 1955.

in relation to the Baroque period. It would appear, partly due to the language used at the time and partly to the hegemony of the image to the detriment of the lasting and reiterated experience of the works in question.

The Baroque is one area to which Gilles Deleuze (1925-1995) has devoted part of his published work. To the Baroque and its relevance for the present. Another focus of his thought has been film and the cinema. And it is in relation to his thoughts on film and cinema that one can mention a further aspect of interest: how the way he conceives his works helps one to think about architecture, for, as is the opinion of Raymond Bellour and Melissa McMuhan on the Deleuze's *Cinema* – both volumes, *Cinéma 1. L'image-mouvement* [*Cinema 1: The Movement Image*] of 1983 and *Cinéma 2. L'image-temps* [*Cinema 2: The Time Image*] of 1985:

> It seems even that since *Anti-Oedipus* this [*Cinema*] is the most conceptually architectonic of Deleuze's (and Deleuze-Guattari's [1930-1992]) books, the one whose concepts remain the most constantly entwined in the architecture and progression of the book.[2]

Furthermore, as a philosopher, Deleuze builds a story, constructs a flow of content. As Bellour and McMuhan point out:

> It's the very question of the novelistic, of becoming-artist, of philosophy as art, of concepts or concepts as fiction. It can be recognized in particular in the fact that Deleuze is a writer-philosopher who almost invents a conceptual language per book.[3]

Without wanting to be a play on words, one can say that his architectural thinking helps one reflect on a range of architectural issues. This because, as Deleuze himself argues: "The encounter between two disciplines doesn't take place when one begins to reflect on the other, but when one discipline realizes that it has to resolve, for itself and by its own means, a problem similar to one confronted by the other."[4]

To be more precise, some of Deleuze's ideas serve as the basis for the thought process presented here. "We must understand cinema not as language, but as a signaletic material."[5] This helps us to understand an indication as an action that is open. "All work is inserted in a system or relays."[6] Opening up a path towards the open action of being able to interpret, reinterpret and recreate at each different moment on the basis of the already experienced or the surprise provided by the artistic work in question. That idea is particularly visible in cinema: "The

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2. Raymond Bellour, and Melissa McMuhan, "Thinking, Recounting: The Cinema of Gilles Deleuze," *Discourse* 20, no. 3 (1998): 68.

3. Ibid, 70.

4. Gilles Deleuze, "The Brain is the Screen: An Interview with Gilles Deleuze," in *The Brain is the Screen: Deleuze and the Philosophy of Cinema* (ed.) Gregory Flaxman (Minneapolis: University of Minnesota Press, 2000), 367.

5. Ibid, 368.

6. Ibid, 367.

cinema doesn't reproduce bodies, it produces them with grains that are the grains of time."[7]

So this paper looks precisely at the thoughts of Gilles Deleuze, including his reflection on the Baroque (and its relevance for today) and Cinema, from the point of view of, and in parallel with, the work of Bernini.

It is our belief that the arguments we propose also throw light on contemporaneity. Both in terms of understanding it in general and of the creative acts that inform it.

This reading proceeds from a conception of the Berninian *bel composto*, with the Bernini chapels – such as the Cornaro Chapel at Santa Maria della Vittoria (1647-1652), the Fonseca Chapel at San Lorenzo in Lucina (1664-1675) and the Altieri Chapel at San Francesco a Ripa (1665-1675) and the high altar at Sant' Andrea al Quirinale (1658-1670) (Figure 1) – as the object of focus. In the first section, the concepts of expansion of time and the epigene, as proposed by Dillon Johnston, concepts that are fundamental to understanding the Baroque as well as Deleuze's thought, are analysed. The second section reflects on Deleuze's concepts of the Baroque's extension and integration of the arts and the idea of the *bel composto*. The subsequent sections proceed from a less abstract reading – an understanding of the Baroque as an eminently scenic operation that is founded on a non-superficiality; this involves Giovanni Careri's proposal to go beyond the theatrical reading of Bernini's *bel composto* – placing it in an operation that refers, in terms of analogy, to the theoretical assumptions associated with cinematographic montage developed by Sergei Eisenstein (1989-1948); we propose a new interpretation that presents itself as a clearly abstract reading in which the dynamic aspect associated with the concepts of *the whole* and *the open* paves the way for an operation of indiscernibility between the body of the beholder – the editor – that completes a possible "notion of montage" in the constitution of the design fact, and the built fact – the Berninian *bel composto*.

Figure 1. *Cornaro Chapel at Santa Maria della Vittoria, Fonseca Chapel at San Lorenzo in Lucina, Altieri Chapel at San Francesco a Ripa and High Altar at Sant' Andrea al Quirinale*
Source: Maria João Moreira Soares, 2016.

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7. Ibid, 372.

A Geological Operation: The Expansion of Time and the Epigene

> At the clean edge of the sea,
> Floating like instantaneous foam or an island
> Sealed off like womb,
> Here Where I sit so still
> I can see the milk in my glass is tidal
> Inclining towards you across the dangerous sky.
> – Eiléan Ní Chuilleanáin, "Lost Star," *The Second Voyage*

In "'Hundred-Pocketed Time': Ní Chuilleanáin's Baroque Spaces" (2007), Dillon Johnston builds a relationship between Eiléan Ní Chuilleanáin's (b. 1942) poetry and the Baroque and, at one point, the thought of Gottfried Wilhelm Leibniz (1646-1716) – who was, according to Gilles Deleuze, the "philosopher of the Baroque":

> Both Leibniz and Ní Chuilleanáin want to represent the expanse of time – past, present, and future – as not merely a vast plane or a flat, linear passage toward a goal but as a pliable surface capable of enfolding events so they remain present but invisible, hidden from the viewer's perspective.[8]

Continuing his reasoning, Johnston argues that Ní Chuilleanáin, like Gilles Deleuze, "can represent these unfoldings and enfoldings of time in terms of drapes, elaborate costumes, curtains, hair, weeds in water, thread, or a spider's web, but she most frequently resorts to epigene images, growing below the surface of earth or sea."[9]

And if Ní Chuilleanáin seeks to obtain "images" for her poetry in the epigene, then Deleuze also does the same when elaborating on the Baroque and Gian Lorenzo Bernini's (1598-1680) oeuvre.

For Deleuze[10], the body is essentially elastic, exhibiting varying degrees of rigidity and fluidity. That elasticity is the result of active compression forces on the material that makes up the body. Bernini's sculptural work would seem to precisely underline said logic, transferring also to the sculptural body degrees of rigidity and fluidity, where the liberation of folds – which go beyond the finite body to reproduce themselves in infinity – depends on a "go-between" that is achieved between fabrics and bodies. This "go-between" places us before the Elements. To quote Deleuze: "Water and its rivers, air and its clouds, earth and its caverns, and light and its fires are themselves infinite folds."[11]

Deleuze reinforces this whole epigenic, "geological", operation by arguing that:

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8. Dillon Johnston, "'Hundred-Pocketed Time': Ní Chuilleanáin's Baroque Spaces," *Irish University Review* 37, no. 1 (2007): 61.

9. Ibid, 61.

10. Gilles Deleuze, *The Fold* (London: Continuum, 2006), 6.

11. Ibid, 140.

is it not fire that can alone account for the extraordinary folds of the tunic of Bernini's Saint Theresa? Another order of the fold surges over the Blessed Ludovica Albertoni, this time turning back to a deeply furrowed earth. Finally, water itself its creased, and closely woven, skintight fabric will still be a watery fold that reveals the body far better than nudity: the famous "wet folds" flow over Jean Goujon's bas-reliefs to affect the entire volume, to create the envelope and the inner mold and the spiderweb of the whole body, including the face, as Spinazzi's and Corradini's late masterpieces, *Faith* and *Modesty*.[12]

From the folds of St Teresa's garments that rise up (Figure 2), with fire, or the earthly folds that twist and turn until they are released, as in the "sighs" of Ludovica Albertoni, to the watery folds that slide and adapt themselves to an interior mould that takes place in the body, we are always in a state of flux that is organised in layers, successively, heading towards infinity, and which is formed in a "go-between", in an opening.

Figure 2. *Detail of St Teresa's Garments*
Source: Maria João Moreira Soares, 2016.

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12. Ibid.

The Baroque and the Extension and Integration of the Arts:
The *Bel Composto*

In *Le Pli* (*The Fold*), published in 1988, the formula that Deleuze advances in his definition of the Baroque, "the fold that goes out to infinity"[13], is articulated with an understanding, both conceptual and perceptual, of the geometric and therefore infinite space[14], as opposed to an earlier understanding of space as a discrete and finite one.

In the Baroque period, geometry replaced arithmetic – where commensurability is implied and paramount – as the dominant basis for architectural design. Geometry was justified in itself and no longer through arithmetic. And geometry was no longer the geometry of pure forms; it became the geometry of complex figures, of anamorphic designs, of projective geometry[15]. A number of regular mathematical curved forms – such as the ellipse, the parabola and the cycloid, or the algebraic functions associated with such curves – began to appear[16]. This geometric domain was linked, in a relationship of interdependence, to an understanding of space – both conceptual and perceptually – as infinite and therefore, continuous.

As the image of this new universe, architecture began to incorporate the same features: the dominance of geometry, the infinite, the continuity, the homogeneity, the non-hierarchical organisation, the lack of a centre and the presence of irregularities. Architecture that was "open", as opposed to the image provided by the old "closed world".[17] A new universe, an "infinite universe". One that is open. This understanding of space, concretised in architecture in its new geometrization – continuous and infinite – was also to be one of the factors contributing to fluidity in the Baroque artistic form, where the analogy with the epigene takes place.

As far as the arts in the Baroque period are concerned, this set of new features must be seen from two interdependent perspectives. One is the extension of each of the arts beyond its own domain: a flowing from art to art, as if each one were a testimony that passes from hand to hand. Always in extension. (Figure 3) Gilles Deleuze argues:

> If the Baroque establishes a total art or a unity of the arts, it does so first of all in extension, each art tending to be prolonged and even to be prolonged into the next art, which exceeds the one before. We have remarked that the Baroque often confines painting to retables, but it does so because the painting exceeds its frame and is realized in polychrome marble sculpture; and sculpture goes beyond itself by being architecture; and in turn, architecture discovers a frame in the façade, but the

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13. Ibid, 138.

14. A reference to the seminal work of Alexandre Koyré, *From the Closed World to the Infinite Universe*, first published in 1957. Alexandre Koyré, *From the Closed World to the Infinite Universe* (Wilder Publications, 2007).

15. Roberto Masiero, *La estética de la arquitectura* (Madrid: Machado Libros, 2003), 124.

16. A. Rupert Hall, *The Revolution in Science, 1500-1750* (Abingdon: Routledge, 2014), 287.

17. The "destruction of the cosmos" and the "infinitisation of the universe" (as a result of its "geometrisation") with the advent of the Scientific Revolution. Koyré, *From the Closed World to the Infinite Universe*, passim.

frame itself becomes detached from the inside and establishes relations with the surroundings so as to realize architecture in city planning. From one end of the chain to the other, the painter has become all urban designer. We witness the prodigious development of a continuity in the arts, in breadth or in extension: an interlocking of frames of which each is exceeded by a matter that moves through it.[18] [19]

Figure 3. *Detail of Fonseca Chapel*
Source: Maria João Moreira Soares, 2016.

The other perspective is the integration of the arts: the arts were no longer organised hierarchically, as in the Middle Ages; nor were they displayed side by side, as in the Renaissance; instead, they merged and mixed, even in terms of their own identification, to the point of exhaustion. The *bel composto* was to be one expression of this merger/union.

The origins of the underlying idea for the *bel composto* have been much debated. While the idea is generally attributed to Bernini[20], it may also have

18. Deleuze, *The Fold*, 141.

19. Deleuze argues that when, in the Baroque, painting goes beyond two-dimensionality, above all through the draperies that extend in a progression of folds, it is, above all, Bernini who ensures that continuity, through his sculpture: "When the folds of clothing spill out of painting, it is Bernini who endows them with sublime form in sculpture." Deleuze, *The Fold*, 140.

20. Apparently, this idea first emerged through Filippo Baldinucci (1625-1697) and Domenico Bernini (1657-1723) (Bernini's son), who were Bernini's biographers: "[I]t was 'common knowledge that he [Bernini] was the first who undertook to unite architecture, sculpture and painting in such a way that they together make a beautiful whole'." Baldinucci quoted in Wittkower, *Gian Lorenzo Bernini: The Sculptor of the Roman Baroque*, 1966, 33. Original quotation: "È concetto molto universale ch'egli sia stato il primo, che abbia tentato di unire l'architettura colla scultura e pittura, in tal modo, che di tutte si facesse un bel composto." Baldinucci cited in Stefano Pierguidi, "Gian Lorenzo Bernini tra teoria e prassi artistica: la 'speaking likeness', il 'bel composto', e il 'paragone'," *Artibus et Historiae* 32, no. 63 (2011): 148.

originated with the, at the time, very influential Gian Petro Bellori (1613-1696)[21]. In essence, the *bel composto* is the result of the union of the arts during the Baroque. Paradoxically, the resulting autonomy reflects the increasing independence of the arts during the Renaissance. Once said autonomy was established, the artist was free to interconnect the arts, making them interdependent. The Baroque artist was now free to merge them and even mix them in terms of their own identification. This mixture/merging was not merely restricted to the use of materials – such as varicolored marbles, gilt bronze, stucco, tinted glass – but also, and more profoundly, to the artistic media themselves: "The dividing line between media and materials disappears and a grand total effect emerges."[22] It was this grand total effect that led fine artist, dramaturgs and composers to join forces "to make churches like theatres, where a concert of the arts performed a prelude to future heavenly bliss"[23].

In this discussion, the role of decoration in the Baroque and of course, given the aims of the *bel composto*, emerged. As Roberto Masiero[24] argues, in Baroque architecture, decoration was paramount. Not for reasons of superficiality or vanity, but because in decoration the whole was recognised. There was no difference between substance and appearance, useful and superfluous, structure and decoration, or the support and the supported. Continuity and unity were evident in the unclear, diffuse and intricate sequence of materials. It is not at all a question here of decoration as something that was an afterthought. As argued by Theodor W. Adorno[25], Baroque "ceases to decorate anything and is, on the contrary, nothing but decoration". It is "*decorazione assoluta.*"

This lack of difference between substance and appearance, which found expression in "*decorazione assoluta,*" emphasises why it is important to discuss the Baroque in the modern day.

Let us return to the idea of the *bel composto*. A *bel composto* that, according to Careri, reached its most complete formulation in the chapels of Bernini:

> the interior of a [Bernini's] baroque chapel is an autonomous organism, complete in itself: a dark world sealed below by the balustrade and lit from above by the light of a lantern. Covered by a luminous celestial dome, this dark, earthly place is populated by bodies made of paint, marble, stucco, and flesh.[26]

This autonomous operation – one that is enclosed upon itself, encapsulated like an organism – is not indifferent to the presence of the *body*. The bodies – the beholder's, those of the sculpture, the painting, and the architectural bodies – that

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21. Vítor M. G. V. Serrão, "A teoria de Gian Pietro Bellori e o conceito de bel composto," in *Metodologia da História da Arte* (Lisbon: Faculdade de Letras/ Universidade de Lisboa, 2017).

22. Mary Warner Marien, and William Fleming, *Arts and Ideas* (Belmont: Wadsworth, 2005), 373.

23. Ibid, 386.

24. Masiero, *La estética de la* arquitectura, 122.

25. Theodor W. Adorno, *Aesthetic Theory* (London and New York: Continuum, 1970), 294.

26. Giovanni Careri, *Bernini: Flights of Love, the Art of Devotion* (Chicago: The University of Chicago Press, 1995), 1.

people it, all of them interact.[27] Said interaction requires a spatial context, whereby the context, too, functions as an(other) body. Bodies that bend, look at each other, contemplate each other. All these actions – and re-actions – can lead to an understanding of a set of other spaces, now imagined. Another life, beyond that which is given to one, is sold to one through the composition of the chapel. What remains is the continuous "reverberation" – a constant crossing – of the operation that is formed within a dark world, one that is illuminated mysteriously, that is completed in itself.

Theatricality

This whole Baroque operation that places us in this constancy is also open to readings of its theatricality[28], in a more direct sense – this aspect in the Baroque is considered by numerous scholars. And Bernini's chapels are frequently proffered as examples of such a reading. As with the Cornaro Chapel at Santa Maria della Vittoria: "Cardinals and members of the Cornaro family behold the vision as if from stage boxes although they are actually kneeling at prayer desks."[29] But in relation to the Baroque, theatre is also a metaphor. Again, taking the idea of constancy associated with the Baroque operation, one can say that, in the Baroque space, said continuity emerges as a sequence of acts that are part of a *mise-en-scéne*. One can speak of a sequence of settings. As if, at each glance, a curtain were raised to reveal a different scene. Continuity is also there in the accidental sequence of space – in contrast to Renaissance spatiality in which the continuity that existed was discreet and marked by the clear definition (and frequent repetition) of the architectural forms and elements. These spatial accidents grab hold of the glance as acts. Take, for example, the decorative work of Bernini himself in St. Peter's Basilica: the funereal monuments to Popes Urban VIII (1627-1647) and Alexander VII (1671-1678), in addition to alluding to the cycle of life and death[30], reveal a universe of figures, as if the setting were a stage (there are angels, for example, who present the figures that are shown in the frames that they hold).

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27. As Wittkower states: "From the beginning of his career Bernini endeavoured to eliminate the barrier between the work of art and the beholder." Wittkower, *Gian Lorenzo Bernini: The Sculptor of the Roman Baroque*, 24.

28. One could say that the theatrical character of the Baroque was literally fully assumed in works such as, for example, Giovanni Battista Tiepolo's (1727-1804) *The Marriage of the Emperor Frederick Barbarossa to Beatrice of Burgundy* (Imperial Hall of the Residenz, Würzburg, 1751), which reveals a scene as the curtain is raised.

29. Marien and Fleming, *Arts and Ideas*, 373.

30. Judith Bernstock writes on the tomb of Alexander VII: "Clearly, the allusion is to the cycle of life and death; from a grave arises a fountain of life. Perhaps one can further visualize a fountain of life in the ocean of drapery that seems to flow above the door of an imagined burial chamber in St. Peter's. The celestial dome, the steepness of this pyramidal tomb (relative to Urban's), and the elongated Virtues all contribute to an overall impression of vertical ascension; the tomb indeed seems 'wholly dedicated to the next world', which Alexander has reached through death." Judith Bernstock, "Bernini's Tomb of Alexander VII," *Saggi e Memorie Di Storia Dell'arte* 16 (1988): 177.

Spiro Kostof states that:

> Bernini absorbs us into a palpable world of devotion, ravishes our senses, persuades us through visual testimony instead of rational argument or abstracted passion. Architecture, painting, sculpture – all the arts and every device of theatrical illusion work together to sweep us into a realm of unashamed emotionalism.[31]

Kostof goes on to argue that said emotionalism in the work of Bernini inherently involves a "sense of theatre."[32]

This theatrical sense can also be read as a lack of determination awaiting determination. Each glance, by each viewer, results in a frozen image/experience. The succession of such images/experiences leads to the idea of extension, as proposed by Gilles Deleuze, which sustains the Baroque operation beyond the limits of the artistic expression of each individual art. As Deleuze writes, returning to the question of the whole, where the epigene is underlying: "This extensive unity of the arts forms a universal theatre that includes air and earth, and even fire and water."[33] For the French philosopher, in this universal theatre, the sculptures play the role of the real characters and the city becomes their setting, wherein the spectators/residents themselves are painted figures or images. The Baroque operation becomes a "*Socius*" – the universal theatre – where the social spaces are now inhabited by "baroque dancers."[34] So this "sense of theatre" is now joined by this "universal theatre," thus underlining, in a way, the "unashamed emotionalism" Kostof attributed to the work of Bernini.

Beyond Theatricality

In *Envols d'amour: Le Bernini: montage des arts et devotion baroque* (1990) (*Bernini: Flights of Love, the Art of Devotion*), Giovanni Careri argues that, despite theatricality being inherent to the Baroque, comparing Bernini's chapels to theatre detracts from their complexity, meaning that the question of the whole is addressed to a model that is too generalist in nature:

> Bernini's chapels have been described in terms of theater because of the nature of their decoration and because of the emotional impact upon the viewer. Although these ensembles were conceived as "emotional machines," I believe that comparing them to the theater confuses rather than clarifies the issue. The theatrical paradigm is so far too general a model both historically and theoretically. In the case of this ensembles, the observer participates by applying a specific form of contemplation to the act of resembling the heterogeneous elements of the *composto* into a whole. The emotional and cognitive dynamics of contemplation are sustained and carried

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31. Spiro Kostof, *A History of Architecture: Setting and Rituals* (New York and Oxford: Oxford university Press, 1995), 509.

32. "[H]is [Bernini's] sense of theatre, his love of curves and dramatic lighting, his emotional, or rather sensation-prone, approach to the call of faith and the collaborative use of all the arts to convey its experience." Ibid, 512.

33. Deleuze, *The Fold*, 141.

34. Ibid, 141-142.

forward by the painting to sculptured to architecture.[35]

The notion of *a whole* took on particular value in Careri's reading of Bernini's *bel composto*, and more specifically in his chapels, such as the Cornaro Chapel, the Fonseca Chapel, the Altieri Chapel, and the high altar at Sant'Andrea al Quirinale. That notion – that of a whole – should be based on a dynamism which, in Careri's view, is intrinsic to the Berninian *bel composto*: regardless of a need to identify figures and motifs in his chapels, "we must [...] reconstruct the mechanisms that allow the shifts from one component to another to occur, thereby influencing the viewer's reception of the *composto*"[36]. This reconstruction of mechanisms requires that one overcomes the temptation of interpreting the meaning of the components and their elements separately. The whole, the *composto*, thus demands dynamism, demands interaction. That demand was to lead Careri to establish a rationale in which cinema, and more specifically the cinematographic montage, was to play a central role.

The notion of montage used by Careri was based on the theories developed by Sergei Eisenstein. In 1923, Eisenstein published "The Montage of Attractions"[37] and in 1924, "The Montage of Film Attractions". The former focuses on the relationship, as a process, between the audience and the stage. Eisenstein argues: "The instrument of this process consists of all the parts that constitute the apparatus of theatre . . . because, despite their differences, they all lead to one thing – which their presence legitimates – to their common quality of attraction."[38] The film-maker goes on to argue that the path for the liberation of the theatre from "illusory depictions" to "realistic artificialities" includes the idea of a whole that is reflected in an idea of montage with a particular purpose and idea of attraction that is consciously created to obtain a powerful effect[39]. In the latter text, Eisenstein shifts his attention to cinema and the cinematographic montage: "Thus cinema, like theatre, makes sense only as 'one form of pressure'. There is a difference in their methods but they have one basic device in common: the montage of attractions."[40] Eisenstein distinguishes theatrical "montage" from cinematographic montage through "chains of associations that are linked to a particular phenomenon in the mind of a particular audience"[41], and not through the phenomenon itself. As he himself writes:

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35. Careri, *Bernini: Flights of Love, the Art of Devotion*, 3.

36. Ibid, 6.

37. A text on a theatrical revue by Sergei Tretyakov (1892-1937), entitled *Wiseman* [*Mudrets*], based on the work of Alexander Nikolayevich Ostrovsky (1823-1886) *На всякого мудреца довольно простоты* [*Enough Simplicity for Every Wise Man*], which premiered in 1868 at the Alexandrinsky Theatre inSaint Petersburg. Tretyakov's revue premiered in April 1923 at Moscow's Proletkult Theatre.

38. Sergei Eisenstein, "The Montage of Attractions," in *S. M. Eisenstein Selected Works: Volume I; Writings, 1922-34*, ed. and trans. Richard Taylor (London: BFI; Bloomington and Indianapolis: Indiana University Press, 1988), 34.

39. Eisenstein, "The Montage of Attractions," 35.

40. Sergei Eisenstein, "The Montage of Film Attractions," in *S. M. Eisenstein Selected Works: Volume I; Writings, 1922-34*, ed. and trans. by Richard Taylor (London: BFI; Bloomington and Indianapolis: Indiana University Press, 1988), 40.

41. Eisenstein, "The Montage of Film Attractions," 41.

> Whereas in theatre an effect is achieved primarily through the psychological perception of an actually occurring fact (e.g., a murder), in cinema it is made up of the juxtaposition and accumulation, in the audience's psyche, of associations that the film's purpose requires, associations that are aroused by the separate elements of the stated (in particular terms in, 'montage fragments') fact, associations that produce, albeit tangentially, a similar (and often stronger) effect only when taken as a whole.[42]

Continuing the same progression – from the theatre to cinema – Eisenstein wrote "Montage and Architecture"[43] between 1937 and 1940. In this work there emerges the much-mentioned reference to the Acropolis in Athens as possible the world's oldest "cinematographic montage". Eisenstein writes: "It is hard to imagine a montage sequence for an architectural ensemble more subtly composed, shot by shot, than the one that our legs create by walking among the buildings of the Acropolis."[44] And, curiously enough, and very much against the tone at the time, as far as the Baroque was concerned, Eisenstein concentrated mostly on Bernini's baldacchino in Saint Peter's (1623-1634) in this work. His attention was concentrated on the iconography, and not so much on discussion questions that were central to the Baroque architectural space.[45] Eisenstein proffers a complete reading of the "eight representations in relief of the coat of arms of the Barberini pope, Urban VIII, adorning the two outer sides of the four plinths of those gigantic columns that support the canopy."[46] For the film-maker, the coats of arms are "eight shots, eight montage sequences of a whole montage scenario."[47]

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42. Ibid.

43. The text, which was meant to be part of the book, *Montage*, Eisenstein was preparing, was discovered in the late 20th century by Naum Klein, the curator of the Eisenstein Museum in Moscow. According to Yve-Alain Bois, the title "Montage and Architecture", may not have been chosen by Eisenstein. Sergei M. Eisenstein, Yve-Alain Bois, and Michael Glenny, "Montage and Architecture," *Assemblage*, no. 10 (1989): 111.

44. Ibid, 117. Eisenstein's reference to the Acropolis in Athens, was a direct consequence of his reading *Histoire de l'Architecture* [*The History of Architecture*] by Auguste Choisy (1841-1909), which was published in 1899, and perhaps also, *Vers une Architecture* [*Towards an Architecture*] by Le Corbusier, which was published in 1923. Le Corbusier referenced Choisy more than 10 years before Eisenstein.

45. "Eisenstein, unlike, Choisy, did not base his stance on the Puritan myths of rationalism, but his choice might not have differed so greatly from that of the French engineer: while two-thirds of "Montage and Architecture" are devoted to Bernini's baldacchino in Saint Peter's, nothing is said of its architectural features, nor of the building that houses it." Ibid, 115.

46. Ibid, 121.

47. Ibid. This iconographic reading is not unrelated to a parallel satirical reading that supports it. Eisenstein bases this reading on the sarcasm that he finds in Bernini's work:

> "The pope . . . had repudiated the offspring of his family, and the great sculptor, assuming the role of minister of justice and of morality, positioned the bastard's head above the papal tiara, exactly where it deserved to be. . . .
> . . .Bernini, too, was equally uninhibited in the scope and extent of his ideas and in the means of putting them into effect. Both the boldness of his satire and the central feature of St. Peter's, into which he was not afraid to plunge the arrow of his sarcasm, are typical of the man. We have only to recall how, in the guise of portraying the mystic ecstasy of St. Teresa . . . [he created] an image of the orgasmic rapture of the great hysteric that is unsurpassed in its realism. This was a malicious joke, aimed at [Pope Urban]."
> Eisenstein cited in Eisenstein, Bois, and Glenny, "Montage and Architecture," 1989, 126-27.

One could argue that this is a Deleuzian "sequence" in which there is an extension of each art form towards a unity, where universal theatre takes to the universe of the cinematographic montage. As Careri points out:

> Thanks to the many possibilities offered by the movie camera, the cinema, more than any of the other arts, may bring about that special composition of sensory, emotional, and conceptual elements that distinguishes the aesthetic object from every other object.[48]

Careri believes that, just like Bernini, Eisenstein worked by making leaps from one level to the next – where there are "conversations" between the various components – in order to gauge the effects, pathos-based and cognitive, he would achieve. And like Eisenstein, Bernini understood that one the connection between the various art forms is made, in a *composto*, success is only achieved when, in the montage, the various arts recognise their own uniqueness and when, also in that montage, the passage from one art form to the other is calculated on the basis of the cognitive and pathos-based effects one seeks to create in the viewer. "The *bel composto*, like Eisenstein's theory of montage but using special and always diverse procedures, is an aesthetic operation in which the heterogeneous multiplicity of the ensemble is taken apart and recomposed by the viewer himself."[49] This need for recomposition is based on a pre-determined narrative/ sequence.

In an initial reading, one can say that, in the Baroque space, continuity appears as a sequence of acts of a staging. One can also speak of a sequence of scenes. As if, at each glance, the curtain were raised to reveal a different scene. In a second reading, one can note that, in reality, the curtain is not raised. One sees scenes fading away and emerging from one another. And one sees parts of objects whose views are broken up by others, and are shown again, and hidden again, to narrate the whole. The curtain does not exist, but everything is perfectly staged, arranged to be seen in a sequence that is pre-determined. A pre-determined narrative.

It is pre-determined, as indeed is cinematographic montage. To quote Deleuze: "Montage does not come afterwards . . . Indeed, it is necessary that the whole should be primary in a certain way."[50] Indeed: the "[m]ontage is the determination of the whole."[51] Bernini's chapels were formed through this pre-determination and in this profusion of elements that contribute to unity.

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48. Careri, *Bernini: Flights of Love, the Art of Devotion*, 5.

49. Ibid.

50. Gilles Deleuze, *Cinema 1: The Movement-Image* (Minneapolis: University of Minnesota Press, 1986), 29.

51. Ibid.

Deleuze and Montage

Gilles Deleuze interest in cinema as an object of "study" is, as Bellour and McMuhan argue in "Thinking, Recounting: The Cinema of Gilles Deleuze" of 1998, difficult to define.[52] Deleuze published *Cinéma 1. L'image-mouvement* [*Cinema 1: The Movement Image*] in 1983, followed by *Cinéma 2. L'image-temps* [*Cinema 2: The Time Image*] in 1985, two volumes in which the philosopher presents his very personal thoughts on cinema. As Bellour and McMuhan write: "Thus we can clarify the question that this book [in two volumes], unique among the inventions of a philosopher, induces: why the cinema, why the cinema at that point? Quite simply so that philosophy can thus itself write its novel."[53] For Deleuze, cinema was, in the late 20th century, the art form that made it possible to formulate clearly the imponderabilities of time as a whole. That whole was an "entity" in constant agitation, marked by fragmentations and ruptures[54]. For the whole to be manipulable, operative, it was necessary to understand the idea of cinematographic montage, and also now said notion allowed one to elaborate ideas on movement and time.

More than a report on the state of the art of cinema, *Cinema* confronts one with a number of concepts – matter that belonged to philosophy[55] – that opened up a path towards the new century: a path on which the constant vibration and constant movement were such that were "beyond". Deleuze distinguished between the "early" cinema, to which the Eisensteinian montaged belonged, where one finds a unitary world made of "rational cuts", and a "new" cinema, where the construction using ruptures and "irrational cuts" – which introduced a new interval between shots – raised cinema to a level where the actions were subject to a general phenomenon of immobilisation and clairvoyance that provides direct access to the time and the time-image. So, we go from a cinema based on the sensori-motor scheme to one that operates through a stimulus-response system[56]. As a result, the montage in the cinema of the latter half of the 20th century, is beyond the whole; it is entirely an *open*. It is entirely time.

The *open* resides in a constant associated with what Deleuze calls the "only generality about [cinematographic] montage": "the time conceived as the Open."[57]

Living-montage

If one crosses this conception of montage – where time is conceived of as the Open – with the Berninian universe in the form of his chapels, one is dealing with a new reading of the *bel composto*.

On the surface, we are offered worlds in a closed system, where the circuits are activated through the heterogeneity of the parts, exposing other worlds, even

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52. Bellour and McMuhan, "Thinking, Recounting: The Cinema of Gilles Deleuze," 57.
53. Ibid, 64.
54. Ibid.
55. "Philosophy is the art of forming, inventing, and fabricating concepts." Gilles Deleuze and Félix Guattari, *What is Philosophy?* (London: Verso, 1994), 2.
56. Bellour and McMuhan, "Thinking, Recounting: The Cinema of Gilles Deleuze," 58.
57. Deleuze, *Cinema 1: The Movement-Image*, 55.

those that are more inward. In reality, the chapels themselves are already a world within another; an interiority within another. The churches guard them. This centripetal force would seem to disobey the centrifugal one that the folds of the Baroque evolve in an infinite continuity – time conceived as the Open.

These are already essential questions. In the revealing of the essence it is impossible to diverge from matter and its relationship to the Elements. Deleuze writes:

> Matter thus offers an infinitely porous, spongy, or cavernous texture without the emptiness, caverns endlessly contained in other caverns: no matter how small, each body contains a world pierced with irregular passages, surrounded and penetrated by an increasingly vaporous fluid, the totality of the universe resembling a "pond of matter in which there exists different flows and waves.[58]

From this image, provided by Deleuze, it would seem impossible to remove the tumultuous essence inherent in the circuits that set Bernini's chapels "in operation". It is from here that one proceeds from the theatrical sense – a scenographic set made up of disparate elements, capable of offering a narrative to the observer – to the cinematographic sense, where the idea of a set is replaced by the notion of the whole and the open, working as a montage, and where the viewer can incorporate the inherent flows.

Entering into a relationship, incorporating the flows, means a passage from viewer to someone who is no longer "outside". Someone who communes with the different flows and waves. Someone who also offers himself or herself, in continuity, to the folds – someone who identifies with the burning robes of Saint Teresa and with the earthly tremors that vibrate, from the ground up, conducted, as they are, through the folds of the different fabrics that support and, once again, conduct these folds through the arched body of Ludovica Albertoni.

In the Altieri chapel, Ludovica Albertoni's agony, or ecstasy, is framed two-fold in succession – once aggregating, then with the second frame containing itself within the niche that houses the altar (Figure 4). These two frames can be understood "as a chapel within a chapel"[59], thus offering depth to the whole, placing it in a new world of interiority in a constant relationship between the parts – architecture, painting and sculpture – that seek indiscernibility. The whole is defined by these relations (Figure 5). The parts are not the property of the objects, they are the property of the whole. Deleuze states: "Through relations, the whole is transformed or changes qualitatively. We can say of duration itself or of time, that it is the whole of relations."[60]

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58. Deleuze, *The Fold*, 5.
59. Careri, *Bernini: Flights of Love, the Art of Devotion*, 52.
60. Deleuze, *Cinema 1: The Movement-Image*, 10.

Figure 4. *Architectural Frames of Altieri Chapel: "Chapel within a Chapel"*
Source: Maria João Moreira Soares, 2016.
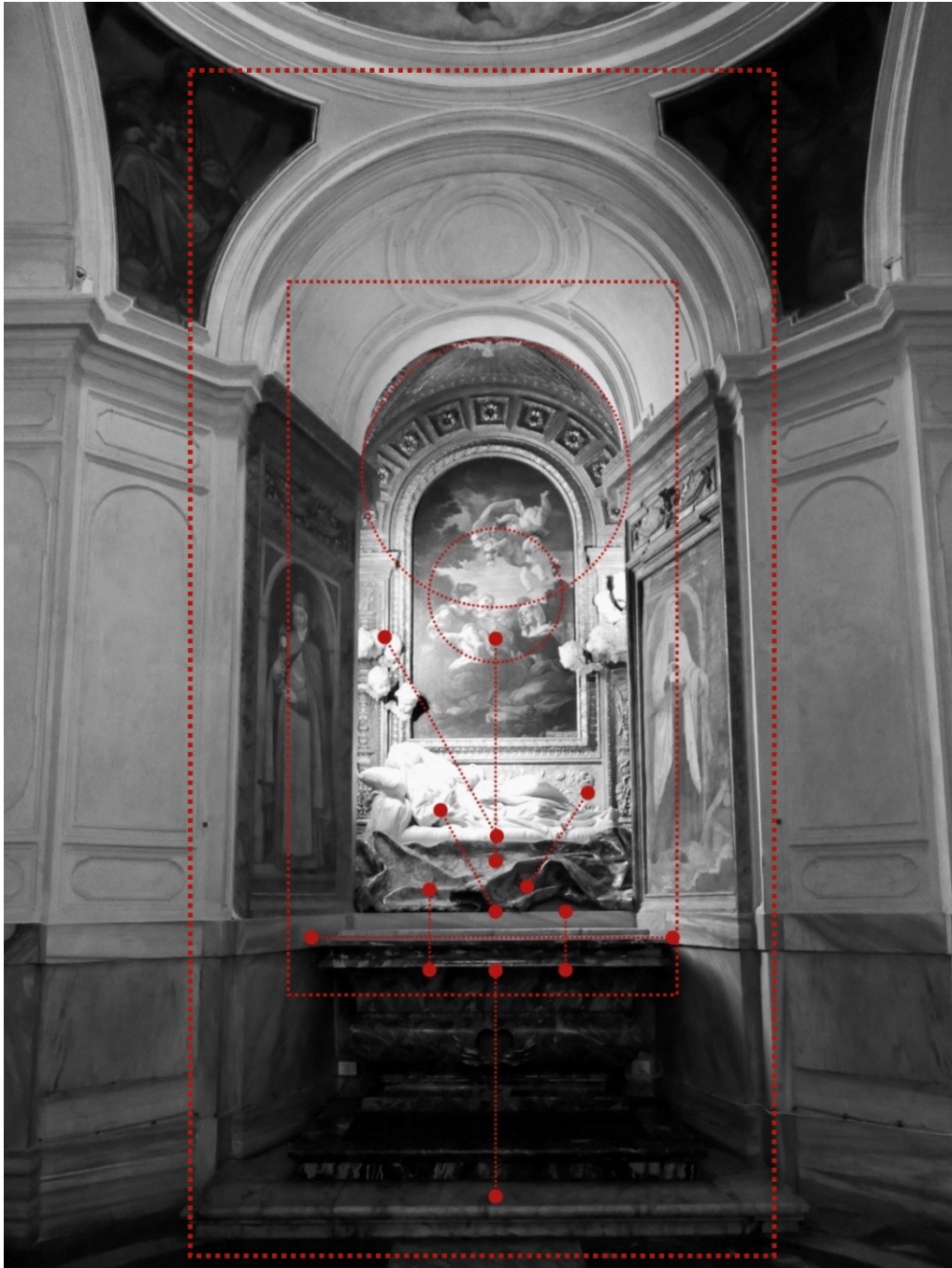
Figure 5. *Frames and Inter-relationships of Components, Altieri Chapel*
Source: Maria João Moreira Soares, 2016.

This places one beyond the relations. It places one in the flux of time – in "modernity" in terms of cinematographic montage. In order to gauge time, in the context of architecture – a gauging that is assisted by the introduction of the very peculiar notion of montage – a body is needed. A body that can operate beyond the stimulus-response system. Another type of montage: a living-montage.

In an interview with *Cahiers du Cinema*, in 1986[61], Gilles Deleuze "opens" the body – our body so that it is presented as a "secret" agent in the full realisation of the cinematographic object: "The brain is unity. The brain is the screen."[62] It is on this screen that the montage of the *bel composto* is realised – just like in a montage produced on a film editing table. It is on this screen, within us, in our own brain, that the work is completed, always as a whole, always open, because the screen is also open.

In this regard, Deleuze reflects:

> Thought is molecular. Molecular speeds make up the slow beings that we are. As Michaux said, '*Man is a slow being, who is only made possible thanks to fantastic speeds.*' The circuits and linkages of the brain don't preexist the stimuli, corpuscles, and particles [grains] that trace them. Cinema isn't theatre; rather, it makes bodies out of grains. The linkages are often paradoxical and on all sides overflow simple associations of images. Cinema, precisely because it puts the image in motion, or rather endows the image with self-motion [*auto mouvement*], never stops tracing the circuits of the brain.[63]

The screen assimilates the bodies made of grains because everything is in dissolution.

In *L'Évolution créatrice* [*Creative Evolution*] of 1907, Henri Bergson (1859-1941) points out that if you put sugar into a glass of water it will dissolve.[64] Referring to this argument by Bergson, Deleuze added a spoon to the Bergson's glass of water: "If I stir with the spoon, I speed up the movement, but I also change the whole, which now encompasses the spoon, and the accelerated movement continues to express the change of the whole."[65] The screen – we ourselves, our brain – is, in this case, the spoon. The brain – again, we ourselves – is now the point of change for the whole. The brain – or we ourselves – is now subject to a general phenomenon of immobilisation and clairvoyance that provides direct access to time, as already pointed out with regard to the idea of Deleuzian montage in *Cinema*, to the time image. In this sense, the Bernini chapels, the *bel composto,* provide a place of "exercise" on the *whole* and the *open* that the whole allows. The chapels are not only enclosed upon themselves, but that act of enclosure includes the human brain, the screen.

It is, therefore, not surprising that Elizabeth Grosz[66] calls for the adoption of a Deleuzian framework so that it can help us transform the static ways in which we relate to, or understand, the universe of the built. The Baroque – or, in this

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61. The interview was published in *Cahiers du cinema,* number 380, in February 1986, under the title "'L'image-temps' de Gilles Deleuze – Le cerveau c'est l'écran: entretien avec Gilles Deleuze": 25-34.

62. Deleuze, "The Brain is the Screen: An Interview with Gilles Deleuze," 367.

63. Ibid, 366.

64. "If I want to mix a glass of sugar and water, I must, willy nilly, wait until the sugar melts. This little fact is big with meaning." Henri Bergson, *Creative Evolution* (Mineola: Dover Publications, 1998), 9.

65. Deleuze, *Cinema 1: The Movement-Image*, 9.

66. Elizabeth Grosz, *Architecture from the Outside: Essays on Virtual and Real Space* (Cambridge: The MIT Press, 2001), 7.

particular case, Bernini's *bel composto* – with its operations in extension, which are the image of the new universe, an "infinite open universe", would appear to be the built universe par excellence for understanding non-static transformative modes, that are intrinsically dynamic, of operating in the context of architecture.

Conclusions

In the living-montage proposed, the body of the beholder is the performer of all circuits and all operations of relations. It confronts and understands within *the whole* and *the open*. This more abstract reading does not invalidate other readings that may be more concrete or direct. This plurality is possible: in a time spiral, they live in progression but do not intersect.

In the reading proposed, the work-fruition-construction – the work on the screen – tends towards the infinite and is resolved in folds and their "go-betweens", in a flow that goes from the "edge of the sea", "floating like instantaneous foam" to the infinity of the oceans.

In a time spiral, one can return to Ní Chuilleanáin and the epigene, which, like a shadow, is present in all the operations manifested in extension: in the fire that consumes the robes of Saint Teresa, the earthly folds that twist until they are released by Ludovica Albertoni, the watery folds that spread, like a time flow, in the chapels, as a whole, on the screen that is us. If, for Dillon Johnston, both Leibniz and Ní Chuilleanáin seek to represent the expansion of time as a surface full of folds that can store events and thus keep them present, but out of sight, and if, as Johnston goes on to argue, these are hidden from being seen or from the viewer's look, in a Deleuzian perspective, supported by cinematographic montage, where we go beyond the whole, where we operate with the open, then the Baroque in general, and the Bernini *bel composto* in particular, can take on a reading that is of relevance for the future. Invisibility meets the observer on another plane, not that of the glance, but that of an emptying into the body.

The montage Careri makes reference to changes constantly: the viewer changes it; constantly. In the reading of the Baroque proposed here, based on the chapels and *bel composto* of Bernini and Deleuze's thought, the viewer/spectator is, as in Careri's reading, the editor. But where the montage is carried out is no longer at the editing table, but in the viewer/spectator him or herself, in his/her body, in the brain. The viewer/spectator is simultaneously the editor and "editing table".

The future may bring an architectural world in constant change which integrates both material and immaterial parts and behaves like a living body, acting and reacting in constant interaction with our bodies. This living-body – an architecture that responds to the new technological inputs (from the neurosciences to AI) – is created in unison with the user, in whose brain the interactions are managed, in essence, as a living-montage.

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From the Hut to the Totem:
An Archetypal Analysis of the Holy See's Eleven Chapels at the Venice Architecture Biennale[1]

By Marta Isabel Sena Augusto[*] & Vidal Gómez Martínez[±]

At the 2018 Venice Biennale, the Holy See participated with eleven chapels in the woods designed by eleven teams of notable architects from all over the world, allowing us to monitor the global vision of worship spaces today. In this essay, we analyse the architectural reflections of the different invited architects in the light of the two main archetypes of architecture: the primitive hut and the totem pole. The great difference between the two archetypes is in the subjective temporality of space. In the hut archetype, temporality takes us back to the beginnings of architecture, and within this group we have divided the chapels into two subgroups: those belonging to the inward hut archetype, which delimits an interior space isolated from the environment, and those that follow the outward hut archetype, which delimits an interior space that establishes a direct relationship with the exterior. The chapels that follow the totem archetype, on the other hand, have the characteristic of renouncing the delimitation of their own spatiality and, through the insertion of an element, are able to generate a field of imprecise boundaries and transform a portion of the environment into a place of prayer and meditation.

Introduction

Since the formation of the first Christian communities in ancient Rome, the church has been able to manage communication with its parishioners in a very refined way with all the means at its disposal. Especially relevant in this aspect is the use of architecture for its component of positioning, communication and evocation.

The Holy See has participated in international fairs and exhibitions since its inception, premiering with the Great Exhibition of the Works of Industry of all Nations in London (1851). Since then, the participations have been numerous,[2] especially since 1929, when the Vatican became part of the modern states under the Lateran Pact. This gave it new international status as an international juridical subject with the capacity to participate as a state in universal exhibitions.

Highlights include the participation in the Universal Exhibition of Paris (1937) with the "Pavillon Catholique Pontifical" by the architect Paul Tournon, that of Brussels (1958) with the pavilion "Civitas Dei" by Roger Bastin, and especially the participation in the New York World's Fair (1964/65) with a large

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1. This text is the result of the collaboration of the authors: Vidal Gómez Martínez: (words 1 to 4000) and Marta Sena Augusto (words 4001 to 8000).
2. P. Hitchen, *Vatican Presents Woodland Chapels at Venice Architecture Biennale*. 2018.

pavilion by a team formed by three studios with its first stone laid in 1961 by Pope John XXII by remote control from the Vatican. As a culmination of this exhibition, the Holy See sent Michelangelo's "Pietà Vaticana" with an insurance policy of twenty-six million dollars[3] - a clear example of the Vatican's involvement in this type of event (Figure 1).

Figure 1. *Unloading of the Pietà at the Hudson River Pier, New York 1964.*
Source: Vatican Pavilion Committee, Official Guide Book Vatican Pavilion (New York World's Fair, 1964).

Popes John Paul II and Benedict XVI showed the same interest in these events, with the Vatican's presence at the Universal Exhibitions of Seville (1992), Lisbon (1998), and Zaragoza (2008) - with their own pavilion in the first. Seville celebrated the Age of Discovery and the five hundred years of the discovery of America and through the Pavilion of the Holy See wanted to create an artistic synthesis of American evangelization. The tour, articulated in fourteen thematic

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3. J. R. Alonso Pereira, "The Vatican Pavilions in International Exhibitions," in *Proceedings of the International Congress of Contemporary Religious Architecture 3* (ed.) Esteban Fernández-Cobián, 176-185 (A Coruña: Universidade da Coruña, 2013).

units, presented the so-called "Implantation of the Church" until today when America has become the continent of hope housing half of the world's Catholics. The pavilion, designed by Miguel Oriol e Ibarra, was a prismatic volume covered by vaults arranged in Latin cross built entirely in Barcelona with a prefabricated steel structure and glass coating. The three floors of the building contain a large inner courtyard, in the center of which was placed the great monstrance of the Cathedral of Toledo.

What is evinced from these initiatives, both through the mobile chapels and the church's participation in international events, is that it has always found a way to reach out to people. The idea of offering a worship site at the crossroads of an influx of people, such as in train stations, airports, ski resorts, campsites, or beaches, is not new. These chapels or churches which are flexible, ephemeral, and elementary in their conception, imply that true worship does not require the construction of a specific space, but simply the designation of a place.

Although this pavilion is the first Vatican participation in the Venice Architecture Biennale, it is only one step further in a dynamic that began five years earlier at the Venice Art Biennale in 2013. It was a small pavilion inspired by Genesis with the slogan, "Contemporary art saw the return of this thematic subject of the creation of the universe and of humanity, the de-creation (the Flood and Babel), and the re-creation with the beginning of the history of redemption in Abraham"[4] and organized in two parts. The first part showed three paintings inspired by the Sistine Chapel by Tano Festa, and a second with a video installation composed of four videos projected simultaneously in a dark room by Studio Azurro.

In 2015 the Holy See participated again with a pavilion led by Michele Reginaldi: a compact white volume of space representing the essentiality of pre-existing crags and accessed through a narrow fissure. Its shape is clearly visible from the north side, made up of two stretches of rounded and pointed arches, from which emerges the vegetation that grows on the roof as if it were through a crack in the rock. The 318-square-meter roof is corrugated sheet metal, half of which has an intensive green system. The whole is supported by a steel structure, mounted in situ without welds. The load-bearing structures, substructures, intermediate floors and roof are all in steel. On the façade the phrases "not by bread alone" and "give us our bread" are written and translated into 13 languages, and appear differently in the day and night. During the day, however, the effect of natural light produces the shadows of the writings on the surface.

Continuing this process of reconstructing the dialogue between art and faith, the Holy See proposed a unique and ambitious pavilion for the 2018 Venice Architecture Biennale. The submission was unique for its physical location and its relationship with the rest of the exhibition and ambitious for the size and relevance of the interventions. The project was directed by Francesco Dal Co and Micol Forti and eleven prestigious architects on the international scene whom were invited to rethink the Forest Chapel of 1920 by Gunnar Asplund at the cemetery of

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4. G. Cardinale Ravasi, "The Holy See at the Biennale Architettura 2018," in *Press Conference for the Presentation of the Holy See Pavilion at the 16th International Architecture Exhibition of the Venice Biennale: Vatican Chapels*, 20.03.2018.

Stockholm in the present socio-cultural context. Specifically, the participants were Andrew Berman (United States); Francesco Cellini (Italy); Javier Corvalan (Paraguay); Eva Prats and Ricardo Flores (Spain); Norman Foster (Great Britain), Teronobu Fujimori (Japan), Sean Godsell (Australia), Carla Juacaba (Brazil); Smiljan Radic (Chile/Serbia); Eduardo Souto de Moura (Portugal) and Francesco Magnani and Traudy Pelzel (Italy).

The eleven chapels were located in one of the few wooded spaces of Venice: the garden of the Cini Foundation on San Giorgio island (Figure 2), designed by Luigi Vietti in the fifties. This small forest stands as an isolated space within bustling Venice, perfect for inviting the religious and secular pilgrimage offered by the pavilion.

Figure 2. *Location of the Pavilion on the Island of San Jorge. View from the Bell Tower of San Giorgio Maggiore and Plan Scheme of the Authors*
Source: Aerial photo google maps and authors.

The designs were constrained by requiring the use of material manufactured or installed by the sponsors - companies in the construction sector - previously designated to each participating team. Thanks to this patronage system, it was

possible to guarantee the Pavilion free of charge as required by the Vatican. These companies (Alpi, Barth Interni, Gruppofallani, Laboratorio Morselletto, Leucos, LignoAlp, Maeg, Moretti, Panariagroup, Piaggio Group, Sacaim, Saint-Gobain Iatly, Secco Sistemi, Simeon, Tecno, Terna, and Zintek), in addition to providing the materials and technology, supported the cost of construction and collaborated in the execution project. Their involvement in the project, beyond mere sponsorship, is recognized in the informational panels and publications, where they expressly give credit to the architects.

For the 2018 Venice Biennale, the Vatican Pavilion has the unique feature of allowing us to monitor the vision of spaces of worship today by architects from different cultural backgrounds. Below, the reflections of different architects are analysed in the light of two of the main archetypes of architecture - the primitive hut and the totem - with the aim of identifying which building archetypes still have traction in contemporary society and culture in relation to religion.

The Eleven Chapels for the 2018 Venice Biennale

Francesco Magnani and Traudy Pelzel | Alpi: The first of the chapels, built entirely of laminated wood, is an exhibition space for drawings and models of Asplund's own Forest Chapel. The Forest Chapel, designed by Gunnar Asplund, inaugurated in 1920, is a small wooden building with white walls and black tiles and is also made of wood. The chapel is composed of two spaces with equivalent surfaces. The first is a classic portico of twelve columns. In this portico, above the entrance, is the only decoration of the chapel: a small angel from the death of Carl Milles. The second space is a square interior covered by a dome through which light enters indirectly. The portico is a transitional space between the forest and the inward interior crowned by the hemispherical dome.

Magnani and Pelzel's project – unlike the Asplund Forest Chapel – does not have a transitional space between the forest and the interior, but rather resembles a much more contemporary reinterpretation of a Stavkirken.[5] Magnato worked with Alpi to develop an experimental material from cladding woods. The exteriors of the building are made entirely of 9,000 laminated wood tiles. The roughness of the dark brown outer shell contrasts with the softness of the light that bathes the ash wood walls inside.

Terunobu Fujimori | LignoAlp Barth Intern: In Teronobu Fujimori's sketches for the Biennale, we see a chapel similar to a traditional hut whose roof is supported by tree trunks and whose structural elements convey the idea of an easily-built construction.

Like the chapel of Magnani and Pelzel, the chapel of the Japanese Fujimori also creates a clear break between the place and its interior space, reinforced by the extreme narrowness of the main door, while establishing a minimum exterior shelter space for the faithful through a portico composed of six partially squared pine trunks that stand out on the rigorous black that surrounds the rest of the chapel. Access to the chapel is made through an opening of only 40 cm, forcing

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5. A medieval Scandinavian church built entirely of wood.

the visitor to constrained movement that guarantees the liberation of external distractions and concentration in the interior space. In contrast to the black exterior space, the interior is bright and simple, composed of a single nave with a gabled roof supported by a visible wooden structure, which in turn defines the cross of the altar. On the white of the walls and the loose gravel of the floor stand out the sheets of gold leaf that highlight the cross thanks to the overhead light and the decoration of the background by charred logs. The side windows, on which are extended washi paper panels designed by the architect, complete the decoration and complement the natural lighting of the environment. The link with LignoAlp forced Fujimori to work with wood, a very appropriate material for a Japanese architect, so he took the opportunity to do a stereotomy exercise, avoiding the use of glues and nails.

Souto de Moura | Laboratorio Morseletto: For his part, Soto de Moura works in collaboration with Laboratorio Morseletto, "the tailors of marble," so his work is carried out entirely in stone from Vicenza. He configures the chapel as a contemporary reinterpretation of the dolmen. Based on large pieces of stone, it defines a minimal and intimate space with an entrance in a bend and culminating in the only element covered: the altar, also defined by two large stone slabs.

The bend in the entrance defines a kind of entrance compass, perhaps a reference to the portico of the chapel at Asplund, while the interior is completely defined by the geometry of the large stone blocks, arranged trapezoidally to emphasise the altar. The geometry of the blocks forms side benches.

The contrast between the rough feel of the cut stone on the outside and the silky touch of the honed interior emphasise the abstraction of this small meditation space in which the altar is a block of stone. The only reference to the Christian rite is a cross defined by two fine cuts in the stone.

Smiljan Radic | Moretti Sait-Gobain Italy: According to Chilean tradition, "animitas"[6] are a trap for the soul. Radic imports this tradition by proposing a chapel with which seeks the harmonious coexistence between monumentality and domesticity.

Smiljan Radic proposes a space formed by a single truncated cone-shaped shell of dark grey polymer concrete resting on a traditional Venetian base made of plastered logs. The use of pluriball in the formwork gives it a texture of great depth that focuses the visitor on the upper opening covered by a large glass pane, visually supported by a steel beam and a wooden strut that forms the central cross.

The entrance to the chapel is marked by a solid wooden door, a clear reference to Chilean farms. The flat door never quite fits into the surface of the chapel, offering wide gaps that invite visitors to enter even when it is closed. It is a door that pivots on an inclined axis; its own weight turning it into the spring that activates the trap for the soul.

Andrew Berman | Moretti Terna: New York architect Andrew Berman believes that the location should be more important than the work itself. He, therefore,

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6. Small chapels or mounds of popular construction that are located at the foot of the roads to remember tragic events or venerate people from the environment to whom mystical abilities are attributed.

proposes a triangular geode inspired by the geometric shapes found in the different corners of Venice and its basilicas.

He proposes a piece with a translucent polycarbonate cladding that contrasts with the black interior that draws us into our own interiority with the help of the very strong light contrast. The piece opens on one of its sides, providing a bench protected by a powerful eave. This is not a space that precedes the interior; on the contrary, it is conceived as a second space for reflection based on the tranquillity that emanates from the immense sheet of water of the Venetian lagoon over which it overlooks.

Francesco Cellini | Panariagroup: Francesco Cellini does not approach the project as a chapel but as an architectural and abstract reflection on the meaning of sacred spaces, their proportions and functionalities. Cellini's proposal is conditioned by his links with Panariagroup and the premise of using large-format porcelain stoneware slabs. Taking advantage of the characteristics of the material as a flat and uniform cladding, it proposes a structure that levitates above the floor, with a dark matte texture on the outside that contrasts with the extra-glossy white interior that reflects the forest inside it.

Although the preliminary designs include substantial shells that even create a liturgical hall, in the final project Francesco Cellini chooses to de-materialise the walls. The final result is perceived from the outside as a frame for the wooded landscape. However, once the visitor stands inside - a mere threshold - it becomes a space pierced by the surrounding forest, as well as by its openness due to the reflections on the inner surface of the walls that reflect the forest, blurring the boundaries between landscape and architecture.

Like Fujimori, Cellini creates a division between exterior and interior through the chromatic contrast of the bright white porcelain of the interior with the ferrous texture of the exterior panels.

Norman Foster | Tecno Terna Maeg: Foster creates the main structure, made of tensioned wires and struts, which acts as a support for a wooden grid. The structure is tensioned from three symbolic crosses, placed on a slightly inclined platform. Around the arms of the crosses is a composition of wires and struts which creates a balanced tension system. Wooden cladding is added to this structure which connects the tensioned structure, covered with wood, with the supporting bridge. This creates an interesting play of light and shadow in the interior.

When we enter the chapel we head towards the forest and when we reach the main space there is a change of direction towards the lagoon. In this last part of the chapel, a few wooden seats allow you to enjoy the view. The result is a pier that floats over the forest covered with struts and tensors supporting a tunnel of vegetation leading to the altar of tame pines with the lagoon in the background.

Javier Corvalán | Simeon: Javier Corvalán's proposal is based on respect for nature, almost without touching it, turning the forest into a true space for meditation and the sky into the only covering. With this premise, he recovers the diameter of the dome that covers the interior of the Asplund forest chapel to delimit a circular space in the forest, without interrupting it, by means of a suspended cylindrical structure designed to sway in the wind - unfortunately it is now blocked for security reasons.

It is a plywood drum on a steel structure suspended from a single mast, on which a large cross rests. It is conceived as a structure that can be dismantled and moved elsewhere, requiring a single point of support. For this work, where the structure takes on special importance, Corvalán worked with his usual collaborator, the engineer Andrea Pedrazzini.

Ricardo Flores y Eva Prats | Sait-Gobain Italia: This chapel, designed by a Chilean and a Spaniard, was inspired, and practically traced from, an image of the project by Ivan Leonidov for the Bol'šoj Artek complex for young pioneers,[7] on the south coast of Crimea (1936-37). Flores and Prats probably chose this reference because its shape is reminiscent of the open-air chapels of Latin America derived from the ancient temples of the indigenous people, where the threshold under an arch was used as a presbytery and where communion with the natural environment was established. In this chapel, the exterior space is complementary to the project.

The chapel wants to "transmit joy, a sense of community and communion with the cosmos"[8] and allows a few to sit protected from the sun and rain. The chapel appears on the side of the road, offering the possibility of crossing it to enter the forest. On the side of the forest, there is a small niche with a lectern that opens to the forest, nature and the lagoon. The construction methods were similar to the traditional ones of Venice. The foundations are made with Venetian wooden piles, the bench is made of red brick and the walls are covered with "cocciopesto".[9]

Sean Godsell | Maeg Zintek Nice: Godsell proposes a chapel-kiosk, which combines the totem's characteristics of designating a place with the reception capacity of the Oostpriesterhulp's truck-chapels.

When closed, it is a grey metallic prism, a real totem that can turn any available space into a site. When it opens its wings for prayer, it concentrates a golden beam on the altar thanks to the gold aluminum finish on the inside of the prism, while at the same time providing a small shelter for the celebrants. The vertical element serves as the altar, while the space for the faithful is the surrounding meadow, which is organised spontaneously, as in the truck-chapels, benches, chairs brought by each person, standing or sitting on the grass.

Carla Juaçaba | Secco Sistemi: Carla Juaçaba goes beyond the marking of a place by a vertical element. She proposes an invisible chapel, a chapel made of the site.

She has simply marked the place with a cross - literally - made of polished stainless steel, 8 metres long, with a square section of 12 centimetres. This structure forms the whole ensemble: two crosses, one marking the altar and the other serving as a bench defined by a spectacular cantilever, invisible from afar, but blending in with the forest through the reflections of the surroundings.

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7. A. De Magistris and I. Korob'ina. *Ivan Leonidov, 1902-1959* (Electa, 2009), 222-227.
8. R. Carrai, *A Dialogue with Ricardo Flores and Eva Prats* (2018).
9. Waterproof mortar used based on lime and crushed brick with varied granulometry.

Under the Sign of the Hut: From the Origins to the Holy See Spaces

The primitive hut was, for many centuries, an archetype of architecture as described by Vitruvius in his *De Arquitectura* in the 1st century BC, and depicted by Filarete 1,500 years later in his *Treatise on Architecture*. It is a structure made up of four tree trunks with forked ends on which a two-sided roof rests.

Marc-Antoine Laugier also postulates in the 18th century that the primitive hut composed of living trees with their foliage, is the origin of the classical temple, offering the model that modern architects should always consider. The small rustic cabin was the archetype of the first house. Laugier describes quality architecture only if it is legitimized by nature and reason.

Two centuries later, the same hut archetype was proposed by Le Corbusier in his Cabanon (Figure 3); an irreducible interior space (14 square meters). Le Corbusier's Cabanon is an archetype of the "millennial" house with multifunctional furniture: the bed hides the drawers of the wardrobe, the support of the sink serves as a separating element, a bench is also a staircase to the upper warehouse, etc.—it refers to an ideal of welcome, essentiality, and privacy.

Figure 3. *View of the Le Corbusier's Cabanon at Roquebrune-Cap-Martin, France*
Source: Authors.

One of the most consolidated strategies in the evangelization of society since the beginning of the existence of the Christian church, has been the reuse of the spaces of worship of the creeds it displaced. Besides the economy of material resources, it is a way of staging the change of beliefs while facilitating the transition of parishioners to the new religion by preserving the previous place of

worship. There are numerous examples of this practice that we can find throughout the geography in which the Catholic Church has been taken root, which at the architectural level can be grouped into three clear trends: integration, insertion and substitution.

With the Edict of Thessalonica by Emperor Theodosius I, in the year three hundred and eighty, Christianity became the only religion of the Roman Empire, and the construction of Christian temples on pagan structures was permitted. Perhaps the clearest example, due to the few modifications it underwent, is the transformation of the Pantheon of Agrippa into the Church of St. Mary and All Saints. Although in the Italian context, there are numerous examples of higher architectural complexity. In this sense, it can be mentioned the San Nicola in Carcere, Santa Maria in Cosmedin and San Lorenzo in Miranda[10] churches in Rome, or the integration of the temple of Athena into the Duomo of Syracuse, where the naos clearly forms the central nave, while the perimeter portico defines the side bays and supports the façade. Only the side chapels and the apse are independent of the Greek structure.[11]

In the Iberian Peninsula, the second process of Christianization is linked to an entire process of geopolitical redefinition carried out through agreements and very difficult war campaigns. This is clearly reflected in the Christianization of sacred spaces. The mosques are often razed to build the new cathedrals reflecting the new religion, as was the case of the great aljama mosque of Seville, of which only the minaret is preserved, transformed into a bell tower, and part of the ablution courtyard that functions as a cloister. More respectful, regarding the material conservation of the existing work, but with the much clearer connotation of imposition, is the transformation of the aljama mosque of Cordoba into a cathedral, inserting a cruciform factory in the forest of columns. Other times, the process is much less traumatic and is limited to turning the cult from south to east, locating the apse to the east and the new façade to the west, while the qibla is relegated to a simple chapel in the epistle bay.[12]

The recovery of the classical canons of beauty, as well as the evolution of the constructive systems during the Renaissance and the Baroque, allowed the architects to put all the emotional potential of architecture at the service of the Evangelical message (Figure 4). Thus, since the fifteenth century Rome it begins to generate and export spaces full of drama thanks to the exponential expansion of scale with the development of structural systems, the management of spatiality through the manipulation of classical orders, and the control of natural light by the combination of both factors that allowed architects to generate almost ethereal spaces of worship.[13]

10. D. Agneli, *Le chiese di Roma* (Roma: Società Editrice Dante Alighieri, 1902), 228-229.

11. S. Sgariglia, *L'Athenaion di Siracusa. Una lettura stratigrafica tra stori e Segni* (Siracusa: LetteraVentidue, 2009), 61-82.

12. S. Calvo Capilla, "De mezquita a iglesia: el proceso de cristianización de los lugares de culto de al-Andalus," in *Transformació, destrucció i restauració dels espais medievals* (eds.) P. Giráldez and M. Vendrell, 129-148 (Barcelona: Patrimoni 2, 2016), 129-148.

13. J. Arnau Amo, et al. *El espacio, la luz y lo santo. La arquitectura del templo cristiano* (Colegio Oficial de Arquitectos de Castilla La Mancha (COACM), 2014).

Figure 4. *Subjective view of the Interior of San Ivo alla Sapienza, Francesco Borromini 1642-1660.*
Source: Vidal Gómez Martinez, 2018.

Under the Sign of the Totem: From the Origins to the Holy See Spaces

The archetype of the totem refers to an autonomous architecture that builds its places through the addition of a minimal element to the place, capable of modifying its meaning. In the words of Norberg-Schulz:

"The fundamental properties of human space are the symbol of the vertical axis and the expansion zone of the horizontal plane. In the past, the country was considered the center of the world: a center that sometimes assumed a precise characterization as Delfi's Omphalos to the Greeks, or the roman Campidoglio, that was their caput mundi. In other cases, it could be a sacred mountain, or even a totemic pole that symbolizes the axis of the world."[14]

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14. C. Norberg-Schulz, *Il Mondo dell'Architettura* (Milán: Electa, 1986), 24.

Some nomad tribes carried this pole with them, an element that was their referent of location in the world so that the centre of the world was where they were. Mircea Eliade tells the story of one of these nomad tribes whose referent of place in the world is given to them by such a pole they always carried: "the most primitive of places constituted a microcosm: a landscape of stones, water and trees".[15]

These places were not chosen, but rather discovered. Sacred places function as centres, become points of orientation and identification and constitute a spatial structure. The Achilpa tribe moved with their sacred pole, through which their divinity - Numbakula - had access to the heavens, choosing their destination by the inclination of the pole and erecting it again as soon as they settled. The pole allowed them to move their world wherever they went.

> "although continually moving, they are always in their world and, at the same time, in communication with heaven, where Numbakula disappeared [...] once the sacred pole was broken, the whole tribe was taken by anguish; its members wandered for some time and finally sat on the ground and let themselves die"[16]

From the early eighties, when we are already talking about a post-modern era, structuralist and semiological thought is dethroned by post-structuralist thought, put forward by Michel Foucault, Jean-François Lyotard, Jean Baudrillard, Gilles Deleuze and Jacques Derrida, whose theories lead to new scientific interpretations based on a universe in non-equilibrium, without fixed points, expressed geometrically in fractals, under the theory of chaos that justify discontinuous, fragmentary and provisional interpretations, based on transformation and difference, a new archetype began to impose on that of the hut: the totem.

During the 20th century, social and cultural changes had a major impact on the way of life of billions of people who saw how the reconfiguration of their cities to the rhythm of the changes driven by the second industrial revolution greatly modified their daily habits in terms of transport time, leisure or family and social life. These changes were compounded by the devastation of the two world wars, which destroyed many urban centres in Europe and obstructed social mobility. In this environment, the church developed various mechanisms to transmit its message to parishioners and the rest of the population, taking advantage of the democratisation of the transport system and the centres of cultural exchange represented by the universal exhibitions.

In this context, the church uses the archetype of the totem based on the introduction of a singular and specific element in the landscape, capable of transforming it into a place of prayer and meditation by its mere presence. In this sense, it develops different types of totems to get its message across to parishioners and to the rest of the population, taking advantage of the democratisation of the means of transport.

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15. M. Eliade, *Patterns in Comparative Religion* (Cleveland: Sheed & Ward Ltd, 1963), 269.
16. Eliade, *The Sacred and the Profane: The Nature of Religion* (Houghton Mifflin Harcourt, 1959).

Mobile Chapels

In the early 20th century, the Church Extension Society of America sent priests to small border towns to celebrate Mass and distribute the Eucharist from the back of three train cars.[17]

The development and consequences of the world wars activated numerous initiatives. During World War I, the Belgian army had two chapel cars moving along the front line.[18] The German Missions-Verkehrs-Arbeitsgemeinschaft, founded by the aviator friar Paul Schulte, made a fleet of planes and cars available to missionaries in Africa. After World War II, he also provided German priests with motorized vehicles.

As a consequence of World War II, twelve million Germans were forced to seek refuge elsewhere in their country. Their fate attracted the attention of Catholic charitable organisations, such as the Eastern Priests' Relief Organisation, which provided them with material and spiritual aid through a fleet of mobile chapels. An estimated six million Catholics settled in regions where no Catholic Mass had been celebrated since the Reformation. Many of them were cared for by Catholic charitable organisations, the most important of which was the Pontificia Commissione di Assistenza or "Vatican Relief". In the eyes of the German government and the occupying forces, this aid was a welcome stabilising factor, while Catholic leaders realised that the intellectual and spiritual starvation of the refugees could lead to total apathy in religious matters. Therefore, to keep the German flock in the church, an emergency strategy was needed. In addition, there was a structural shortage of priests; in the Soviet zone, for example, the number of refugees was estimated at two million, while there were only 660 Catholic priests, one third of whom were over seventy years of age. This gave rise to the phenomenon of backpack priests who carried a chalice, a paten and a missal in their chasuble as emergency liturgical equipment. These clerics travelled great distances, defying fatigue and reading Mass in the most improvised and squalid settings.

Kapellenwagen

In 1947, after a visit to Germany, the young Premonstratense priest Werenfried van Straaten, decided to create a structure through which material and financial aid could be sent to Germany. The organization, called Oostpriesterhulp,[19] grew at an extraordinary rate thanks to contributions and donations mainly from Holland and Belgium. Under the motto Ein Fahrzeug für Gott - A Vehicle for God - the EPRO initially provided the clergy with motorcycles and cars. The next step of this mobile apostolate was the Kapellenwagen - chapel-trucks (Figure 5) - which solved three

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17. S. Sterken, "The Chapel Truck is Coming to your Village! The Eastern Priests Relief Organization and the Refugee Problem in Germany after World War II." *Trajecta: Religion, Culture and Society in the Low Countries* 26 (2017): 65-86.

18. P. Pierre Lebrun, *Le temps des églises mobiles. L'architecture religieuse des Trente Glorieuses* (Gollion: Éditions In Folio, 2011), 157-159.

19. Eastern Priests Relief Organization (EPRO).

problems at once: the lack of space for worship, the transport of supplies and the shortage of priests. The Kapellenwagen were towing coaches purchased from the Dutch railways and adapted.

Figure 5. *Celebration of the Mass at One of the Chapel Trucks. Date, Location and Photographer Unknown (top) and Chapel truck in Belgium, 1951. Photographer Unknown (bottom)*
Source: Aid to the Church in Need, historical archives, Königstein.

Fourteen metres long and two metres wide, these trucks contained separate areas for the storage of goods for the chapel, which could be opened using two large doors, that together, formed a kind of altarpiece and between which a covering cloth could be placed to provide a minimum of shelter for about a hundred worshippers. The trucks were manned by a driver and two priests (one German and one foreign). The red-painted trucks were generally received with enthusiasm by the isolated villages, and the mission, which began in 1950 with two prototypes, a year later twelve, and reached its peak with 26 trucks.

They celebrated more than seven thousand masses and distributed more than two hundred and fifty tons of supplies. In 1970 the campaign was officially

suspended. Some of these trucks were used for promotional purposes, while the rest went on to Latin America, for a new field of action for the organization under the more generic name of Aid to the Church in Need. It could be argued that EPRO put into practice the idea of a church reaching out to the people long before it was taken up in the doctrine of the Second Vatican Council.

Blow-up Chapel

Chapel trucks anticipated a fundamental paradigm shift in pastoral care that would reach its most direct emanation in the inflatable chapel. Literally, a chapel could be carried in a backpack, designed by the German-born architect Hans Walter Müller in 1969. The chapel, consisting of a PVC sheet that took on a polyhedral shape when inflated, combined opaque and translucent elements, establishing a dialogue with its surroundings and making its inner activity visible from the outside. It could seat approximately 200 people. The image of the chapel folded into a package on a balance weighing thirty-nine kilos with the label "Inflatable church, 200 people, assembly 10 min" is very illustrative (Figure 6).

Figure 6. *Ephemeral Church, Hans Walter Müller. The Chapel Folded, During the Inflation Process and in Use*
Source: © Hans Walter Müller.

This first inflatable chapel was designed for the Parisian suburb of "Montigny-lès-Cormeilles" which lacked a place for worship. It was premiered in 1970 during a holiday weekend. The result was astonishing with the shadows of the trees reflecting on the surfaces and the movement of the light throughout the day being projected into the interior. In fact, Hans Walter Müller has become a reference in today's architectural landscape both for his "architecture of air" and for his long research into the association of synthetic materials with artificial light and the projected image.

From Hut to Totem: An Archetypal Analysis of the Eleven Chapels of the Holy See at the Venice Architecture Biennale 2018

In our analysis, the eleven chapels have been grouped into two archetypal groups: those that follow the archetype of the hut and those that follow the archetype of the totem. The first is based on the idea of a primary interior protective space, meanwhile the second is an architectural tendency that abdicates its own spatiality, to be a ready-made place through the insertion of an element that transforms its space of proximity into a different space in relation to the surrounding space.

Within the archetype of the hut we have divided it into two subgroups: the introverted hut which delimits an interior space, isolated from the surroundings, and the extroverted hut which delimits its space by establishing a direct relationship with the exterior.

The Forest Chapel, designed by Gunnar Asplund, which served as a motif for the construction of the eleven chapels, belongs to the archetype of the hut—a transitional space that follows the archetype of the extroverted hut and an interior space that follows the archetype of the introverted hut.

Within the first archetype, the hut, within the first archetypal subgroup, the introverted hut, we find five chapels (Figure 7): those projected by Francesco Magnani and Traudy Pelzel | Alpi; Terunobu Fujimori | LignoAlp Barth Intern; Souto de Moura | Laboratorio Morseletto; Smiljan Radic | Moretti Sait-Gobain Italia; and Andrew Berman | Moretti Terna. By interior cabin archetype we mean those chapels in which there is an interior space that is perfectly defined and differentiated from the exterior. It is the archetype most commonly used by the Catholic church, which isolates itself from its surroundings to create a sacred space, as in the case of the interior space of the Chapel of the Forest, designed by Gunnar Asplund.

Figure 7. *Views of the Introverted Hut Archetypical Chapels: Francesco Magnani and Traudy Pelzel (top-left); Terunobu Fujimori (top-middle); Souto de Moura (top-right); Smiljan Radic (bottom-left); and Andrew Berman (bottom-right)*
Source: Authors.

- The first of these, Francesco Magnani's (Italy) is the most reminiscent of Gunnar Asplund's Chapel of the Forest, but without its transitional space, remaining in this way with a perfectly delimited interior space.
- In the chapel of Terunobu Fujimori (Japan), although the loose gravel of the floor recalls an outdoor environment, there is a clear break between the place and its interior space, reinforced by the extreme narrowness of the entrance door.
- The chapel by Souto de Moura (Portugal) made of Vicenza stone configures a space completely isolated from the outside and open to the sky.
- The chapel by Smiljan Radic (Chile) is also open to the sky and is configured as a cylindrical interior space perfectly delimited and isolated from the outside.
- The chapel of Andrew Berman (USA) is, in archetypal terms, the most similar to that of Asplund, with its transitional space between the exterior and the interior and its perfectly defined interior space, closed and open to the sky.

In the second archetypal subgroup - extroverted hut - we identify two chapels (Figure 8): Francesco Cellini | Panariagroup and Norman Foster | Tecno Terna

Maeg. By archetypal extroverted hut we mean those chapels in which there is a well-defined interior space, often a floor or roof marking the boundary of a sacred ground, but which are open to the outside, such as the entrance space of the Forest Chapel designed by Gunnar Asplund.

- In his chapel, Francesco Cellini (Italy), creates an interior space through the chromatic contrast of the bright white porcelain of the interior with the ferrous texture of the exterior panels. The interior space is open but introverted and well delimited.
- In the chapel by architect Norman Foster (United Kingdom), the internal space is defined by the floor and walls made of wooden profiles, tensioned cables and struts completely open to the outside.

Figure 8. *Views of the Extroverted Hut Archetypical Chapels: Cellini (top) and Foster (bottom)*
Source: Authors.

In the second archetypal group - totem - we find the last four chapels (Figure 9): Javier Corvalán | Simeón; Ricardo Flores and Eva Prats | Sait-Gobain Italia;

Sean Godsell | Maeg Zintek Nice and Carla Juaçaba | Secco Sistemi. By totem archetype we mean those chapels that do not have their own space and, like portable chapels, chapel trucks or inflatable chapels, through the introduction of a singular and specific element in the landscape, transform their space of proximity into a place of prayer and meditation.

Figure 9. *View of the Totem Archetypical Chapels, Chapel by Corvalan (left-top), Flores y Prats (left-middle), Godsell (left-bottom) and Juaçaba (right)*
Source: Authors.

- Javier Corvalán | Simeón's chapel is presented as a suspended cylindrical structure, designed to be swayed by the wind like a sculpture that marks a different place in the environment, without a defined internal or functional space.
- The chapel by Ricardo Flores and Eva Prats (Spain) doesn't delimit an interior space and the exterior space is complementary to the project. The chapel appears on one side of the road, as a gateway to the forest. On the forest side, there is a small niche with a lectern.
- The chapel by Sean Godsell (Australia) proposes a chapel-kiosk with the function of an altar, while the space for the faithful is in the surrounding

meadow, which is organised spontaneously, as in the bus-chapels, benches and chairs brought by each person, standing or sitting on the grass.

- Carla Juaçaba's chapel (Brazil) is marked by a slender vertical mirrored element, which mirrors the green of the place and becomes almost invisible and immaterial.

Conclusions

Architecture is always an expression of its time, even when it remembers a past time. Each work is situated in it as if in relation to a place. The structure, the light, the form indirectly alludes, not only to the context, understood as an evident physical presence and to other spaces, but also to age. Time acts on the body of the architectural space through its elusive step that increases its age at every moment; it acts within the "spirit of the time", where the prevailing tendencies of an era manage to permeate the work and make their influence felt, and acts on the movement of the human body within it. However, time in architecture is also subjective time (also called psychological time). It is neither material nor mechanically measurable, it flows in the mind and is the product of an inner, subjective experience, through the emotional intensity that accompanies it, and through the archetype that underlies the creation of a new place in the world.

The South Korean philosopher and essayist Byung-Chul Han in his 2009 book, *The Scent of Time: A philosophical essay on the art of lingering*,[20] analyses the disappearance of initiation times and thresholds in general in today's society. He points out that the time of life has fragmented and accelerated to such an extent that it is no longer articulated by cuts, conclusions, thresholds and transitions, but that we rush from one presence to another. This reflection is important in the sense of contemplating the evolution of the thresholds of spaces and the transitions between spaces out of history. The inhabited space, for example, which began as a threshold or transitional space, acquired an inner space, fragmented it and isolated its fragments more and more, and the threshold spaces became compressed until they became non-existent. The reason for this process can be found in the evolution of the living of time and the time given to the other.

In the 2018 edition of the Venice Biennale, the Holy See recognises that people's needs for meditation and isolation in the 21st century are very different from those of previous centuries: it requires an instantaneous spiritual retreat that can take place anytime, anywhere. It brings the chapel into the mass tourism movement and the globalised world has placed the "instant chapel" as an exercise in architectural experimentation to 11 of the world's most renowned contemporary architects.

This experience has allowed the world to understand some of the current paradigms of the Catholic place of worship and has allowed us, at the same time, to analyse the different approaches to the chapel in the 21st century.

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20. B.-C. Han, *The Scent of Time: A Philosophical Essay on the Art of Lingering* (John Wiley & Sons, 2017).

It is evident that among these approaches the question of temporality was decisive in an epistemological sense, not only because of the requirement of instantaneousness but also, and in the interest of this essay, because of the subjective temporality to which each of the 11 architectural experiences refers.

The great difference between the hut and totem archetypes is in the subjective temporality of their spaces. In the hut archetype, temporality takes us back to the beginnings of architecture. Within this group, we have divided the chapels into two subgroups: those belonging to the inward archetype, which delimits an interior space that is isolated from the environment, and those that follow the outward archetype, which delimits an interior space that establishes a direct relationship with the exterior.

The chapels that follow the totem archetype, on the other hand, refer us to the present time—the time of the masses, of globalization and instantaneousness—and have the morphological characteristic of renouncing the delimitation of their own spatiality, and, through the insertion of an element, are able to generate a field of imprecise boundaries and transform a portion of the environment into a place of prayer and meditation.

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Architectural Instructions in Italy between the 16th and 18th Centuries

*By Francesco Del Sole**

Carlo Borromeo's Instructions represent the only practical application of the Tridentine decrees in architecture. However, historians over time have given little weight to the work, which is mostly considered a simple parish handbook due to its practical-functional nature used to treat the sacred space. New research conducted on the literary work has focused on the massive diffusion of this treatise in the undergrowth of the ecclesiastical literature of the time, testifying to how much the Instructions are linked to the historical context and the spiritual needs of the post-Tridentine Church. The great novelty of the work lies in the fact that it completely overturned the way of writing about architecture. In the writings of Carlo Borromeo, a continuous interweaving between the doctrine of the soul and the sacred building is outlined to give the Church the image of an institution organically constituted in its material and spiritual reality. The influence of this work outside the Milanese context in which Carlo Borromeo worked is still to be clarified, especially in the South of Italy, which experienced the peak of its Counter-Reformation season between the seventeenth and eighteenth centuries. Here, Instructions will be analyzed along with the Antica Basilicografia of Pompeo Sarnelli (1686) and Il Rettore ecclesiastico of Marcello Cavalieri (1688), two writings born in the diocese of Benevento under the wing of the bishop Vincenzo Maria Orsini, a native of Gravina di Puglia.

Introduction

Since Paola Barocchi included the first book of Carlo Borromeo's *Instructionum Fabricae et Supellectilis ecclesiasticae* in her edition of the sixteenth-century Treatises on Art in 1962, the work has experienced a new flowering.[1] Critics, moving away from the habit of reading the text as a mere manual of practical use, have begun to investigate the deeper reasons that link Borromeo's work to the historical context and the spiritual needs of the post-Tridentine Church.[2] To date, the influence of the work outside the Milanese

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1. P. Barocchi, *Trattati d'arte del Cinquecento fra Manierismo e Controriforma* (Bari: Laterza, 1962), III, 3-113.

2. The most important studies include the invaluable writings of Maria Luisa Gatti Perer. Here I would like to mention the most significant contributions that will be cited in the article several times: M. L. Gatti Perer, "Prospettive nuove aperte da S. Carlo nelle sue Norme per l'Arte Sacra," in *Atti dell'Accademia di S. Carlo, inaugurazione del III anno accademico*, 15-33 (Milano: Studia Borromaica, 1980); Gatti Perer, "La manutenzione ordinaria degli edifici sacri e delle loro suppellettili secondo Carlo Borromeo," in *Atti dell'Accademia di S. Carlo. Inaugurazione del V anno accademico*, 121-147 (Milano: Studia Borromaica, 1982); Gatti Perer, "Progetto e destino dell' edificio sacro dopo S. Carlo," in *San Carlo e il suo tempo, Atti del convegno internazionale nel IV centenario dalla morte - Milano, 21–26 maggio 1984*, 611-631 (Roma: Edizioni di Storia e Letteratura, 1986). See also: J. S. Ackermann, "Pellegrino Tibaldi, San Carlo Borromeo e

context remains to be clarified, especially in the South of Italy, which experienced the peak of its Counter-Reformation season between the seventeenth and eighteenth centuries. Here the *Instructiones* will be analyzed along with some writings born in the diocese of Benevento under the wing of the bishop Vincenzo Maria Orsini, a native of Gravina di Puglia. It was precisely the future Pope Benedict XIII who, about a century after the death of Saint Charles, was able to actualize the image of Borromeo's loving and zealous bishop that had given way to the seventeenth-century vision of the prelate, which spread with his early sanctification.

Saint Charles Borromeo, Model of Every Virtue

The canonization of Carlo Borromeo is the event that in the Catholic world inaugurates the seventeenth century, becoming the most effective manifestation of the renewal drive of the Counter-Reformation.[3] The year 1610, when the bull of sanctification was issued, was only the last step in a process that had begun in 1601 when the Oblates of Milan proposed to the vicar general of the diocese that their archbishop, who had died in 1584, be made a saint. The citizens of Milan immediately began to frequent Borromeo's sepulchre in constant pilgrimage, shaping the public cult of the prelate. This devotion, originally of the popular matrix, was nourished by daily graces and miracles, meticulously noted down by the Hosts of the Cathedral who had the task of collecting every useful testimony to shape the figure of the new saint. Furthermore, at a time of great crisis in Catholic doctrine, the birth of a strong devotion around one of the most important cardinals of the Council was seen by the ecclesiastical leadership as a precious opportunity for the post-Tridentine church. Within a few years, Borromeo underwent sudden depersonalization. As the process of sanctification unfolded, the memory of the prelate settled down in a well-codified form: Charles Borromeo was no longer a simple archbishop but a model who had to appear 'as an ornament to the triumphant

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l'architettura ecclesiastica del loro tempo," in *San Carlo e il suo tempo, Atti del convegno internazionale nel IV centenario dalla morte - Milano, 21-26 maggio 1984*, 573-586 (Rome: Edizioni di Storia e Letteratura, 1986); A. Scotti, "Architettura e riforma cattolica nella Milano di Carlo Borromeo," *L'Arte* 18/19, no. 24 (1972); D. Frascarelli, "Arte e Controriforma: l'altare maggiore nelle Instructiones fabricae et supellectilis ecclesiasticae di Carlo Borromeo," in *I cardinali di Santa Romana Chiesa, collezionisti e mecenati* (ed.) M. Gallo, 24-37. Roma: Shakespeare and Company 2, 2001.

3. There is a vast amount of literature on Carlo Borromeo, his canonization and the importance of his doctrine in the Counter-Reformation world. I will limit myself to pointing out the most recent contributions that have outlined an updated framework of the research carried out so far: A. Turchini, *La fabbrica di un santo. Il processo di canonizzazione di Carlo Borromeo e la Controriforma* (Casale Monferrato: Marietti, 1984); J. M. Headley and J. B. Tomaro (Eds.), *San Carlo Borromeo. Catholic Reform and Ecclesiastical Politics in the Second Half of the Sixteenth Century* (Washington: Folger Books - Associated University Presses, 1988); D. Zardin, *Carlo Borromeo. Cultura, santità, governo* (Milano: Vita e Pensiero, 2010); M. L. Frosio and D. Zardin (Eds.), *Carlo Borromeo e il cattolicesimo dell'età moderna. Nascita e fortuna di un modello di santità* (Milano: Bulzoni, 2011).

church and useful to the militant one'.[4] His sanctity is dispersed in a long list of virtues, of which commemorative panegyrics were composed beginning in 1601. The production of votive images and the flourishing trade of relics constitute indispensable support for the widespread diffusion of the cult (see Figure 1). During the canonization of 1610, the formal purity of Caroline's doctrine gave way to a bubbling of metaphors, linguistic games and theatrical constructions that highlighted, above all, the propagandistic and self-celebratory power of the counter-reformed church.

Figure 1. *Saint Charles Represented as a Man with a Window in his Chest 'Where it is Possible to See the Heart'*
Note: The heart is a recurring and almost obsessive theme linked to the canonization of Carlo Borromeo.
Source: P. Fattorio, *Ampla et diligente relatione de gli honori fatti al cuore di San Carlo* (Roma, 1614).

The 'Sapiens Architectus'

Parallel to the image of the new saint who invites to 'guard one's own heart' in the sign of sincere devotion, the Jesuit Achille Gagliardi (1537–1607) focuses on the reform aspect intrinsic to Borromeo's pastoral action. He is the *Sapiens Architectus*. From his words, we understand why the Milanese bishop was proposed as a model of life not only for the faithful but also for the clergy. It was necessary to look at Borromeo's 'holy flesh' by drawing inspiration from the key principles of his pastoral action: the priest who embodies the image of the Good Shepherd must rediscover the bond with his flock. The man of the church must appear as an architect capable of working on several fronts. On the one hand, based on the Tridentine decrees, he must carry out a monumental work of the rebuilding of the ecclesiastical organs, ordering the Church according to a ramified

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4. A. Turchini, *La fabbrica di un santo. Il processo di canonizzazione di Carlo Borromeo e la Controriforma*, 1984, 21.

structure of government, where the bishops are the *cardines* and the priests the desired *nerves* of the spiritual life of the people;[5] on the other hand, he must promote a true and proper restoration of Catholic worship, inventing suitable solutions to accompany the people on the path of faith.[6] To this end, the Good Shepherd must not be concerned only with doctrine but also focus on sacred space, which, in its rational and ordered structure, creates the necessary conditions for man's encounter with God. The deep sense of Carlo Borromeo's idea of architecture is based on this necessity, translated in the *Instructionum Fabricae et Supellectilis ecclesiasticae*, printed in Milan in 1577 (Borromeo, 1577) (see Figure 2).[7]

Figure 2. *Saint Charles and the Main Sacred Buildings Built in the Years of his Episcopate*
Source: Milan, Biblioteca Ambrosiana.

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5. A. Paredi (Ed.), *Sancti Caroli Borromaei Orationes XII: ad usum episcoporum in Concilium Oecum. Vaticanum II convenientium Pauli VI Pont. Max. iussu denuo editae* (Milano: Tip. U. Allegretti di Campi, 1963), II, 122. The reference to bishops as "cardines" is taken from the homily of 21 July 1583 at S. Prassede in Milan (II, 122); the reference to priests as "desired nerves" is taken from the homily of 3 January 1584 (III, 300).

6. E. Cattaneo, "Il restauro del culto cattolico," in *San Carlo e il suo tempo, Atti del convegno internazionale nel IV centenario dalla morte - Milano, 21-26 maggio 1984*, 427-453 (Roma: Edizioni di Storia e Letteratura, 1986).

7. C. Borromeo, *Instructionum fabricae et supellectilis ecclesiasticae: libri II* (Città del Vaticano: Libreria Editrice Vaticana, 1577).

From the 'Good Shepherd' to the 'Good Visitor'

The impressive diffusion of the whole 'corpus' of St. Charles' works between the seventeenth and the eighteenth centuries should be seen in the context of the new post-Tridentine spirituality. The *Acta ecclesiae mediolanensis*, in addition to dealing with the institutional part (Provincial Councils and Synods), pay particular attention to the devotional aspect of the Catholic Reform, which must be based on 'instructions', homilies and pastoral letters to recover the relationship with the faithful. It is precisely on the moral behaviour of Vincenzo Maria Orsini that biographers insist when they describe him as the most worthy heir, between the seventeenth and eighteenth centuries, of the Carolinian pastoral model. Elected cardinal in 1672, Orsini arrived in the diocese of Benevento in 1686 where he remained until his election to the papal throne.[8] If Carlo Borromeo became a pastoral model immediately after his death, Orsini's reformist zeal was already exemplary during the years of his government, so much so that Pope Innocent XII himself wished that the organization of his diocese be followed by his contemporaries.[9] He spent much of his days approaching the people in the parishes, insisting on frequent and direct preaching. As such, starting from Caroline's teaching, Orsini transformed the model of the Good Shepherd into that of the Good Visitor, making his own the precept according to which 'the office and exercise of the Bishop is nothing but a continual visitation: for it is necessary for him always to be vigilant and to toil in everything with apostolic zeal'.[10] This is an enrichment of the model of the post-Tridentine bishop using a pastorality which, precisely in carrying out the Visits, moves carefully through the first phase of detection of critical situations, followed by intervention and provision. To give an idea of the extent of his pastoral action, it is sufficient to recall that in the 44 years of his episcopate in Benevento, the prelate was able to make, personally or through his collaborators, about two thousand pastoral visits.

The 'Treatise of the Pastoral Visit' by Giuseppe Crispino (1682)

It is not surprising, given his spiritual zeal, that under the influence of Orsini, writings such as the *Trattato della Visita pastorale*, printed in Naples for the first time in 1682, came to light.[11] The work became a veritable *vademecum* for

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8. For more on Vincenzo Maria Orsini see A. De Spirito, *Culto e cultura nelle visite orsiniane e L'osservazione partecipante di un vescovo del Mezzogiorno.* (Roma: Studium Edizioni, 2003).

9. De Spirito, *Culto e cultura nelle visite orsiniane e L'osservazione partecipante di un vescovo del Mezzogiorno*, 2003, 14.

10. Ibid, 103.

11. G. Crispino, *Trattato della visita pastorale* (Roma: Domenico Antonio Ercole, 1965). The first printing was dedicated by Crispino to Innico Caracciolo, whose secretary he was. The version taken as reference here is the reprint of 1695, in whose preface Crispino explains to the reader the genesis of the work, linked to Orsini's advices. The work was enormously successful and was printed regularly until the end of the nineteenth century (the ninth edition was published in 1895). About the book see G. De Rosa, *De Rosa, G. Chiesa e religione popolare nel Mezzogiorno* (Bari: Laterza, 1978), 105-110.

bishops scattered throughout the provinces of Italy. The author Monsignor Giuseppe Crispino had already been the secretary of Archbishop Innico Caracciolo who, for the first time, had introduced in the South of Italy the type of pastorality directly inspired by the reformist practice of Carlo Borromeo.[12] Having found a road paved by Caracciolo's policy in the nearby Neapolitan diocese, it was easy to impose the Ursinian method in the management of the Visitation. With the subdivision into phases (preparatory, local, real and personal), the event took the form of a real spiritual rite that helped the provincial parish priests to make the sacred building worthy of celebrating the glory of God and, at the same time, to form a clergy adequate to the care of souls. The author's use of terms such as 'building/edifying', 'raising' or 'plant' in his literary endeavour does not appear obvious. The Treatise is the result of a studied edification of the parts, constructed *iure architectonico* based on the 'precious stones' of the doctrine imparted by Orsini.[13] The analogy with architecture is evident not only in the use of terms proper to the discipline but also in the metaphorical reference to that art of building, which must fuse, in a single whole, the internal itinerary of the soul to the sacred space. This substantial identity between moral and material construction induces Orsini to guide Crispino in the writing of the Treatise. The author describes the model of the Pastoral Visit focusing on a single objective: to regulate the liturgy and the practice of worship by highlighting problems of action, movement and function of space. Therefore, in the part dedicated to the 'real visitation', the text only takes up the practical indications on the sacred building set out in the *Instructiones* of Carlo Borromeo. The only 'unit of measure' to be considered in the composition of the sacred space is faithful in their condition of user.[14] If the church is a spiritual building that exists only in function of the devotees who animate it, man must identify himself with the house of God, becoming himself a 'church of living stones'.[15]

From Homily to Treatise

The substantial interpenetration between the care of the soul and the care of the sacred space present in the doctrine of Carlo Borromeo, well taken up by Orsini, leads to a logical consequence: the sacred building must be treated with the same method with which the Good Shepherd awakens the faith in his flock. Accordingly, historiography is unanimous in defining Borromeo's preaching work as one of the greatest achievements of his pastoral action. In a climate of fervent disputes of faith, Saint Charles' homily was not philosophical but essentially popular. Moreover, Borromeo's intellectual working method, which is influenced

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12. R. De Maio, *Società e vita religiosa a Napoli nell'età moderna (1656-1799)* (Napoli: Edizioni Scientifiche, 1971), 23-25.

13. S. Della Torre, "Riferimenti classicisti nell'architettura sacra post-tridentina," in *I tempi del concilio. Religione, cultura e società nell'Europa tridentina* (eds.) C. Mozzarelli and D. Zardin (Roma: Bulzoni, 1997), 414-427.

14. Borromeo, *Instructionum fabricae et supellectilis ecclesiasticae: libri II.,* 1577, 13.

15. G. Dominici, *Regola del governo di cura famigliare* (Firenze: Angelo Garinei, 1860), 79.

by his *mens iuridica*, is based on perspicuitas, the utmost clarity and communicative effectiveness.[16] In the composition of his homilies, little space is reserved for improvisation. The inspirational principles of the speech are arranged according to logical 'tree-like' schemes that outline the plot of the subjects to be developed and branch out into gradually simpler concepts, functional to the game of content symmetries and useful for memorization (see Figure 3). The message of the sermon is thus diluted in such a way as to divert the personal needs of each member of the faithful towards a collective devotionality, made up of mystical impulses and direct involvement in the rite. The objective is to speak to the heart of the faithful since the prelate sensed that 'irreligiosity is a disease of the heart before being a disease of the brain'.[17] The architectural *Instructiones* are developed using the same deductive ad arbores method with which the key concepts of a sermon are branched out (see Figure 4). This innovative approach is precisely one of the reasons why this literary work, for a long time, was not considered a true treatise on architecture. In this regard, the exclusion of the text from the famous *Artistic Literature* (1924) by Julius von Schlosser is emblematic. Antony Blunt was the first, in 1940, to define Carlo Borromeo 'the only author who applied the Tridentine decree to the problem of architecture'.[18] The great novelty of the work lies in having completely overturned the way of writing about architecture; no longer, as in Palladio's treatise (1570), through a structure that unravels from the particular to the general with an eye fixed on the classical models. We find ourselves in front of a gigantic work of disassembly in which the sacred building is decomposed into its parts, progressively descending in scale. This examination expresses the author's meticulousness in revising the physical reality of the building: the visibility, the hierarchy of the architectural elements, the measures and dimensions of the parts, the furnishings and the vestments, even lingering over minute prescriptions. The only concern of the bishop-legislator is that of reducing the various aspects of the liturgy into 'norms', making sure that every element of the sacred space does not get in the way of the Christian rite for which the place is functional. In the writings of St. Charles, a continuous interweaving between the doctrine of the soul and the sacred building is outlined, aiming to give the Church the image of an institution organically constituted in its material and spiritual reality. On the one hand, the homily must be composed according to a disciplined architecture of knowledge; on the other hand, the sacred

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16. Carlo Borromeo graduated in canon and civil law from the University of Pavia (1552-1559) where he studied under Francesco Alciati. See C. Fantappiè, "Per una reinterpretazione dell'opera e dell'eredità giuridica di san Carlo Borromeo," in *Carlo Borromeo e il cattolicesimo dell'età moderna. Nascita e fortuna di un modello di santità*, 165-210 (Milano: Bulzoni, 2011); S. Bianconi, and S. Morgana, "Verborum pondera vimque habebit: teoria e pratica linguistica in Carlo Borromeo," in *Carlo Borromeo e l'opera della 'grande riforma'. Cultura, religione e arti nella Milano del pieno Cinquecento* (eds.) F. Buzzi and D. Zardin (Milano: Silvana Editorial, 1997), 366.

17. A. Novelli, "S. Carlo Borromeo oratore sacro," in *San Carlo Borromeo nel terzo centenario della canonizzazione. La Scuola Cattolica* XVIII, serie IV (1910), 131.

18. A. Blunt, *Artistic Theory in Italy, 1450-1600* (Oxford: Clarendon Press, 1940), 137.

building must result in 'a creative living [...] that knows how to make the human talents, mentioned in the Gospel parable, bear fruit'.[19]

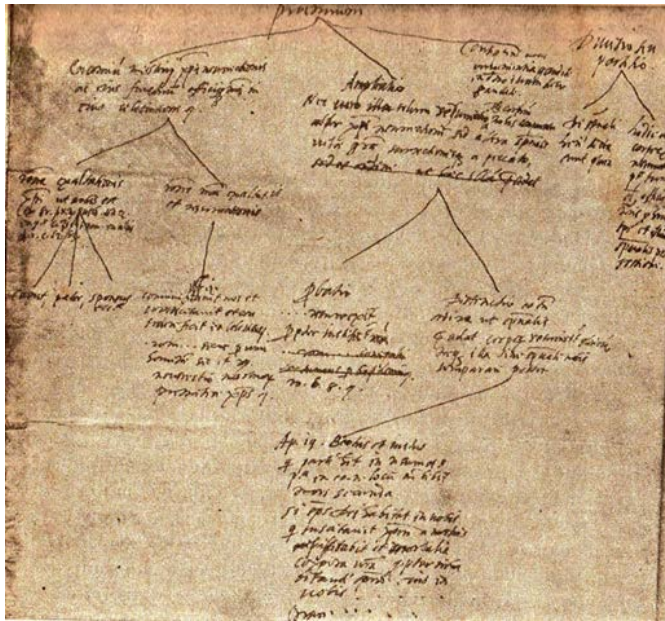**Figure 3.** *Autograph Scheme of Carlo Borromeo's Homily for Easter Mass in 1581*
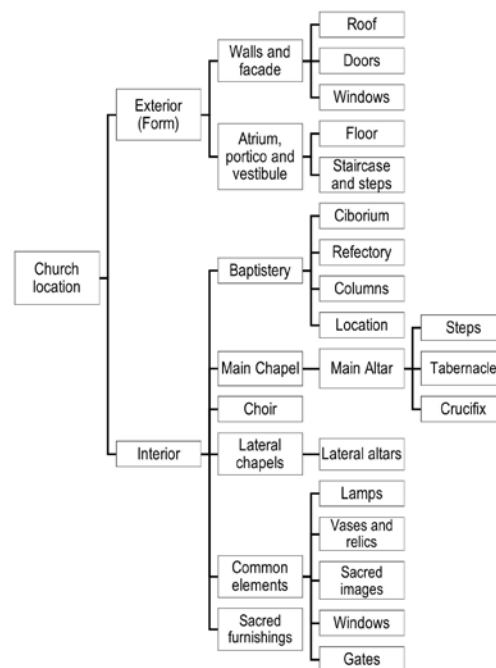*Source:* Milan, Biblioteca Ambrosiana.

Figure 4. *Compositional Scheme 'Ad Arbores' of the Instructiones of Carlo Borromeo (1577)*
Source: Author's elaboration.

19. S. Benedetti, *Fuori dal classicismo. Sintetismo, tipologia, ragione nell'architettura del Cinquecento* (Roma: Multigrafica Editrice, 1984), 113.

Carlo Borromeo's Ideal Church

Once the site and plan of the church have been chosen, the portico in front of the building and the access portals are the first *thresholds* to introduce the faithful to the grand liturgical stage. Behind the sentences dedicated to the portico in the *Instructiones* (proportionate to the size of the church, erected on marble columns or pillars of stone or brick), it is possible to read between the lines figures and types typical of early Christian architecture, called upon to give the main portal the necessary prominence, as a means which introduces the hall in semi-darkness. The portals must be architraved "as seen in the most ancient basilicas [...] since they must be distinguished from the civil ones".[20] As for the number of entrances, it must be multiple and possibly odd. The choice of a number corresponding to that of the naves is justified by the original function of separating the entrances for men from those for women. This separation of roles, which applies more generally to the separation of roles between the clergy and the faithful, is reflected in the division of space and is one of the major early Christian legacies of the Counter-Reformation building designed by Borromeo. The hall is delineated as a path that marks the itinerary of the soul with the aim of giving life to a new man, understood as a temple of God, a church of living stones. This vision, underlying the *Instructiones*, is to be found in the overall structuring of the liturgical space, in the dialectical relationship between nave and presbytery, church and square, exterior and interior. The sacred space must be a line of tension towards the sacrarium. The altars that until then had been placed "under pulpits or choir lofts, where the organ is played, [...] between pillars and columns"[21] were to be eliminated altogether, in order to create a straight path that does not tolerate interruptions. Leafing through the pages of the *Instructiones*, one realises that the architectural elements of the entire building are described according to a precise hierarchy, marked out by the use of real and symbolic thresholds that look back to medieval tradition. The faithful are mere spectators; they must participate in the Eucharistic celebration from below and from afar, limited by physical barriers and studied elevations of the floors. Elements of great liturgical importance such as the altar, the tabernacle and the baptistery become almost inaccessible places, protected by gates that allow the faithful to see them only, always at a proper distance. Chapels, including the main chapel, must be protected by gratings or marble or stone balustrades. The same applies to the choir, which must be "separated from the part of the church where the faithful are and closed off by gates, in accordance with ancient custom and for reasons of discipline".[22] If space does not permit this, the bishop must ensure that "the crowd is kept at a certain distance from the celebrating priest".[23] These physical thresholds respond not only to the practical need to bring order to the liturgical assembly, but also to underline its hierarchical differences, rehabilitating the priestly ministry, which was deeply challenged by Protestant doctrine. The attention paid to the steps and different

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20. Borromeo, *Instructionum fabricae et supellectilis ecclesiasticae: libri II*, 23.
21. Ibid, 49.
22. Ibid, 35.
23. Ibid, 53.

levels that articulate the sacred space, a reflection of the pyramidal structure in which the entire *societas christiana* is organised, should be interpreted in the same light. Right from the chapter dedicated to the location of the church, Borromeo recalls how important it is for the building to be "in a rather elevated position [...] so that it can be accessed by less than three steps, five at the most".[24] The ninth chapter is entirely devoted to this subject. He asked the architect to create an external staircase large in proportion to the size of the church, with a wider treadway every three or five steps for a comfortable ascent. Also in the chapter devoted to the high altar he feels the need to provide indications about the floor, which "will be higher than the floor of the church [...] by at least eight ounces and at most one cubit".[25] The reorganisation carried out by Pellegrino Tibaldi, Borromeo's trusted architect, in Milan Cathedral is emblematic in this respect.[26] In an axial line, Tibaldi's basilica has a nave reserved for the faithful; higher up, the senatorial choir reserved for the civil authorities; and finally, even higher up, the presbytery with the altar. The clear division of the presbytery, on a higher level than the nave, is the device which, more than any other, reflects Borromeo's entire reform. The liturgy, which had always been conditioned by the relationship between the nave and the presbytery, was profoundly innovated by Borromeo in the way the spaces were divided up, which profoundly influenced "the norm and the form, so that they conform to the criteria indicated by the Fathers regarding the construction [...] of the building".[27]

The 'Antica Basilicografia' by Pompeo Sarnelli (1686)

The use of this innovative dialectic *a genere ad speciem* is not only to be considered the technical expedient of an academic. On the contrary, it is the practical method chosen by a bishop who wanted his people to understand the essential concepts of the faith, spreading the doctrine of the Counter-Reformation throughout the territory. This is the purpose of the *Instructiones*, which are not to be read as a set of precepts to be rigidly followed but as successfully experimented guidelines in the Milanese diocese and proposed as a model, tacitly favouring great freedom of action precisely because of the norms outlined in the Treaty. The objective is to give weight to the local needs of each community as highlighted by the bishop, who, in turn, takes into good account the opinion of the architect. Bishop Orsini was inspired by the principles of adaptability and usability of the Caroline norms, experimenting with local models of the *Instructiones* that could adapt to the needs of the diocese of Benevento where, before his arrival, 'there was not a church in which it was possible to celebrate'.[28] After the fruitful experiences

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24. Ibid, 9.
25. Ibid, 31.
26. G. Benati and F. Repishti (Eds.), *Carlo Borromeo, Pellegrino Tibaldi e la trasformazione interna del Duomo di Milano: nuove acquisizioni critiche e documentarie* (Milan: Veneranda Fabbrica del Duomo di Milano, 2010).
27. Borromeo, *Instructionum fabricae et supellectilis ecclesiasticae: libri II*, 5.
28. P. Sarnelli, *Memorie cronologiche de' vescovi ed arcivescovi della S. Chiesa di Benevento* (Napoli: Giuseppe Roselli, 1691), 168-171.

in the dioceses of Manfredonia and Cesena, during his first visits to the churches, Orsini understood the state of the city. It is no coincidence that in 1686, the year of his settlement in Benevento, the *Antica Basilicografia* was printed.[29] Pompeo Sarnelli's treatise ideally attempts to reconstruct the spaces of the primitive church-building through reckless use of the sources, referring to the original meaning of 'basilica' of the early Christian age, also proposing a graphic reconstruction (see Figure 5). We are facing erudite research on religious architecture that aims to intercept no longer the mass of the clergy and the 'heart' of the faithful but an audience of authoritative ecclesiastics and scholars. The drastic change of the interlocutor is accompanied by the blurring of some characteristics at the basis of the Caroline Treatise, such as the bishop-architect relationship well outlined by Borromeo with the specificity of tasks and roles. In this case, the architecture does not take shape from the constant dialogue between client and technician but thanks to the *auctoritas* of the past, reconstructed piece by piece with great obstinacy. Hence, the text attempts a mediation between the erudite studies already carried out for some time on sacred buildings (such as the work of Cataneo or Panvinio) and the practical approach of the norms of Saint Charles.[30] This is also evident in the compositional choices; as the author himself confirms, the reference to the *Instructiones* is constant (the subdivision of the paragraphs keeps well in mind the technique ad arbores, articulating the discourse from the general to the particular) but the approach to look at the source has changed (see Figure 6). The author describes the various parts of the sacred building, forgetting the *perspicuitas* of the post-Tridentine treatise and inserting long historical and symbolic reflections. St. Charles' precepts are generally placed at the end of a series of authoritative quotations, thus losing the 'flexibility' that his careful vision made possible (see Figure 7). Fully aware that he is reaching an audience of a select few, Sarnelli chooses the path of erudition. This does not mean that his goal is only a disquisition among intellectuals. The *Basilicografia* was born above all to highlight the strength of the example and discipline of Orsini; the treatise itself is emphatically described as the 'basilica of his Orsini roses' and in many passages, the work illustrates the results obtained by Orsini's episcopal government. In the drafting of the text, the author moves in the same direction as the pastoral attitude of the bishop, who, having recently arrived in Benevento, realized the serious deficiencies in the local religious education so much so that he personally visited many cities 'doing the usual functions and preaching what the holy visitation was'.[31] The worrying spiritual emergency is accompanied by the material one, for which the sacred buildings had 'semblance

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29. On this personality see M. Basile Bonsante, "Appunti su Pompeo Sarnelli moralista e scrittore d'arte," in *Atti del congresso internazionale di studi sull'Età del Viceregno – Bari, 7-9 ottobre 1972*, 239-256 (Bari: Bigiemme, 1977); Basile Bonsante, "Architettura e committenza religiosa: l'Antica Basilicografia di Pompeo Sarnelli," *Archivio Storico Pugliese* XXXV, fasc. I-IV (1982): 205-235.

30. P. Cataneo, *I quattro libri di architettura di Pietro Cataneo Senese* (Venezia: Casa de' Figliuoli di Aldo, 1554); O. Panvinio, *De praecipuis urbis Romae sanctioribus basilicis quas Septem Ecclesias vulgo vocant* (Roma: Apud Maternum Cholinum, 1570).

31. Sarnelli, *op. cit.*, 168-171.

of hovels, or caves'.[32] As Carlo Borromeo had taught, all that remained was to restructure the diocese to 'provide for the crumbling churches and restore discipline'.[33] Sarnelli's treatise aims to respond to these needs, addressing the problems related to architecture concerning the much more serious deficiencies in the field of religious education. As such, just the continuous oscillation between norm and erudition highlights 'the attempt to reconcile morality and erudition or, rather, to put the latter at the service of the former'.[34]
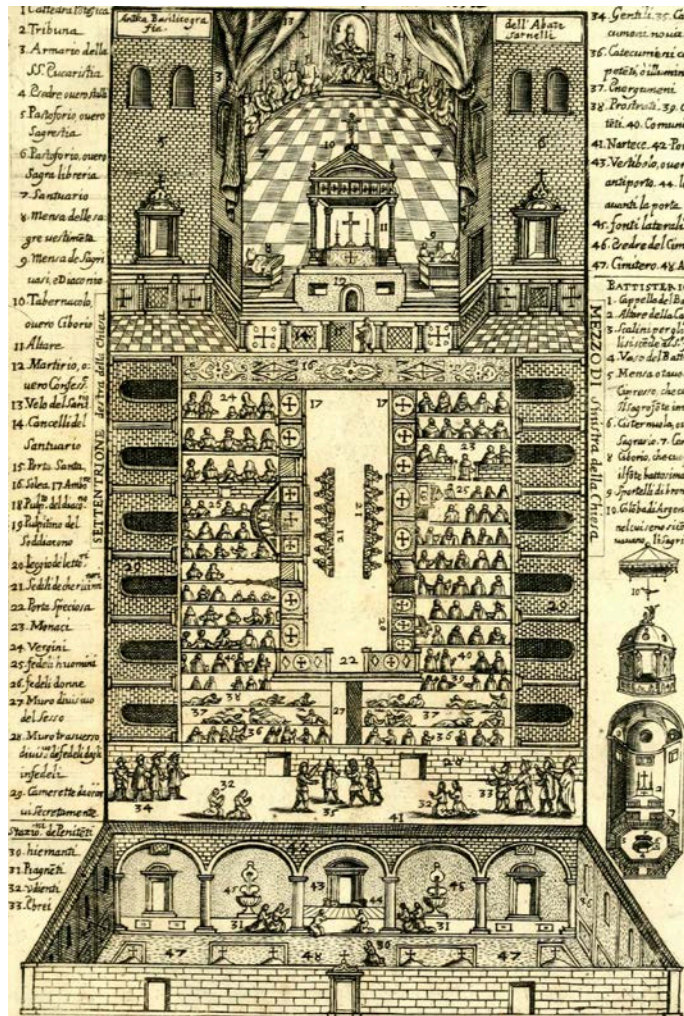
Figure 5. *Graphic Reconstruction of the Interior and Atrium of the Early Christian Basilica*
Source: P. Sarnelli, *Antica Basilicografia*, 1686.

32. De Spirito, *op. cit.*, 104.
33. Sarnelli, *op. cit.*, 168-171.
34. Basile Bonsante, "Architettura e committenza religiosa: l'Antica Basilicografia di Pompeo Sarnelli," 1982, 220.
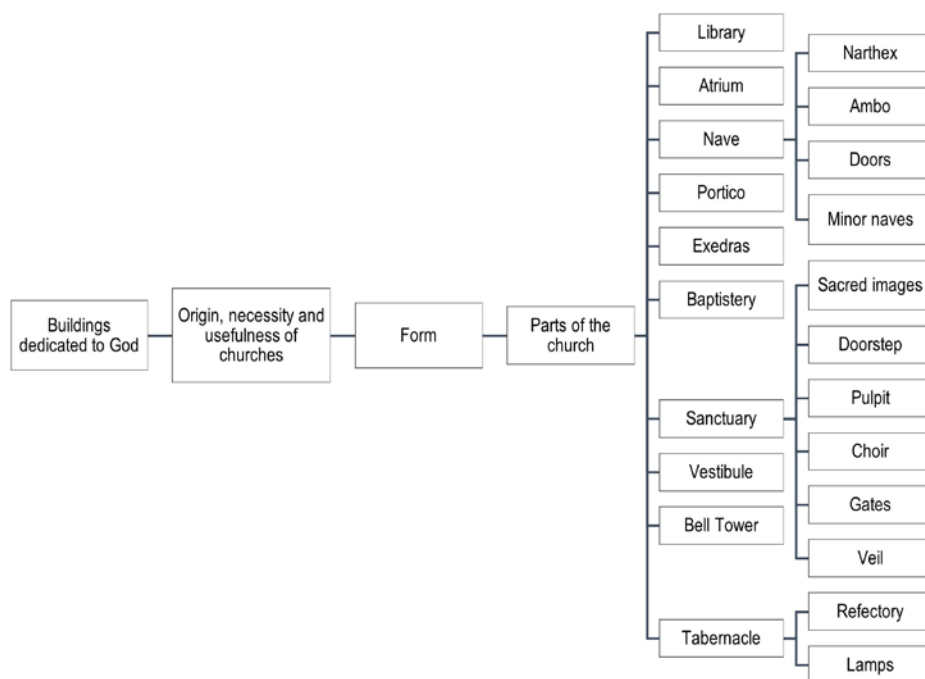
Figure 6. *Compositional Scheme 'Ad Arbores' of the Macrothemes of the Antica Basilicografia of P. Sarnelli*
Source: Author's elaboration.
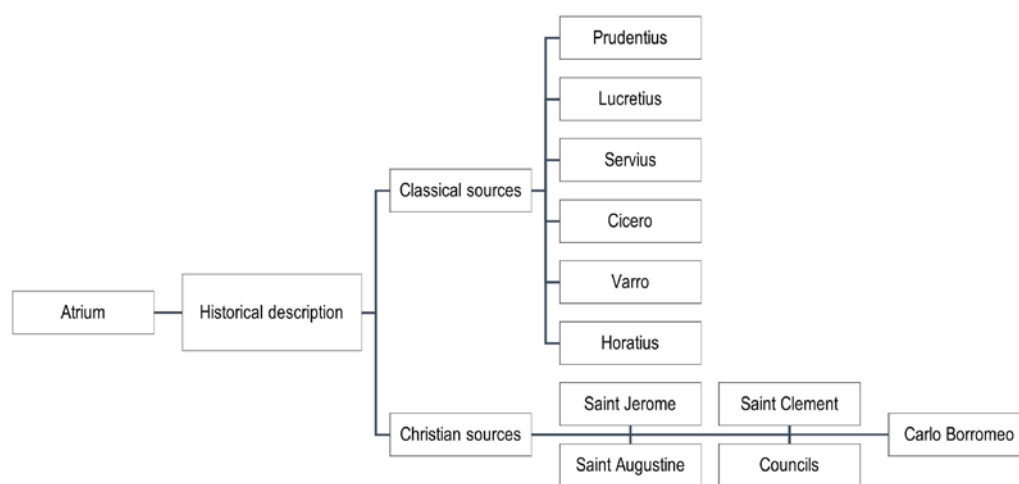
Figure 7. *Detail of the Development of the Paragraph Dedicated to the Item 'Atrium' in the Antica Basilicografia*
Note: It is evident how much the speech is based on authoritative quotations of classical and Christian kind, and then closes with the norm of Saint Charles.
Source: Author's elaboration.

The 'Rettore Ecclesiastico' by Marcello Cavalieri (1688)

If the first times of Orsini's episcopate in Benevento allowed a certain erudite reflection on religious architecture, in 1688, there was the urgency to move to the operational phase after the earthquake that struck the city. The acts of the Visits that the bishop made in those years testify to serious damage to sacred buildings. Orsini, speaking of the tragedy, refers to the age of the buildings and does not fail to emphasize how the divine hand had wanted to punish the clergy for the unseemly way in which they were used to guard the house of God.[35] The most urgent need at that time was to rebuild the places of worship, proposing a model of management of the sacred space that would allow reaching 'at least decency, when having does not allow to compliment abundance; making up for more with kindness [...]. Because God [...] puts the fullness of heart before the preciousness of the vows'.[36] Since the earthquake suddenly changed the priorities of the Benevento diocese, the bishop was forced to move towards crude practicality that left no room for erudite digressions. With this spirit he turns to Cavalieri, commissioning him to write the *Rettore Ecclesiastico*, which, even more than the *Antica Basilicografia*, appears to be a work dominated by the 'express commandment' of the prelate that, in this case, must be contained 'within the limits of a bare and literal instruction, so as to facilitate its execution with brevity and reading, with adapting to the short intelligence of not a few'.[37] The intention to create a link with the *Basilicografia* of Sarnelli printed two years earlier is clear. According to Cavalieri, it is not necessary to make erudite reasoning on the primitive Christian church because it was St. Charles himself who had 'accommodated' the ancient practices according to 'modern customs' and the 'dictates of architecture'. Avoiding preambles and clearly departing from Sarnelli's vision, the *Rettore Ecclesiastico* is set up as a parish handbook. The work recovers the Caroline model in many ways, so much so that several times this treatise has been spoken of as a simple translation 'to the letter' of the sixteenth-century *Instructiones*.[38] However, reading the words of the author and accompanying them with a careful analysis of the composition of the work, it is possible to realize that the norm of Saint Charles underwent important modifications, since it was adapted to the functional needs of the diocese, which required rules of immediate application. Although the chapters of the treatise reflect the 'disassembly' of the sacred building proposed by Saint Charles, they do not follow the order dictated by the Milanese bishop but are composed differently, highlighting 'the author's long experience as a "visitor" in the diocese of Benevento' (see Figures 8–9).[39] 'I do not deny, however, that I have put in some small part of my own, which, with the office of Visitor in this diocese [...] I have judged more proper and appropriate to the different circumstances of places and

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35. De Spirito, *op. cit.*, 55-60.
36. M. Cavalieri, *Il Rettore ecclesiastico istruito sulle regole della fabbrica e delle suppellettili....* (Napoli: Fusco Editore, 1688), Introduction.
37. Ibid, 26.
38. Benedetti, *op. cit.,* 131, note 97.
39. Basile Bonsante, *op. cit.,* 220.

times'.[40] The greatest novelty of Cavalieri's work lies in the fact that he fully understood the spirit with which Borromeo had printed his treatise on architecture, leaving full freedom of action to the local bishop who, as Good Visitor, could have proposed 'those rules that in the progress of the holy visitation have arisen suitable to needs, and universally necessary no less to practice than to know'.[41] The aspect on which he insists, even in a redundant way, is that of the 'cleanliness' of the sacred buildings, with entire paragraphs dedicated to the problems of humidity, the 'clearness' of the walls and the repairs to be carried out 'without delay', recalling on several occasions the poverty in which the churches of Benevento were after the earthquake. The result is a treatise that scrupulously follows the system ad arbores of San Carlo; in some cases, it shortens or eliminates entire parts of the original text because they were not considered necessary to the practical needs of the diocese. In this respect, the first lines of Title I are exemplary: the reader is warned that the first two chapters of the *Instructiones* of Saint Charles, dedicated to the site and form of the church, are not included. As the author affirms, the *Rettore Ecclesiastico* has the task of reporting only the news 'that concern the construction of the churches already built'.[42] Completely absent, for obvious reasons, are the prescriptions on the Ambrosian rite as well as the paragraphs on the location and shape of the baptistery and the bell tower along with the instructions regarding the churches and monasteries of the nuns. The prescriptions on the ecclesiastical furnishings are inserted directly as chapters within the text without providing for the division into two tomes as had happened for the *Instructiones* of Borromeo. On other points, however, the norms of Saint Charles are rewritten to allow for greater flexibility in the organization of sacred space. Among the most obvious changes on this point, aimed at simplifying the text by the emergency due to the earthquake in which the diocese found itself, we must mention the possibility of providing openings on the sides of the church, expressly forbidden by St. Charles; the possibility, for poor churches, of having only one sacrarium near the baptistery (on this point, St. Charles appeared intransigent in providing a sacrarium for the baptistery and one for the church); the presence of a single pulpit as a simpler solution (Borromeo describes minutely, according to the width of the church, the presence of several ambos or pulpits). The same simplification is made in the case of the minor altars, the sacristy, the bell tower and the burials inside the sacred space. In other parts of the treatise, on the other hand, the descriptive meticulousness reaches even more accurate results than Borromeo had done, precisely because of the practice of the Holy Visit (see Figures 10-11). In addition to inserting entire paragraphs on the 'cleanliness' of the churches, the major additions concern practical expedients: detailed description of drapes, veils, lamps, candlesticks, tablecloths to be used on the altars and the tabernacle; the addition of an entire paragraph dedicated to the 'cabinet of the holy oils and its annexes' (tit. IX). In general, it is worth noting the scrupulous attention paid to coverings, restorations and maintenance to be done constantly, which are absent in Borromeo's text. The text constantly repeats the works of 'retouching',

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40. Cavalieri, *op. cit.,* Introduction.
41. Ibid, 26.
42. Ibid, I, 1.

'whitewashing' of the 'disacconcised' paintings as well as the obligation, for each church, to place a cross in the presbytery, at the intersection with the nave, so that 'at the first entry into the church it is made visible and excites the piety of the faithful to veneration'.[43]
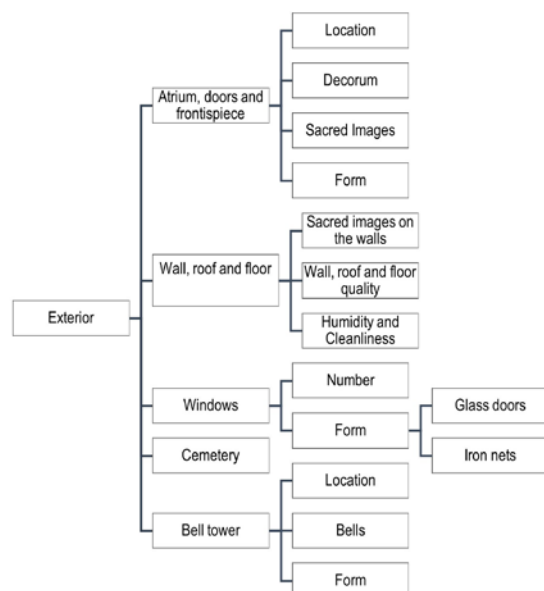
Figure 8. *Compositional scheme 'ad arbores' of the macro-themes related to the exterior of the sacred building in the Rettore Ecclesiastico*
Source: Author's elaboration
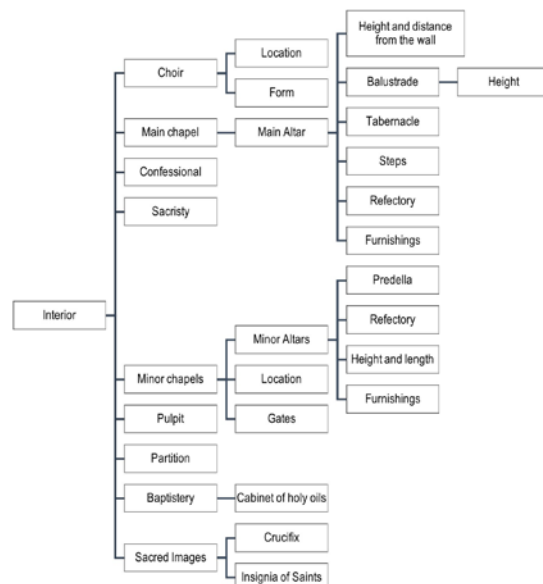
Figure 9. *Compositional Scheme 'Ad Arbores' of the Macro-Themes Related to the Interior of the Sacred Building in the Rettore Ecclesiastico*
Source: Author's elaboration.

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43. Ibid, XI, 26.
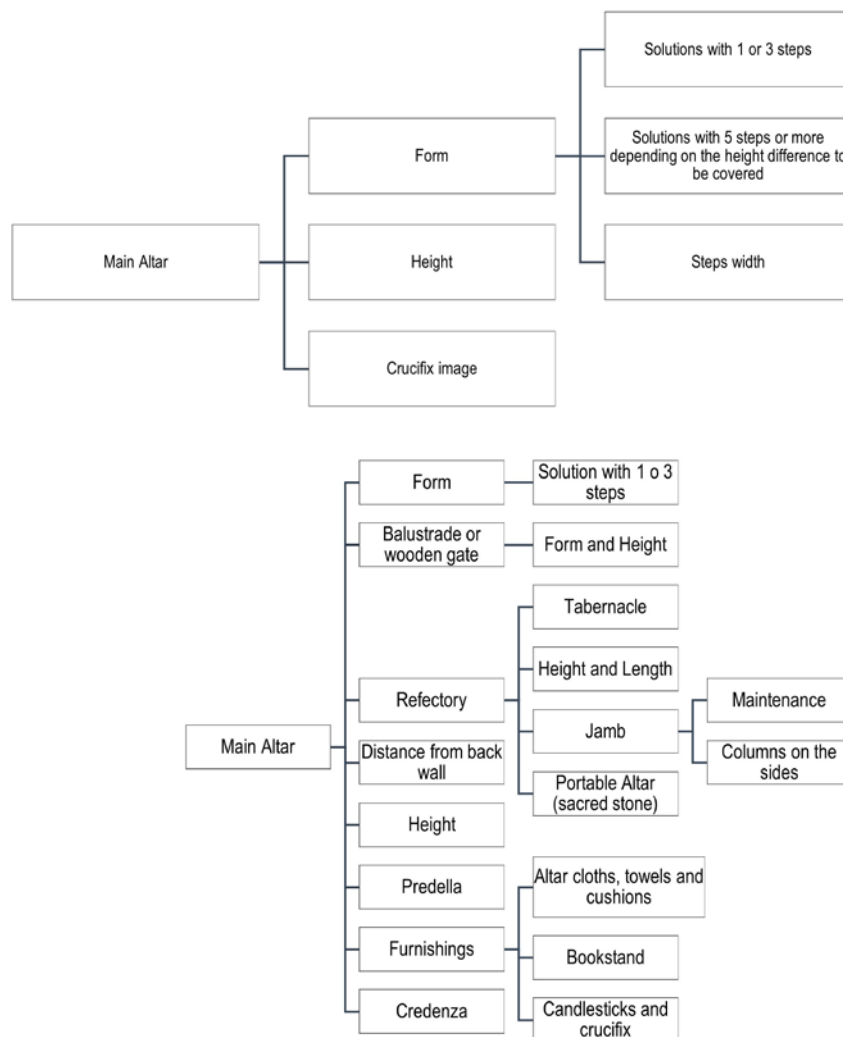
Figures 10-11. *Detail of the Development of the Item 'Main Altar' in the Instructiones of Saint Charles (top) and in the Rettore Ecclesiastico (bottom)*
Source: Author's elaboration.

Conclusions

The massive circulation of the *Antica Basilicografia* and the *Rettore ecclesiastico* in the undergrowth of the ecclesiastical literature of the time can be explained by the fact that we are dealing with a perfect synthesis of Orsini's discipline, whose key principles are the formation of a clergy suited to the care of souls and the meticulous attention given to sacred space. Orsini's pedagogical choice, centred on the importance of the pastoral visit, is intertwined with the archetype of Carlo Borromeo's *Instructiones*, examined on the concrete dimension of the local tradition. The use of the 'ad arbores' technique, index of a vision of religious building linked to concreteness and practical reason, allowed to adapt in time the compositional scheme of the Caroline treatise, leading the Good Shepherd

to change, correct or innovate principles and corollaries to 'invent solutions suitable for the infinite ways in which the fragility of man is manifested, to support and accompany him with Christian charity in the path of faith'.[44] Like Orsini, who more than anyone else embodies the model of Saint Charles par excellence, many other contemporary prelates of the South set up their pastoral practice, emulating the sixteenth-century norms. The study of the various 'Instructions' that were printed between the seventeenth and eighteenth centuries allows us to look at the religious architecture of these times from a different perspective, making the text of St. Charles, with all the local variations, one of the possible normative sources. After all, as Kirschbaum stated, 'the Catholic Reformation created neither Mannerism nor Baroque: it found them, infused them with its spirit, and made use of them'.[45]

Acknowledgments

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44. Gatti Perer, op. cit., 1986, 624.
45. E. Kirschbaum, "L'influsso del Concilio di Trento nell'arte," in *Gregorianum*, 26 (1945), 106.

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10 Variations of an Architectural Design Theme Analogy between Compositional Principle and Musical Theme in the Design of the "Napoleon and the Myth of Rome" Exhibition Project

By Marta Isabel Sena Augusto[*]

The essay "10 variations of an architectural design theme" use comparative analysis to analogize the morphological development of an architectural compositional principle with the variations of a musical theme. The case study is the design of the temporary exhibition "Napoleon and the myth of Rome"[1] in the archaeological complex of Trajan's Markets - Museum of the Imperial Fora. This temporary exhibition, with more than 100 works – including sculptures, paintings, prints, medals, gems, etc. - some from the same period as those in the permanent exhibition, has to dialogue with the archaeological complex and the permanent collection from its own identity. The team of architects who designed the installation of the temporary exhibition chose to start from a clear compositional principle that throughout the exhibition path loses, gains, sublimates, or simplifies elements as it adapts to the specifics of the space, program, lighting, and permanent collection pieces location, in order to discern the temporary exhibition from the permanent collection. Through this case study, we can see how each of the variations, in architecture as in music, reinforces and helps to achieve higher comprehensibility of the main theme.

Introduction

Theme and Variations

Any complete musical form is based on variations on a main theme. During the performance, the theme is repeated in altered forms or accompanied in different ways. The musicologist Ottó Károlyi defines the principle of variation as "founded on a series of repetitions in which the contrasting elements are the variations themselves. The 'known' part, i.e., the theme, remains more or less unchanged while the 'unknown' part corresponds to the ways of varying the theme, usually employing melodic, rhythmic, harmonic and colouristic changes. Usually, the theme is clearly stated at the beginning of the series of variations and

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followed by the 'elaborations', precisely the variations; their number is free but rarely exceeds 32".[2]

Variations are free within the limits of the rules and elements determined by the compositional principle. Leoncilli Massi again makes it clear: "To vary is to invent the new; it is to give form to the idea of space, to construct spatial harmony without interrupting the circularity of the compositional 'mimesis' of variation, without ever leaving the tracks on which the preconceived fields develop, except at the risk of dissolution. To vary is to compose".[3]

In music, the variations on the main theme can be: harmonic - changing the concatenation of simultaneous sounds (chords); melodic - the identity of the succession of sounds and silences; contrapuntal - the interplay of melodic lines playing simultaneously; rhythmic - the cadence in the succession of elements; and timbre - change of sound within the same frequency.

According to the architect and composer Giovanni Giannone, the variation of the main theme in music is comparable to the morphological development of the compositional principle in architectural design. In his book *Architecture and Music*, quoting Anton Webern, points out that the word canon - the principle of polyphonic writing - was adopted from Greek sculpture and architecture where it designated the system of "proportioning of the parts. Assuming the 'fundamental importance of the principle of repetition for the purpose of higher comprehensibility',[4] this supreme law, to better understand the canon, necessary and viable through a clear articulation, i.e., distinction between main and secondary parts, and coherence".[5]

Variations tend to retain the information of the compositional principle. The compositional principle may be considered a morphological hypothesis that configures the spatial structures whereby it is possible, by realising it, to pursue the whole of the intentions of the design.

We can explain the compositional principle in architecture just as Weben explicitly refers to Goethe's theory of Urpflanze to explain the principle of variation in music: "The roots are nothing but the stem, the stem is nothing but the leaf, the leaf is nothing but the flower: variations of the same thought".[67]

An architectural work is an ensemble of explorations of a compositional principle, which in the field of music would be the variations on a theme. As the architect and composer Leoncilli Massi explained, "each variation or iteration and repetition of concepts corresponds to the conquest of a previously unknown value due to the progressive clarification of the initial idea".[8]

The development of the compositional principle in architectural design, as the main theme in music, requires the exercise of innumerable possibilities of variation.

2. O. Károlyi and M. Porzio, *La Musica Moderna. Le Forme e i Protagonisti da Debussy al Minimalismo* (Milano: Mondadori, 1998), 124.

3. G. C. L. Massi, *La Leggenda del Comporre* (Firenze: Alinea Editrice, 2002), 214.

4. A. Webern, *Il Cammino Verso la Nuova Música* (Milano: Giampiero Taverna, 1960), 41.

5. Ibid, 30.

6. Ibid, 90.

7. G. Giannone, *Architettura e Musica Questioni Di Composizione* (Palermo: Caracol, 2010), 25.

8. Massi, *La Leggenda del Comporre*, 2002, 12.

In the phase of producing variations - development of the compositional principle - image production increases. Many hypotheses are tested and abandoned.

The compositional principle in architectural design, as a main theme in music, is also a system of rules whereby a certain degree of control and spontaneity and improvisation is permitted. The rules in architectural design are formal, spatial, and synesthetic and can determine both the genesis of morphology and how spaces are experienced by the user. As English architect and historian Alan Colquhoun points out, "the system of rules can also include the human behaviour of the building's users, as can be seen in Le Corbusier's drawings, in which he seems to add to the expectation of architecture something that in earlier times belonged to a system of norms outside it: the rules of social behaviour (...) what was once part of the *langue* became the function of the *parole*".[9]

Analogous to what happens in musical themes, in architecture, the compositional principle formulates and even formalises the rules of organisation of morphology and also constitutes a memory - storage and classification - of schemes of action that delimit the possibilities of morphological articulation according to the occasion.

In architectural design, the process of developing a compositional principle oscillates between the parts and the whole. Every single variation requires verification of the coherence of the whole. The objective and purpose of the compositional principle are to give coherence to the whole and remain within the same formal family despite the specificity of the individual parts. The compositional principle thus presupposes the idea of a complete and closed totality, designed to function within its own system. In this sense, an element external to the compositional principle will seem dissonant or false. However, a compositional principle with clear rules allows for the existence of exceptions to the rule. Exceptions are not extraneous elements, they are rebellious elements that reaffirm the presence of the rules and help achieve higher comprehensibility of the main theme.

The Museum of the Imperial Fora and Napoleon

To the east of the Trajan's Forum, at the foot of the Quirinal hill, lies the Trajan's Market: a complex built at the same time as the Forum, at the beginning of the 2nd century, interpreted as the endpoint of a gigantic Roman system beginning with Trajan's Port at Fiumicino, used to supply the capital.

The discovery of this important complex is due to Napoleon, who decreed in 1811 - when Rome was annexed to the Napoleonic Empire - the demolition of the Sant'Eufemia block and the excavation of the area south of Trajan's Column but it was not until 1926-1934 that the Roman complex was freed from subsequent interventions, recognised as a Roman "market" and reconstructed.

Built on six levels the complex of Trajan's Markets occupied and supported the cut of the Quirinal hill (about 40 metres high) that through a series of successive steps, articulates the curvilinear layout of the exedrae behind the porticoes of Trajan's Forum, with the rectilinear layout of the surrounding urban fabric.

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9. Colquhoun quoted by S. J. Morales, *Arquitectura y Proyecto* (Sevilha: Ed. Kronos, 1991), 95-96.

Since 2007, this complex hosted the Museum of the Imperial Fora, which occupies the buildings of the Great Hall and the Central Body and includes the Great Hemicycle with the section of Trajan's Forum. The permanent collection of the Museum comprises sculptural fragments from the Imperial Fora, which are often reassembled to give the visitor a sense of their original entity.

The Aim of this Paper

It was in this archaeological context, occupied by the permanent collection of the Museum of the Imperial Fora, that the Roman architectural studio Wise Design was commissioned to design the temporary exhibition "Napoleon and the Myth of Rome" for the celebration of the bicentenary of Napoleon's death (May 5, 2021).

This temporary exhibition, with more than 100 works - including sculptures, paintings, prints, medals, gems, etc. - some from the same period as those in the permanent exhibition, should permit an autonomous reading with respect to the permanent collection but also dialogue with it and with the archaeological ensemble on the basis of its identity.

The design of this exhibition is particularly interesting from the point of view of architectural composition because the exhibition project is based on the search for a clear compositional principle, capable of distinguishing the temporary exhibition from the permanent collection and maintaining this identity, even while interrupting and reappearing in the different spaces of the Museum.

In this case study, the analogy between a musical theme and the compositional principle in architecture is quite evident.

Throughout the exhibition, the theme is altered by losing, gaining, sublimating, or simplifying elements as it adapts to the specifics of the space, programme, lighting, and permanent location of the collection pieces.

The aim of this paper was to analogize the morphological development of an architectural compositional principle with the variations of a musical theme, identify the compositional principle of the exhibition project "Napoleon and the Myth of Rome" and describe each of the variations to the compositional principle and the motivations of the changes operated in each of the variations.

The Elements and Guidelines of the Compositional Principle in the "Napoleon and the Myth of Rome" Exhibition Project

The design team encountered two main difficulties: The first is related to the fact that the temporary exhibition would have to coexist within the permanent exhibition and without displacing the works of the permanent collection, the second is that the physical space, i.e., the interior spaces of the market, not having been conceived as an exhibition space, presents a series of very complex problems

such as natural lighting unrelated to the function[10] of the exhibition, the placement of artificial lights on the works of the permanent collection, the impossibility of anchoring to the walls, and low temperature and conditions of humidity in hosting works of art.

The need to have the temporary and the permanent exhibitions coexist led to the wish to make the temporary exhibition identifiable. This recognisability was entrusted to a clear compositional principle: the exhibition carpet. There are three elements of the composition principle:

1. walkable platforms/ramps;
2. vertical surfaces, varying in height by more than 2 metres, where niches and display cases can be opened[11];
3. display cases and 75 cm high parallelepiped podiums.

There are three guidelines to the compositional principle:

1. The walkable platforms/ramps are always flanked, at least on one side, by a vertical display surface where showcases can be opened.
2. The walkable platforms, vertical surfaces, and podiums are painted petrol blue. Pre-spaced graphic elements representing swarms of Napoleonic bees are superimposed on the blue vertical surfaces.
3. The chromatic criterion for the interior of the niches and showcases opening in the vertical surfaces is to provide a golden background to the metal pieces, such as sculptures and medals, and a blue background to the stone statues.

The 10 Variations of the Compositional Principle in the "Napoleon and the Myth of Rome" Exhibition Project

The Blue Wall Variation

From Via IV Novembre, we find the monumental arch at the entrance of the Markets of Trajan and we enter directly into the Great Hall, by a methacrylate roof that protects the building from atmospheric agents and contaminators (Figure 1).

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10. In some cases, it was necessary to obscure the windows with a black canvas with a hologram of Napoleon's rostrum which seems to appear and disappear depending on the visitor's movements.

11. Some of the showcases of the vertical surfaces are air-conditioned, 26 in total. In addition to their function as display niches, these showcases have the function of guaranteeing the necessary temperature and humidity conditions for each individual work. There are also concealed doors in the vertical panels, which allow the maintenance technician to access the technical cavity to control the light and change the salts in the drawers connected by holes to the showcases and to reduce the humidity of the air inside.
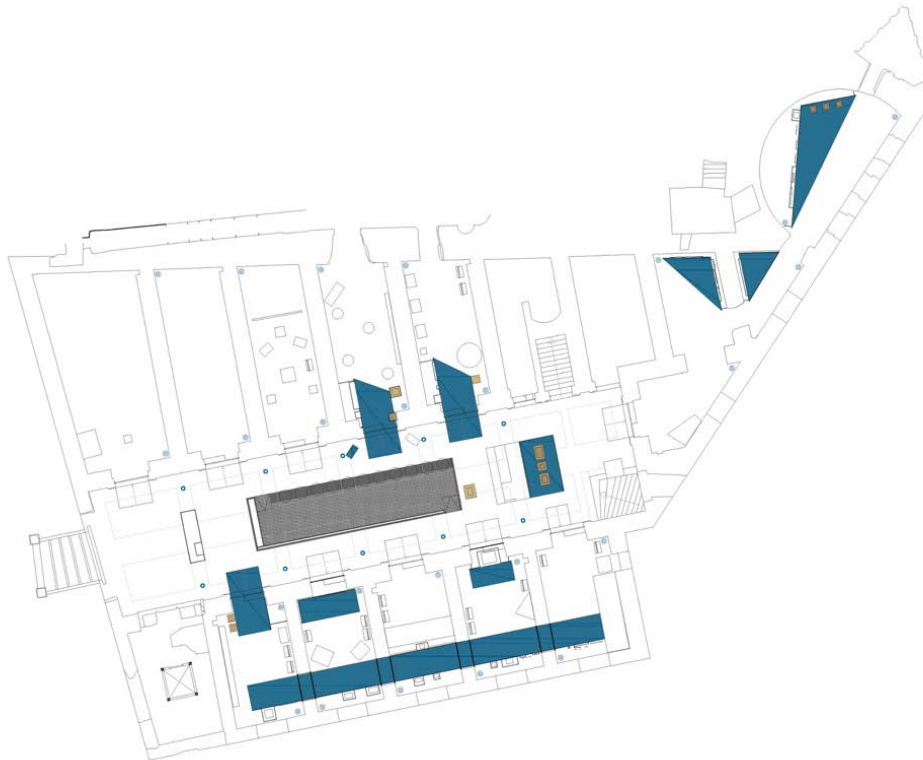
Figure 1. *Planimetry of the First Floor of the Museum of the Imperial Fora with the Addition of the Temporary Exhibition "Napoleon and the Myth of Rome" Project*
Source: Wise design.

The Great Hall, is a large rectangular plan room (32x8 m) that occupies the height of two floors, covered by a vault composed of six crosses in Roman cimento - *opus caementicium*[12] *and* flanked on both long sides by five *tabernae*, which face directly onto the hall with doors framed in travertine and surmounted by a window which raises the light from the Great Hall to inside the *tabernae*.

In front of the entrance door, we find the first variation - *The Blue Wall* - a blue wall (300x300x90 cm) with the colophon and an introduction to the exhibition.

Turning the *Blue Wall* we find, on the right, in a gilded niche, the bust of Johann Joachim Winckelmann next to his famous phrase: "The only way for us to become great and, if possible unsurpassable, is to imitate the ancients". This phrase serves to introduce the second part of the exhibition - The Blue Ribbon.

In this first variation, the design compositional principle of the exhibition project, does not have a walkable surface or podiums. Of the three elements that make up the main theme - walking platforms, vertical surfaces, and podiums - it presents only the blue vertical surface that gains in thickness, becoming a thick wall that divides the Great Hall from the space immediately adjacent to the museum's entrance door.

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12. The complex was built using the construction technique of *opus latericium* (Roman concrete covered with a brick veneer). The pavements make extensive use of *opus spicatum* (cut bricks arranged in a herringbone pattern).

The Blue Ribbon Variation

At this point, at the back of the *Blue Wall variation*, we see a ramp of the same blue colour that invites us to enter a lateral *taberna* (Figure 2).

Figure 2. *View from the Great Hall with the Back of the First Variation of the Temporary Exhibition Project - The Blue Wall*
Note: In front of us, we can see the entrance to the blue ribbon variation.
Source: Marcela Grassi.

On this side of the Great Hall, all five taverns are joined by aligned doors that form a corridor running through all the taverns by the back wall.

The project of the temporary exhibition uses this connection to roll out a 23 metres long blue carpet along the five *tabernae*, as well as a vertical display surface flanking it on the right, covering the rear wall.

The *Blue Ribbon* variation is a part of the exhibition dedicated to the timeline of Napoleon's life and his Roman role models (Figure 3). Along the vertical surface, niches are carved in which images of Napoleon and his idols can be seen in chronological sequence: in the first of these niches we see Louis Rochet's

plaster cast for the statue of *Napoleon cadet at Brienne-le-Château carrying De viris illustribus* by Cornelius Nepote - the book with which Napoleon deepened his passion for the great heroes of the age, such as Alexander the Great, Hannibal and Guilio Caesar, his great role models.

Figure 3. *View of the Interior of the Blue Ribbon, from the Last Taberna towards the First One*
Source: Marcela Grassi.

In the second and fourth *tabernae*, the large ribbon is echoed on the left by isolated vertical surfaces - leaning against the opposite wall and closing off the *tabernae*'s access to the Great Hall. On these islands, which are away from the carpet, are exhibited large works which benefit from the distance to the carpet for better viewing. In the second tavern, for example, there is a reproduction of the great equestrian portrait of Napoleon *Bonaparte Crosses the Alps* painted by Jacques-Louis David, between 1800 and 1803, which faces Alexander the Great on horseback (from the National Archaeological Museum of Naples) that is in a niche in the blue surface, while two statues by *Dacci* from the permanent collection face the great equestrian portrait of Napoleon and turn their backs to the *Blue Ribbon* (Figure 4). All through the exhibition we find this type of situation in which works from the permanent collection share space with those from the temporary exhibition, and given their figurative affinity, sometimes they seem to belong to the temporary exhibition, but in other places they seem to overlap with it.

Figure 4. *View of the Interior of the Second Tabernae, with the Acéphalous Loricate Statue, Trajan's Age, 112 A.D., from the Permanent Collection that Faced the Large Equestrian Portrait of Napoleon and Turn its Back to the Blue Ribbon*
Source: Author.

A 9 hour film from 1929 about a young Napoleon is shown on the screens. On the island of the fourth *tabernae* there is the large bronze bust *Napoleon I Emperor with the laurel wreath*, by Lorenzo Bartolini, from the Louvre museum.

In the last *taberna* we find the end of the Blue Ribbon, the exit to the Great Hall, and a window onto the Forum. The section of the Blue Ribbon ends with a reproduction of Horace Vernet's painting *Napoleon Awakening to Immortality*, which represents Napoleon rising from a grave.

In this variation, we find all the elements of the compositional principle - walking platforms, vertical surfaces, and podiums.

The Map Variation

Historical background: The Napoleonic Kingdom was founded by Napoleon Bonaparte, when the French general crowned himself sovereign of the former Italian Republic.

Napoleon decided not to annex the conquered Italian territories to the French Empire and, in 1805, he founded the Kingdom of Italy - which included central and eastern Italy and much of the north with Milan as its capital - and proclaimed himself King of Italy and, at the same time, became Emperor and king of two

different administrative entities. The Kingdom of Italy did not survive the fall of its monarch and was dissolved in 1814.

The exhibition design: At the exit of the last tavern we find a blue platform with three podiums surmounted by plexiglass showcases holding Pacetti's sculpture group *Napoleon inspires Italy and makes it rise to greater destinies*, from the Castle of Fontainebleau, and two busts of Napoleon crowned in Carrara marble (Figure 5). These three statues face the map of the kingdom of Italy administered by Napoleon and the French empire that occupied a large part of the peninsula at the time.

Figure 5. *View of the Map and the Three Podiums in the Great Hall*
Source: Marcela Grassi.

The map is displayed on a blue wall - similar to the first variation-. In this case, the vertical blue surface involves the reconstruction of the attic from one of the porticoes in the Forum of Augustus.

As in the previous variation, in the *Map* we find all the elements of the compositional principle - walking platforms, vertical surface, and podiums - that demarcate the space of the temporary exhibition inside the museum.

The Tree-lined Boulevard Variation

Historical background: for Napoleon, the conquest of Rome in 1809 represented the concrete possibility of making Rome the second city of the Empire, as established by the senate-consultation of 17 February 1810 with the aim of

applying the urban planning criteria to Rome that would transform it into a second Paris.

One of the most emblematic architectural elements of the Napoleonic government's urban planning policy was the tree-lined promenade, the public use of which elicits the dynamics of socialisation and acculturation. From the gardens of aristocratic villas, inaccessible to common people, they continue to the open spaces of promenades.

Tree plantations were only established and extended to suburban streets at the beginning of the 19th century on the initiative of the Napoleonic regime. The straight tree-lined streets became one of the programmatic forms in which the Napoleonic state accentuated its presence on the territory, showing its ability to implement a global project and became the icon of Napoleon's complex urban planning policy.

The exhibition design: for the Great Hall, the curators had asked the design team to design a seating area with plant elements - a kind of Napoleonic garden. The design team, instead, decided to occupy the centre of the Great Hall with a seating area representing the Napoleonic tree-lined boulevard.

Behind the Map, is a podium displaying the bust of Antonio Canova, a leading figure on the Roman artistic scene at the time.

For the Great Hall, the curators had asked the design team of a rest area with plant elements - a kind of Napoleonic garden. The design team decided instead to occupy the centre of the Great Hall with an installation representing the Napoleonic tree-lined boulevard.

Economic constraints also determined this variation: since the budget was only enough to build half of the tree-lined boulevard, the Wise Design team decided to make a single tree line out of the nine cypresses and cover the vertical surfaces with Dibond composite panels with a mirror effect. On the long side, this mirror effect served to restore the symmetry of the tree-lined avenue, and on the short sides, it served to remove any dimensional reference to the tree-lined avenue segment, stretching it to infinity.

For the flooring, the team of architects opted for a grey laminate flooring evoking a paving stone from an avenue.

The installation is in the shape of a 3 metre high parallelepiped, defined with a 13 metre long left side and two short ends about 3 metres long. The right side, on the other hand, is 70 cm high and 70 cm wide, and punctuated by nine circular holes from which nine live cypress trees, some 5 metres high, sprout (Figure 6).

According to the Wise team, the materialisation of this tree-lined boulevard, with its successful completion through a play of mirrors also represents Napoleon's presence and absence in Rome. The fact that Napoleon was never in Rome, never saw Rome with his own eyes,[13] and also the fact that the vast programme of urban

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13. Despite Napoleon's fascination with Rome to the point of drawing inspiration from Imperial Rome and its art and culture as a propaganda language to illustrate his power and greatness, and the fact that his mother, sister Pauline and brother Lucien had lived in Rome, Napoleon did not go there during the first Italian Campaign, stopping in 1797 at Tolentino where the treaty with the Papal States was concluded; in 1812, he opted to travel to Moscow, the "third Rome", a journey that would mark the decline of his dominion over Europe and his eternal absence from Rome, and

transformation that the Napoleonic government wanted to apply to Rome was never fully realised.

This variation would differ radically from the others in terms of the material and chromaticism of the elements of the compositional principle, but on a compositional level, it resulted as a sublimation of the constructive principle, which is materially and semantically ennobled at this point. The elements of the compositional principle - vertical surface, the walkable platform, and the podium - are brought together in a purer, more finished form. The blue colour has given way to a mirror-like surface that operates the evanescence of the materiality of the elements.
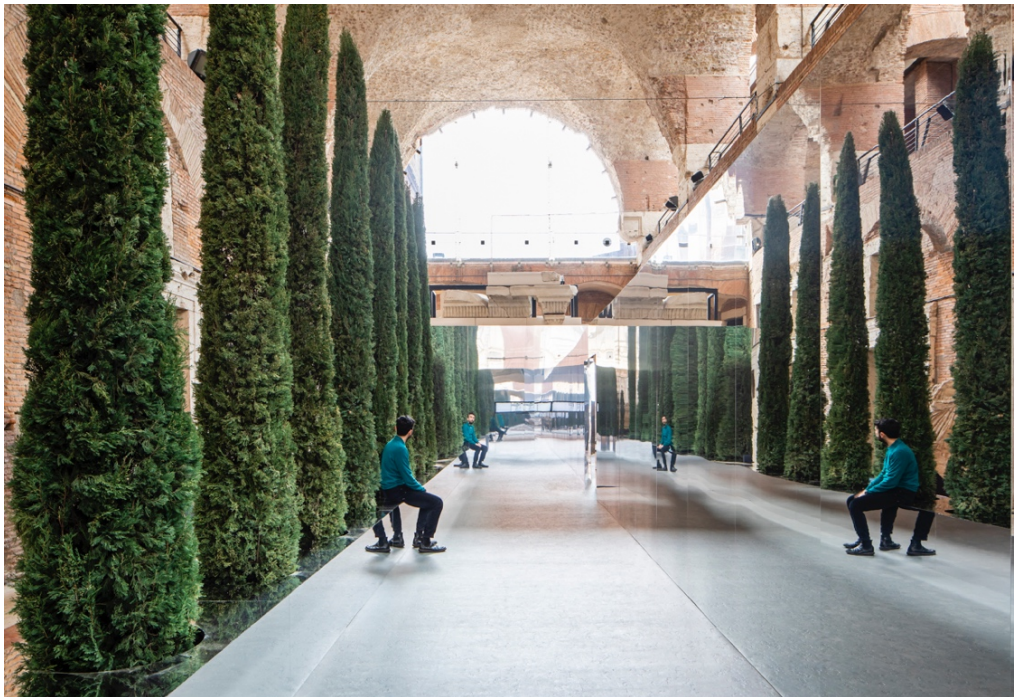
Figure 6. *View Inside the Tree-lined Boulevard Variation*
Source: Marcela Grassi.

The Two Tongues Variation

Historical background: Napoleon's relations with the Papacy were extremely complicated. This hostility led Napoleon to invade the northern regions of the Papal States in 1796. In 1797 Pius VI was forced to sign the Treaty of Tolentino, which provided for the cession of occupied territories to France and the handing over of countless works of art. In 1798, Napoleon's army invaded Rome and proclaimed the Roman Republic, declaring the end of the temporal power of the popes. Pius VI was taken prisoner first in Tuscany and then in Valence, France, where he died.

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although Rome had embellished itself by preparing for his arrival, the relationship between Napoleon and Rome was one of absence.

With his successor, Pius VII, Napoleon had a more conciliatory attitude at first. In 1801 the Concordat was signed and in 1804 Pius VII was invited to Paris to attend the coronation at Notre Dame but this apparent entente did not last and led to Napoleon's occupation of Rome from 1809 to 1814. Pope Pius VII was first exiled to Savona and then to Fontainebleau.

During the occupation, the Napoleonic Government of Rome, with the intention of enhancing Trajan's Column, promoted the destruction of the southern block to create a large elliptical square. During the works, the ruins of the Basilica Ulpia were discovered. The findings, including some ancient Dacian statues, are now part of the Museum's permanent collection.

On his return to Rome in 1814, Pius VII completed several urban projects initiated by the French government, such as the excavated area of the Basilica of Ulpia - which in fact took the name "Recinto di Pio VII" - and commissioned the sculptor Antonio Canova to bring back to Rome the artistic heritage looted by the French.

The exhibition design: crossing the cypress-lined boulevard we are guided to the *tabernae* on the other side of the Great Hall. As in the *Blue Ribbon* variation, a blue ramp indicates the entrance to the *taberna* where the temporary exhibition continues. This section occupies two *tabernae* which are interconnected at the back, forming an exit and return circuit to the Great Hall.

The temporary exhibition occupies a small part of the *tabernae* adjacent to the Great Hall. In this variation, we find all the elements of the compositional principle: the blue floor, a vertical blue surface with showcases and the podiums of the same colour.

In the first of these taverns, the temporary exhibition and the pieces of the collection are displayed in an exemplary manner: the statues of four Dacians - part of the permanent collection - found during the Napoleonic excavations of the Ulpia Basilica, complete this section of the temporary exhibition dedicated to the excavations of the Ulpia Basilica with plants of the area and two engravings, from the period, by A. Uggeri.

The second tavern is dedicated to the complex relationship Napoleon had with the Papacy and religion. The exhibition design is very similar to the previous tavern. Here too, we find the three elements of the compositional principle: the blue floor, the vertical blue surface where the bust of Napoleon crowned with laurel by A. L. Boyle faces the bust of Pius VII, installed on a podium in front of it (Figure 7).

Figure 7. *View of the End of the "Two Tongues Variation" with the Blue Walkable Platform that Protrudes into the Great Hall, like a Tongue*
Note: In front of us we see two cypresses and their reflection of the "the tree-lined boulevard" variation.
Source: Marcela Grassi.

The system of the *Two Tongues variation* ends with the blue walkable platform which, freed from the vertical surface becomes a ramp that protrudes into the Great Hall, like a tongue.

The Three Triangles Variation

Historical background: Intended to modernize Rome and turn it into a second Paris, in 1810 the Napoleonic government created a commission for public works and charity. Giuseppe Valadier, Giuseppe Camporese, and Carlo Fea were appointed directors and drew up various projects for the urban renewal of large areas of the city, such as the one for Piazza del Popolo by Valadier; the transformation of Palazzo del Quirinale into Palazzo Imperiale, for Napoleon's lodgings (who would never visit), by Raffaele Stern or the tree-lined avenues to connect some monuments or existing buildings in the Pincio orchards.

Among these projects it was the arrangement of the archaeological area of the Imperial Fora and a square south of the Column of Trajan, which until 1811 was mainly occupied by two religious complexes for women: the Monastery of the Holy Spirit and the Conservatory of St Euphemia.

In the years 1812 and 1813, various projects were drawn up for this area and, finally, in December of 1813, the Commission of Embellishments surprisingly approved the project by the young Ticino architect, Pietro Bianchi, who went in the opposite direction to that of Valadier and Camporese: no longer a square inserted in the surrounding urban fabric, but a "Museum of Ruins": an enclosed archaeological area to be visited only to admire ancient finds up close.

The French occupation ended in January 1814, but work on the Trajan's Column area was resumed in May 1814 by Pope Pius VII.

The exhibition design: At the end of the great hall, we enter the Central body of Trajan's Markets where the three rooms of the old warehouses were originally located and today house no pieces from the permanent collection.

In this variation, the guiding lines of the relationship between the elements of the compositional principle undergo some changes: the walkable platform becomes triangular and the vertical surface unfolds at a right angle to form an L.

In the first room (Figure 8) we find, in front of us, a large painting depicting *St Euphemia and the Poor Clares*, originally located in the Church of St Urban. The adjacent vertical surface displays medals from the Church of St Euphemia and drawings of the area before the demolition. The triangular floor cuts the room with a diagonal line that ends at the doorway to the central room.

In the central room, dedicated to the projects for the reconstruction of the south area of the Column of Trajan after the demolition and excavation, are placed the three projects, drawn up in 1812 by Giuseppe Valadier and Giuseppe Camporese, for the arrangement of the Piazza della Colona Traiana, now kept in the Accademia di San Luca.

Here, the triangular treading surface fits perfectly with the original triangular shape of the room. The vertical exhibition surfaces occupy two of the perimeter walls and the platform adjacent to both of them leaves a passageway between the rooms.

Figure 8. *View of the First with the Large Painting Depicting* St. Euphemia and the Poor Clares
Note: The adjacent vertical surface displays medals from the Church of St Euphemia and drawings of the area before the demolition. The triangular floor cuts the room diagonally, ending at the doorway to the second room, on the right.
Source: Marcela Grassi.

The third and final room is a large vaulted hall. To break the vault, the vertical display surface starts at the entrance door and proceeds perpendicularly to the opposite wall - leaving, behind, space from the semi-circle of the vault to the technical gap -.

On the first vertical surface, we find paintings and drawings of the Imperial Forums and the area of Trajan's Column. The second vertical surface is a thin panel that serves as a backdrop to the three podiums with marble statues of Eros, Hescholapius, and Hercules child from Bevagna returned to the Capitoline Museum by the Napoleonic government in 1813.

The Z Variation

Turning back and returning to the Great Hall, we find, on the right, the 16th century staircase leading to the first floor (Figure 9) and second floor (now closed). The temporary exhibition continues in the Central Body, in the spaces where, probably, the seat of the procurator Fori Divi Traiani was originally located.

Figure 9. *Planimetry of the Second Floor of the Exhibition.*
Note: Central body of Trajan's markets with the addition of the temporary exhibition project.
Source: Wise design.

In this room (Figure 10), the great Napoleonic battles are represented in the exhibition by the Egyptian Campaign with the set of military operations conducted in Egypt and Syria in the period 1798-1801 that began with Napoleon's landing in Alexandria leading the French Armée d'Orient. After conquering Egypt Napoleon relinquished his command to General Jean-Baptiste Kléber to return to France, where the war of the Second Coalition was underway.

In the right of the entrance, we find an extraneous element (or exception) to the compositional principle: a vertical surface of about 3 meters where two insignias rest, superimposed by eagles with spread wings[14] - a symbol of Napoleonic empire - at the time they were carried by soldiers on horseback.

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14. The symbol of Napoleon's army - a golden eagle with spread wings - was chosen by Napoleon when he was proclaimed Emperor of the French in 1804. Napoleon replaced the previous symbol of the monarchy, the fleur-de-lis, for the eagle - the symbol of Imperial Rome.

Figure 10. *View of the "Zeta Variation" Room from the Entrance to the Exit*
Note: Through the exit doorway we can see part of the "zeta variation".
Source: Marcela Grassi.

In front of the entrance, we find a vertical exhibition surface, 2 meters high, which folds horizontally in two to form a Z shape in planimetry.

In the niches of the vertical blue surface, we can see works such as the engraving depicting General Napoleon Bonaparte in the Pyramids by Girardet, and the bronze statuette Bonaparte on a dromedary by C. J. Meurant.

In this variation of the temporary exhibition, the walkable platform is missing. This change is due to the small size of the room and the Z configuration of the display vertical surface: the platform would be so small that it would not be walkable, so the team of architects decided to do without.

The Blue Room Variation

Historical background: In 1809, when Napoleon announced his intention to travel to Rome, for a second coronation at St Peter's, the sculptor Bertel Thorvaldsen received the commission[15] to carve a frieze to decorate the Salone d'Onore of the Quirinal as part of the overall renovation of the palace chosen for Imperial seat.

Bertel Thorvaldsen's *Triumph of Alexander the Great in Babylon* frieze, which first version was made in stucco for the Quirinal Palace in Rome as part of the decoration of the imperial flats for Napoleon and his family, is one of the greatest masterpieces of 19th-century European sculpture.

This first frieze, representing Napoleon as the new Alexander the Great and heir to the Roman emperors, was so successful that Napoleon himself commissioned a new version, in marble, for the Temple of Glory in Paris. Left half-paid and unfinished due to Napoleon's fall, the commission for the high relief was then taken over by Gian Battista Sommariva, who paid the remaining fee and bought the work for his Villa Carlotta. This frieze is made up of thirty-three slabs depicting two processions, the Macedonian and the Babylonian, which converge in the central figure of Alexander the Great on a quadriga led by a winged victory. This frieze was placed in its final position in 1829 by Sommariva's son.

Bertel Thorvaldsen still makes several replicas of the Alexander the Great frieze, including one in marble for the Christiansborg Royal Palace in Copenhagen.

The exhibition design: The *Blue Room* variation is a square room dedicated to the display of five slabs of one of the plaster replicas of the frieze *The Triumph of Alexander the Great in Babylon* by Bertel Thorvaldsen, in the version preserved in the Musei Civici di Pavia (Figure 11).

The *Blue Room* was conceived with a rather canonical display mode, where a stand, placed halfway up the vertical surfaces, was to hold 17 pieces of a replica frieze. In the end, although the room was designed to hold all the 17 friezes, only 5 were exhibited.[16]

Two podiums with busts of the sculptor Bertel Thorvaldsen and the architect Raffaele Stern were placed at each side of the entrance to the room.

In this variation, the guidelines of the relationship between the elements of the compositional principle undergo the following changes: the walking platform becomes a square and the vertical surface embraces three of the sides of the square resting on the three walls of the room.

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15. Thorvaldsen has been recommended by the architect Raffaele Stern, who had been commissioned to renovate the Quirinal Palace to transform it into Napoleon's Italian palace.

16. Last June 11, the 5 frieze plates on display returned to the Musei Civici in Pavia and were replaced by a video showing the history of the frieze *The Triumph of Alexander the Great in Babylon* by Bertel Thorvaldse.

Figure 11. *View of the Blue Room Variation*
Source: Marcela Grassi.

The Fold Variation

Historical background: Trajan's Column is a monument erected in the Trajan's Forum that celebrated the conquest of Dacia (present-day Romania) by Emperor Trajan. It was the first cochlear column to be erected. Its reliefs depict the salient moments of that territorial expansion.

The Trajan's Column - 39.86 metres high, made up of 18 blocks of Carrara marble, each with a diameter of 3.83 metres - was originally surmounted by a bronze statue of Trajan.

In 1806, Napoleon Bonaparte, after his great victory at the Battle of Austerlitz, decided to melt down the bronze of 1,200 cannons captured from the Austrians and Russians and make a column in honour of his army inspired by Trajan's Column - the Vendôme Column.

The construction of the Vendôme Column, erected in Paris, was completed in 1810. The Column, is 44 metres high, has an average diameter of about 3.60 metres, rests on a plinth. The bas-relief depicts scenes from the period between the creation of the *Grande Armée* and was topped by a statue of Napoleon.

After the Battle of Paris in 1814, soldiers of the occupying Russian army tried to overthrow the Vendôme Column without success. In 1831, after the abdication of the last Bourbon king, Charles X, a statue of Napoleon dressed as a lance corporal, by M. Seurre, was reinstated on the Column. Later, Napoleon III had the statue dressed as a corporal replaced by another in imperial costume by the sculptor Dumont.

In April 1871, the Vendôme Column was destroyed at the behest of Gustave Courbet as a monument to chauvinism. Courbet was later ordered to pay the costs of reconstruction. The Vendôme Column was rebuilt as we see it today, but Gustave Courbet died before the payment of the first trance.

The design of the exhibition: the room that follows, as in the corresponding room on the lower floor, is a large room with a semi-circular vault and, to break up the vault, the vertical exhibition surface, with a height of 2.50 metres, starts at the entrance door and continue until it touches the vault at the exit door on the opposite side (Figure 12), leaving a large space for the technical gap.

Figure 12. *View of the Large Vaulted Hall with the Fold Variation Display*
Note: In order to break up the vault, the vertical exhibition surface starts at the entrance door and advances until it touches the vault at the exit door on the opposite side, leaving a large space for the technical gap. The blue pavement surface shrinks to the small triangular area, left free by the fold, not to be walked on but rather to complete the straight line that would have been defined by the vertical surface - door to door.
Source: Marcela Grassi.

In this section, the curators had asked the team of architects that the *Winged Victory* - a cast of the decoration of *Trajan's Column* - and a painting of Napoleon with the Winged Victory, face each other. The Wise Design team thought the best

way to do this, following the composite principle, was to bend the vertical surface in the middle of the two pieces to allow them to face each other.

In this variation, the blue pavement surface shrinks to the small triangular area, left free by the fold, not to be walked on but rather to complete the straight line that would have been defined by the vertical surface - door to door.

The Epilogue Variation

Historical background: On 2 December 1804, the coronation ceremony of Napoleon as Emperor of the French was held in Notre-Dame Cathedral in Paris.

Contrary to what is usually claimed, Napoleon did not want to take the crown from the hands of Pope Pius VII, who had traveled to Paris to attend the ceremony. A year later, Napoleon transformed the Italian Republic into the Kingdom of Italy and proclaimed himself King of Italy. The coronation took place in Milan Cathedral on 26 May 1805. Napoleon Bonaparte was dressed in the great costume of a King, with the royal mantle of green velvet, holding in his hand the sceptre and the hand of justice, and on his head the imperial crown on which Napoleon placed the iron crown. At that moment he uttered the famous words: "God gave it to me, woe to him who touches it".

Napoleon Bonaparte would be the last of the Italian sovereigns to wear the Iron Crown.

The exhibition design: The last piece of the temporary exhibition is a painting by François Gérard, dated 1805, *Napoleon in his coronation robes*, kept in Ajaccio, in the Palais Fesch-Musée des Beaux-Arts (Figure 13). This painting was initially planned to occupy one of the *tabernae* in the ground floor but, due to its condition, the Wise Design team proposed to place it on the first floor.

The vertical surface where it rests and which blocks the arched door is actually the size of the *taberna*. Due to the large size of the painting and the small size of the walking platform, 1 metre wide, it invites us to observe the painting either from very close or from very far.

At the end of the exhibition, a door permits us to go out, to the back of the Main Building, where we access a belvedere that gives us a unique perspective on the Roman Forum and *Trajan's Column* crowned by the skyline of contemporary Rome (Figure 14).

Figure 13. *View of the Last Piece of the Installation: The Painting* Napoleon in his Coronation Robes, *Painting by François Gérard, Dated 1805*
Source: Marcela Grassi.

Figure 14. *View from the Belvedere towards Roman Forum and Trajan's Column Crowned by the Skyline of Contemporary Rome*
Source: Author.

Conclusions

In the current panorama, temporary exhibitions are one of the most fertile channels of transmission in terms of the involvement of visual arts, graphics, and architecture. This, in particular, operates, as Pier Federico Caliari argues, the transformation of the classic model of the museum into a palimpsest – "like a coexistence of codes and overlapping of textures, as blurring and overlaying, as a trace and ruin together: in essence just like a palimpsest, that is, like an ancient parchment code scraped with pumice in order to be able to write on it again".[17]

The installation accomplishes a dilation of perception and an intensification of observation, moving between the poles of "density" and "intensity" and forcing the works, coming from different worlds, into a critical relationship that renews it. Taking up the Francesco dal Co's words "showing can coincide with the preparation of an 'opening', of a 'void'".[18] The exhibition design has the vitality inherent in its ephemeral components, which shrugs off the static nature of museographic design to speed up communication.

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17. P. F. M. Caliari, *La Forma dell'effimero. Tra Allestimento e Architettura: Compresenza di Codici e Sovrapposizione di Tessiture* (Milano: Lybra, 2000), 8-9.
18. F. Dal Co, "Mostrare, Allestire, Esporre," in *Mostrare. L'allestimento in Italia dagli anni Ventiagli anni Ottanta* (ed.) S. Polano (Milano: Lybra Immagine, 1988), 13.

The interaction between the archaeological complex, the permanent collection and the temporary exhibition, while, on the one hand, may have the ability to broaden the meaning of the objects shown, on the other hand - as its legibility is not automatic and is in direct dialogue with other possible readings - produces unconventional communicability.

Similarly to what happens in music between variations and the main theme, the architectural conception of the exhibition project oscillated between each of the variations and the whole exhibition. The aim and purpose of the compositional principle were to give coherence to the whole and to remain within the same formal family, despite the specificity of each of the variations.

In the sequence of the 10 variations, we see how each of them, oscillating between control, spontaneity and improvisation, corresponds to the conquest of a new, previously unknown value and the progressive clarification of the compositional principle. Using this case study to compare the variation of the main theme, in music, to the morphological development of the compositional principle, in architectural design, we assume the fundamental importance of variation for greater comprehensibility in reading the compositional principle.

We also verified how a compositional principle with clear rules allows the existence of exceptions to the rule, as it adapts to the specifics of the space, program, lighting, and location of permanent collection pieces, to distinguish the temporary exhibition from the permanent collection. In some variations the compositional principle loses elements, in others, it gains (as in The Z variation). In the *Three-lined Boulevard,* the variation gain cypresses and the compositional principle is sublimated, instead, in the *Wall* variation, it is simplified.

The compositional principle also constituted the formation of a layer in the memory with the possibility of being erased or turned on, allowing a new focus on the articulated narrative of the museum and the permanent collection. Through the overexposure of the layout of the temporary exhibition, the visitor experiences a kind of loss and rediscovery of a new identity of the complex and the works in the permanent and temporary exhibitions.

In the development of this compositional principle for the temporary exhibition, the question of temporality was decisive in an epistemological sense. In all 10 variations of the compositional principle, the exhibition design succeeded in anchoring the visitor to the contemporary and, from here, looking to the past. In this sense we find three distinct temporalities in the exhibition: the archaeological complex and the permanent collection represent a temporality frozen in the past, ecstatic, unchanging; In the blue installations everything is instantaneous: the lightness of the juxtaposition of the building's walls and floor, folded like sheets of paper; even the tree-lined avenue - which memory is present in its illusory symmetry, in its formal rationality, in the emptying out of the excesses of the contours and in the instantaneousness of the play of reflections - seems to have always been there, opening up a temporal vortex between the building's antiquity and the visitor's present day. As Gilo Dorfles argued, "sometimes it is the 'consciousness of the ephemeral' - the awareness on the part of the creator that he

is not creating a lasting work - that allows the architect to conceive structures that he would never have created".[19]

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19. G. Dorfles, "L'effimero nell'architettura," *L'Arca*, Luglio-Agosto (1988): 6-7.

Oswald Mathias Ungers at Belvederestrasse: Self-portrait in the Studio

By Martina D'Alessandro[*]

Planning implies a double register of actions. On the one hand the architect establishes a dialogue with the reality, performing a maieutic action that allows him to arrive to an epiphany concerning the context's deepest meanings. On the other hand, the obstetrical role of the architect is propaedeutic to the creative act of designing that, in the poietic impetus, pushes the architect towards the definition of a dynamic continuum of renewed principles. In the tension between maieutic and poietic, between autonomy and heteronomy of the architectural discipline, the nature of architecture is rooted. Working with the interdisciplinary dimension of architecture corresponds to the opportunity of drawing a cultural self-portrait, of which it is possible to decrypt the traits through the patient scanning of images, photographs, objects collected in the memorabilia. *Individuals like Oswald Mathias Ungers (1926-2007) express, in an extraordinarily clear and fascinating way, the attitude of working within architecture through other disciplines. OMU arrives on the scene of architectural culture not only for his works and his theoretical contributions, but also for the importance of his art and rare books private collection. The collected artworks are matrixes at the basis of his architectures, they reflect his ideas through the free tools of art. Ungers'* studiolo, *built in his house in Belvederestrasse in Cologne, assumes the value of a place of retreat in an ideal and inscrutable spot, in which Ungers can study his art collection and reflect on the cultural matrixes of his architecture. The thesis that this essay wants to explore is the relationship between OMU's architecture and the system of references to the sister arts of architecture, considering the Kubus-Haus as a paradigm of this interdisciplinary interweaving based on suggestions, analogies, similarities, connections and overlaps, that have created a general and complicated system akin to a palimpsest.*

Introduction

In architecture the act of *designing* is the projection of rational and inventive capacity on reality, it is the synthesis of a cognitive process that comprehends references, experiences, personal memories and collective history in a future–oriented continuous progress and creative action. Planning implies a double register of actions. Architect establishes a dialogue with the reality, performing a maieutic action that allows him to arrive to an epiphany concerning the context's deepest meanings. This maieutic attitude presupposes the acknowledgement of a reality, consisting of objects, places, traditions, histories and experiences, with whom it is necessary to establish a dialogue and from which it is possible to extrapolate principles, references and meanings. The obstetrical role of the architect is propaedeutic to the creative act of designing that, in the poietic impetus, pushes

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the architect towards a future time and defines his intent to establish a dynamic *continuum* of renewed principles. Architect's nature, which is bipolar in some way, is rooted in the tension between maieutic and poietic, between past and future. The architect is focused on acting as keeper of values of the past while he tries to become the engine of change, projected towards the future. If it is hard to ignore history, it is unavoidable to interpretate it. Architects and theorists have always dealt with the relationship between history and project, which is the guiding principle of the artistic and architectonic discipline. Geometries, that have defined hierarchical relationships between these two parts, have been articulated over time, sometimes they have delineated the project's dependence on the historical experience, other times they have been focused on the quest for a formal and linguistic outcome of a new architecture which apparently seems to be detached from history. The point of view on the actual situation, on the architectural design, intended as a leap into the past, through the present and with a future perspective, depends on the way history is interpreted. Personal and collective dimensions, individual memories and historical awareness are intertwined in the architectural design, in a complex and articulated set of relations. When facing a project, the architect does not limit himself to the knowledge of the history and the place he is working on. He is called to work on reality using personal and individual tools and interpretations. As John Berger says, the way we see the world is influenced by what we know or believe.[1]

Since his education, every architect should build his own personal and intimate *toolbox*, provided with all the useful tools to read and interpretate the reality, both physical and conceptual, both present and future, following many cultural and compositional principles. Building such an archive of *memorabilia* means defining the genetic material of one's own thinking, as the foundation of a new and necessary system that does not erase what was before it but, indeed, it draws the continuity with the past, which dwells in every new mark. This genetic structure represents the narrative of choices and the genesis of thoughts that guide knowledge, starting from what we have decided to include or exclude from our own cultural system.

It is an open and variable archive, which is fluid in its inclusiveness towards different memories and dissimilar selection criteria that build it up over time. Building an archive of memories is, first of all, a selective and critical act. Every individual, and every architect, chooses what is carrier of primary meaning, separating what is to keep in mind from what is necessarily to forget. Immediately after that, the theme of conservation is the one to discuss. The chosen element is detached, suspended and isolated from its original space and timeframe, in order to assume the role of witness of a value, that is worthy to be led in a future time and space. The selective and conservative action transforms the object into a find, a relic, giving it a surplus of meanings compared to the original semantic ordering.

Working with memory corresponds to the opportunity of drawing a cultural self-portrait, of which it is possible to decrypt the traits through the patient scanning of images, photographs, objects collected in the *memorabilia*. For some architects, places of the memory are actual spaces where they can nourish their

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1. John Berger, *Ways of Seeing* (London: Penguin Books, 1972), 10.

knowledge and they can generate architecture. Individuals like Oswald Mathias Ungers (1926-2007) express this attitude to work with memory in a remarkably clear and fascinating way. Oswald Mathias Ungers arrives on the scene of architectural culture not only for his works and his relevant theoretical contributions, but also for the importance and the peculiarity of his art and rare books private collection, still relatively unknown to reviewers. The collected artworks are matrixes at the basis of his architectures, they reflect and depict his ideas through the free tools of art.[2] Ungers' *studiolo*, built (1989-90) in his house in Belvederestrasse (1958-59) in Cologne, assumes the value of a place of retreat in an ideal and inscrutable spot, in which Ungers can study his art collection and reflect on the cultural matrixes of his architecture.[3] The cube-library changes the antiquarian attitude of the *amateur,* the connoisseur that collects documents, into the construction of an actual *theatrum memoriae*. This strongroom of memory and ideas is held by two fundamental principles: the first one is a systematic-encyclopaedic vision of architectural facts that is increasingly extending to universal dimensions whilst the second one is the tenaciously pursued will to reactivate and give life to the whole corpus through a hermeneutical device. This process is made possible by a radical use of the analogy.[4]

Through heteronyms use of memory, the architect builds his own self-portrait just talking about other people that influenced him: masters, philosophers, painters, sculptors, photographers, directors. Passions, encounters and clashes have had their influence on the architect's training and have nourished, yesterday and today, his architecture in many different ways. Images, books, principles, relics create an accurate and intimate auto-heterography,[5] a personal and private laboratory where the mind is fed and architecture is generated. Among the meshes of correspondences that, in a delicate balance that is neither immediate nor easy to read, bring together the more rational components of the author's research into form and the emotional and metaphysical aspects of the works of art he collects, a harmony emerges between art-space-idea, between reason and imagination. Ungers is not only familiar with some contemporary artistic experiments, but also shares the theoretical conceptions from which they derive. He constructs a process of gradual refinement of ideas in spaces and forms in which art is an *active* component. This point of tangency identifies an *interstitial space*[6] that puts two distinct dimensions into dialogue according to spatial overlaps and visual connections in a general and

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2. The conquest of space, the way of modelling the space through the shape represents the point of contact between collected artworks by Ungers and his architectures. The evidence of the strong figurative, compositional and theoretical relation between art and architecture is clear in the analogies between Ungers' design researches and artistic paths of the main exponents of conceptual art, such as Gerhard Merz (1947), Donald Judd (1928-94), Sol LeWitt (1928-2007) and Gerhard Richter (1932).

3. Jasper Cepl, *Oswald Mathias Ungers. Eine intellektuelle Biographie* (Colonia: Walther König, 2007), 470-472.

4. Pierluigi Nicolin, "Forza della Prussia!" *Domus*, no. 670 (March 1986): 10.

5. It refers to the reading of Giorgio Agamben, *Autoritratto nello Studio* (Milano: Edizioni Nottetempo, 2017).

6. The term "interstitial space" alludes to that limbo-space which describes the system of relations of passage from one dimension, that of architecture, to another, that of art, trying to indicate an appropriate translation of the meaning of the German word "Zwischenräume".

stratified system of relations. The thesis I intend to explore is that the relationship between art and architecture is positive and creative, in which the artistic element, while not representing the unique and necessary component for understanding architectural spaces, expresses a system of connections that refers to spiritual values, to other dimensions, complementary in the complex path that leads to the architectural project.

This investigation is focused on identifying certain points of contact between these two worlds, heteronomies and design, taking as its starting point the design for the Kubus-Haus library in Cologne. This building, thanks to its character and conformation, provides an opportunity to identify the relationships that link the genesis of Ungers' architecture to the system of heteronyms that the author keeps in the building. The presence of the books that OMU surrounded himself with, first editions and the incunabula of architectural theory, created an atmosphere that both inspires and demands[7] (Figure 1).

As Giorgio Agamben writes, "in the disorder of the sheets and books opened or piled up one on top of the other, in the disarranged postures of the brushes, colours and canvases leaning against the wall, the studio preserves the minutiae of creation, records the traces of the laborious process that leads from power to action, from the writing hand to the written sheet, from the palette to the canvas. The studio is the image of power – the power of writing for the writer, the power of painting or sculpting for the painter or sculptor."[8] Trying to describe Ungers' studio therefore means trying to describe the modes and forms of his own poiesis.

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7. Cepl, "Ungers and His Boocks. The Library as a Collection of Ideas," in *O. M. Ungers. Cosmos of Architecture* (ed.) Andres Lepik (Ostfildern: Hatje Cantz, 2006), 34.

8. Agamben, *Autoritratto nello studio*, 13. Our translation. Original text: "Nel disordine dei fogli e dei libri aperti o ammucchiati l'uno sull'altro, nelle posture scomposte dei pennelli, dei colori e delle tele appoggiate al muro, lo studio conserva le minute della creazione, registra le tracce del laborioso processo che porta dalla potenza all'atto, dalla mano che scrive al foglio scritto, dalla tavolozza alla tela. Lo studio è l'immagine della potenza – della potenza di scrivere per lo scrittore, della potenza di dipingere o scolpire per il pittore o lo scultore".

Figure 1. *Library Cube, View from the Corner of Quadrather Straße,* 1989
Source: Martin Kieren, *Oswald Mathias Ungers*, 1997.

Literature Review

Architectural critics have taken an ever-increasing interest in Ungers' work, be it in stone or in words, over the last decades, exploring its value from many different perspectives. There are numerous publications dealing with Ungers' architecture, both in Germany and worldwide. They are primarily aimed at the investigation of the architect Ungers, studied through monographs, monographic publications on specific built projects and critical essays published in the most important European specialist magazines commenting on the broad spectrum of buildings designed by the architect. The themes explored in this research touch on the entirety of the topics on which OMU's architectural poetics is built. His cultural and architectural training, his reflections on the city and urban design, the theoretical structure of his architecture, as well as its content, form and language are the aspects through which critics have broken down, analysed and interpreted Ungers' research on architecture.[9]

The relationship between art and architecture in the work of Ungers is investigated through contributions concerning the character of Ungers' private collection of artworks and rare books, including the essay *Eine Privatbibliothek in Köln- Müngersdorf* [10] (1991), *The Visit to the Architect's Hause*[11] (2006), *Ungers and His Boocks*[12] (2006), *The Collection of Architectural Models*[13] (2006) and the catalogue *O. M. Ungers. Kosmos der Architektur*[14] (2006) in which all the works of art from the Ungers collection are shown on the occasion of the retrospective exhibition of the master's work held at the Neue National Galerie in Berlin in 2006.

A series of publications explored the theme of collaboration between architect and artists in the composition of architectural projects, such as the catalogue *Oswald Mathias Ungers, Gerhard Richter, Sol LeWitt*[15] (1991) on the Hypo-Bank project in Düsseldorf (1988), the essay *Dach des Wissens*[16] (1992) on the Badische Landesbibliothek in Karlsruhe (1980-1991) and the essay *Kunst*[17] (1995)

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9. Jasper Cepl's biography not only accomplishes the enormous feat of completing the bibliography on the author, but also reveals another important point of view from which to view the figure of Ungers. Jasper Cepl, *Oswald Mathias Ungers. Eine intellektuelle Biographi*, 2007.

10. Werner Strodthoff, "Eine Privatbibliothek in Köln-Müngersdorf," *Bauwelt*, no. 16 (1991): 830-833.

11. Stephanie Tasch, "The Visit to the Architect's Hause. The Art Collection of Oswald Mathias Ungers," in *O. M. Ungers. Cosmos of Architecture*, 18-29.

12. Cepl, "Ungers and His Boocks," 30-39.

13. Oliver Elser, "The Collection of Architectural Models, Based on His Own and Historical Designs," in *O. M. Ungers. Cosmos of Architecture*, 40-53.

14. Ungers Archive für Architekturwissenschaft, *O. M. Ungers. Kosmos der Architektur* (Düsseldorf: Die Qualitaner, 2006).

15. Katharina Hegewisch, *Oswald Mathias Ungers, Gerhard Richter, Sol LeWitt* (Düsseldorf: Hypobank, 1991).

16. Noemi Smolik, "Dach des Wissens," in *Die Badische Landesbibliothek Karlsruhe. Eine Projekt der Staatlichen Hochbauverwaltung*, ed. Finanzministerium Baden-Wüttemberg (Stuttgart: Verlag Gerd Hatje, 1992), 52-61.

17. Sophia Ungers, "Kunst/Art," in *Deutsche Botschaft Washington, Neubau der Residenz– German embassy Washington, the new residence* (ed.) Oswald Mathias Ungers (Stuttgart: Gerd Hatje, 1995), 41-55.

on the project for the German Ambassador's Residence in Washington D.C. (1982-1995).

A recent contribution on this aspect is Martin Kieren's essay, *Konstellationen-Monologe*[18] (2009), in which he makes an interesting reflection on the surrealist component of Ungers' work.[19]

Studiolo

Kubus-Haus has been realized as an extension of his home-studio in Belverderstrasse in Cologne, which was built during the 1950s.

At first there was no library in Ungers' house. The books were stacked in a corner of the living room. His collection grew only gradually, especially during his time as professor in Berlin and Cornell. The books, and works of art, received their own room only after Ungers had returned from the USA, when the two bachelor apartments in the house were converted. The two rooms of the upper apartment were turned into a library room; the lower apartment became the studio[20] (Figure 2).

Later, Ungers would build his own library (1989-90). As Cepl wrote, "the villa was transformed into a small city within the city, surrounded by walls – in a way, it became a small Villa Adriana."[21]

Reading the famous essay that Ungers wrote in 1979, which anticipated the Kubus-Haus project by a decade, it is possible to trace the author's self-heterographical intentions, which are at the basis of the library project. "Hadrian's villa is the first evidence of an architecture of memory, collecting set-pieces from history, that had left traces in his mind, juxtaposing temples and canals from Egypt, caryatids from Greece, and places described in myths and sagas. The central place of the villa is the library, Hadrian's retreat, a place filled with the 'knowledge of antiquity'. The villa reassembles the idea of an ideal city, a humanist city, a place for the arts and sciences, a miniaturized Universe, where humanist ideals are gathered in a 'classical' evironment. In the same sense as the villa relates to events of the past it acts as a model for the future – not as a purist statement or a homogeneous system – but as a place filled with memories of the collective, as an object full of secrets and suprises, a "monumentum memoriam", as in the Latin sense of the word "moneo", meaning to "remember"[22] (Figure 3).

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18. Martin Kieren, "Konstellationen-Monologe. O. M. Ungers rationale Versuche, falschen Problemstellungen aus dem Weg zu gehen/Confi gurazioni-Monologhi. Tentativi razionali di O. M. Ungers per evitare una formulazione sbagliata dei problemi," in *Die Idee der Stadt/L'idea della città* (ed.) Uwe Schröder (Tübigen-Berlin: Ernst Wasmuth Verlag, 2009), 14-53.

19. On the relationship between art and architecture in Ungers' work, the author has published several contributions, including Martina D'Alessandro, "O.M.Ungers: la sinestesia tra arte e architettura. Il progetto per le Kaiserthermen di Trier," in *Il progetto di architettura fra didattica e ricerca* (ed.) Claudio D'Amato (Bari: Polibapress/Arti grafiche Favia, 2011), 361-370; Martina D'Alessandro, "Architettura come opera d'arte. Arte e architettura nell'opera di Oswald Mathias Ungers," in *OMU/AR. Un laboratorio didattico* (ed.) Annalisa Trentin (Bologne: Clueb, 2010), 82-89.

20. Cepl, "Ungers and His Boocks," 34.

21. Cepl, "Ungers and His Boocks," 34.

22. Oswald Mathias Ungers, "The Architecture of Collective Memory," *Lotus International*, no. 24 (1979): 7.
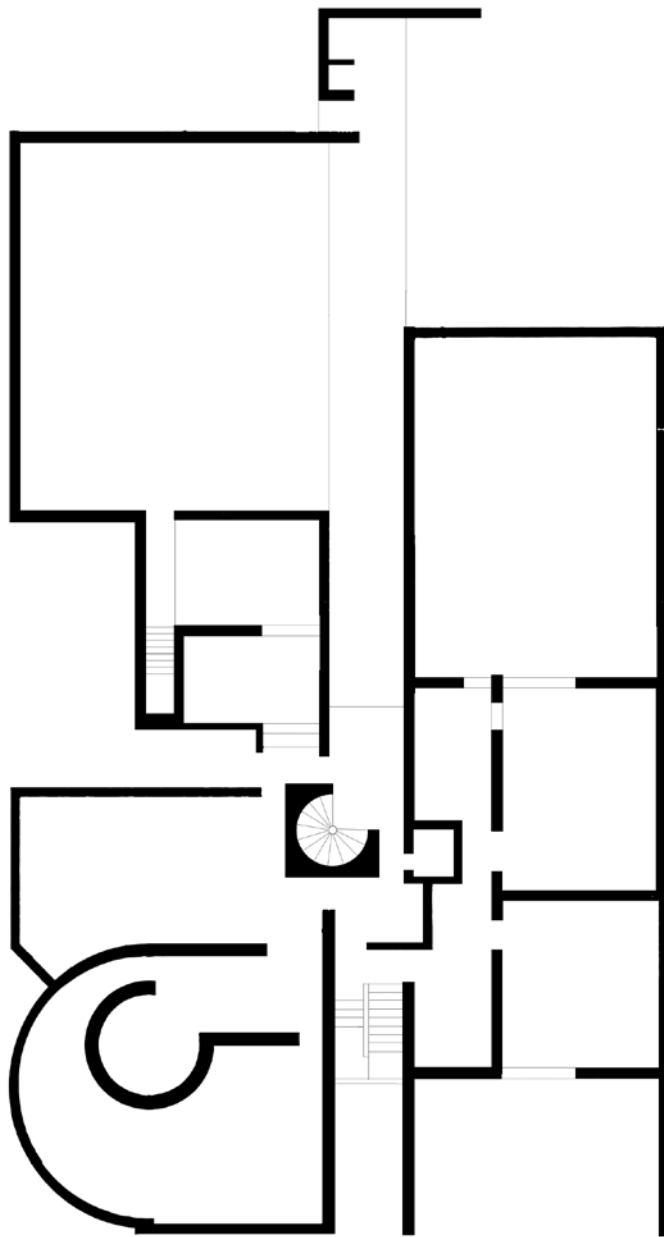
Figure 2. *Belvederestrasse Home Plan, Before the Intervention, until 1989*
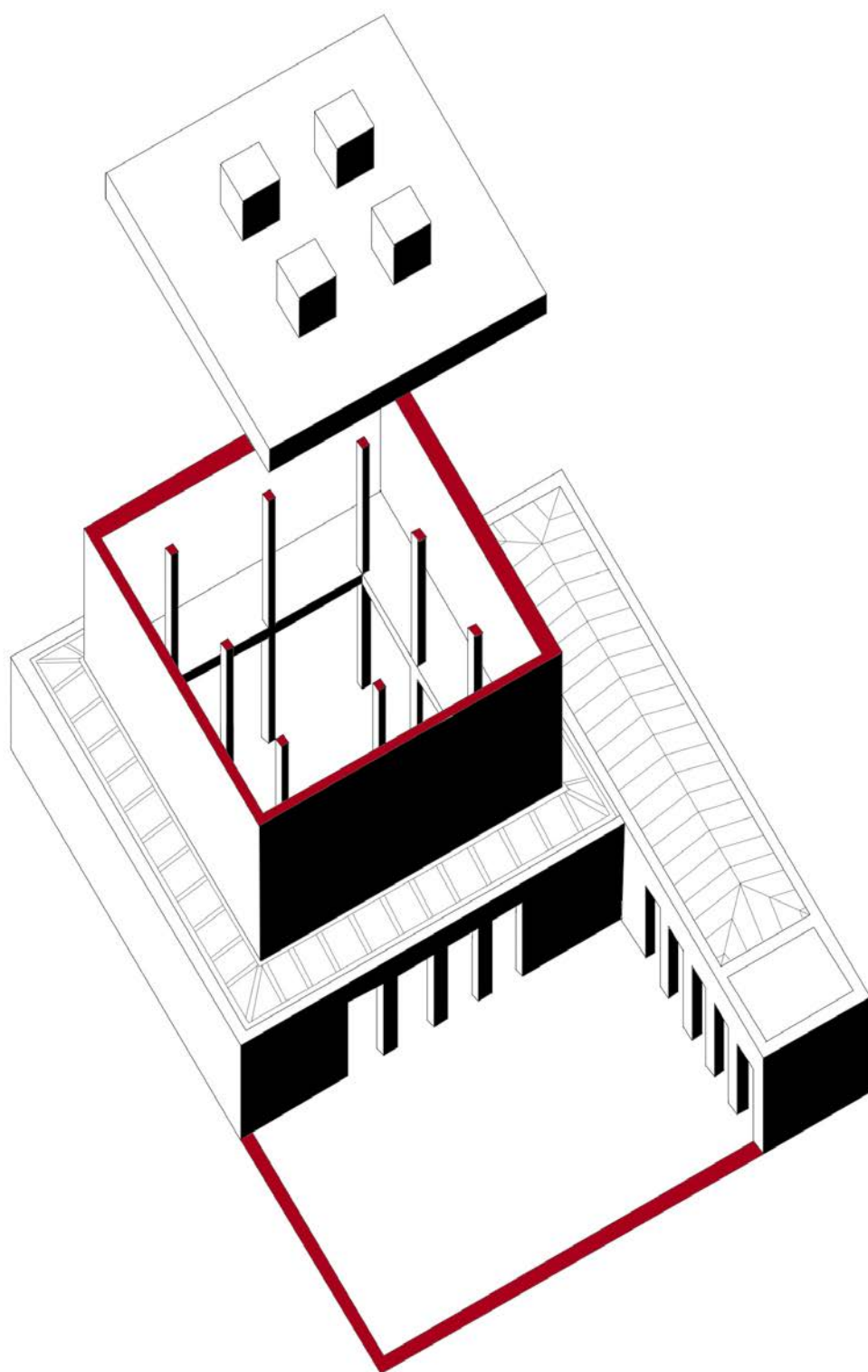*Source:* Martina D'Alessandro, 2021.

Figure 3. *Kubus-Haus Axonometry*
Source: Martina D'Alessandro, 2021.

When Ungers built its library in 1989, he immagines it as a such a private retreat and reservoir of knowledge, a kind of platonic architecture for his own *theatrum memoriae*. Ungers design a place for his books and art collection and he regards it at the same time as an attempt to gather in it the basic ideas of architecture. The pure volume, which is an abstract and platonic cube, is the space where art and architecture physically coexist and ideally converge. Here we can find the compositional principles that have nourished Ungers' architecture: embedding, transformation and abstraction. In this building art and architecture are two sides of the same Janus coin. The small hearth of the Kubus library in Cologne becomes the theatre of this *interstitial space* between art and architecture: Ungers, by drawing this place, turns the idea of *Zwishenräume* in a built reality.[23]

As already mentioned, the library is an extension of the family home. As critics have often pointed out, Ungers establishes a contradictory relationship between the library project and the original structure of the house, following a Cusan *coincidentia oppositorum*.[24] Before the extension, the house on Belvederestrasse had a system of gardens and outdoor areas protected by massive brick walls at the rear of the plot. On this sequence of free spaces Ungers inserted a new volume which, though dialectically opposed in form and compositional structure to the existing house, represents a completion defining a heterogeneous but unitary system.

The library is composed of an articulated succession of spaces and volumes. It is often identified with the black cube that occupies the rear of the house. Although the cubic volume is the most massive element of the extension and forms the compositional core of the library, the spatiality of the intervention is composed of a constellation of spaces and volumes. A glance at the architecture of Villa Adriana in Tivoli is evident in this succession of open and built-up spaces.

The compositional structure of the library follows a centripetal and centrifugal approach at the same time: the courtyard with its six columns and the small rectangular volume embraces the central square, completing its overall figure. Similarly, the punctual openings of the square space open up the library to precise framings of the outside space, giving the inner core dynamic and changing spatial depths.

The courtyard outside houses a series of contemporary art installations, including Bruce Nauman[25] (1941) and Günther Förg[26] (1952-2013), which metaphorically amplify the echo of the collection housed within the library beyond Ungers cosmos (Figure 4). The pavilion next to the black cube, accessible both from the courtyard outside and from inside the library, houses a space dedicated to the models of timeless architecture that Ungers commissioned to the artist Bern

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23. Oswald Mathias Ungers, "Zwischenräume," in *O. M. Ungers: Zwischenräume* (eds.) Anja Sieber-Albers, and Sophia Ungers (Ostfildern-Ruit: Hatje Cantz Verlag, 1999), 7.

24. Ungers often refers in his theoretical work to the texts of German philosophers of the mid-fifteenth century, including Nikolaus von Kues (1401-1464). Ungers refers to this philosopher especially with regard to the theory of *Coincidentum Oppositorum*, the central theme of his work *De docta ignorantia* (1440), in which Nikolaus von Kues develops the notion of convergence and coincidence of opposites, which Ungers takes as the philosophical matrix of his project method.

25. Bruce Nauman, *Square*, 1977/88, steel.

26. Günther Förg, *Ohne Titel*, 1988, bronze.

Grimm (1962): white plaster models of OMU projects are directly juxtaposed with models of historical buildings that represent Ungers' idea of architecture.[27] This room of plaster casts, completely white inside and leaning against the perimeter walls of the house, is configured as a bare space, a background against which to cast the shadows of the models on display. The zenithal light that spreads throughout the space contributes to giving this space a courtly and platonic atmosphere (Figure 5). The nucleus of this miniature city is the block housing the library itself.

Access to the library is only from the inside of the house along a path that tangentially touches one side of the square and aligns the internal path that connects the distribution and ascension system of the house. The volume of the library is a cube. Divided into three levels, the basement houses the bibliography about OMU, with the complete collection of his writings and critical texts on his work. The ground floor houses the library, which is double-heighted up to the roof of the building.

The compositional system responds to a radical application of the principle of incorporation, already experimented by Ungers in other projects such as the Hotel Berlin in Berlin (1977), the German Museum of Architecture in Frankfurt am Main (1979-84), the Solar House (1980) and the Baden Regional Library in Karlsruhe (1980-84) (Figure 6).

As he Ungers wrote in an essay, "The theme of the doll inside the doll or – to put in another way – of the Russian Easter egg, describes a phenomenon that plays a role in other fields as well, in psychology for example, and is in no way limited to architecture. In fact, this concept encompasses many realities and can be seen both from a formal and from a conceptual point of view. Its fascination lies in the observation that it contains an element of continuity whose end cannot be conceived. An object that continues to turn up inside another object describes a sequence which could theoretically carry on indefinitely, a continual process that is no longer intelligible in logical terms."[28] In the Kubus-Haus, Ungers applies the incorporation of spaces that are transformed into each other according to an endless continuity, a metaphor for the power of the knowledge that the library contains.

The outer shell is a black, hermetic volume that clings to the boundaries of the house. The few openings Ungers allows are on the inside towards the inner courtyard. No people enter this material shell through doors and passages, no light enters through windows. It is a volume that responds solely to the compositional theme of the building and the three-dimensional dimension of the outer box.

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27. The models, made by Bernd Grimm and kept in the private library in Belvederestrasse in Cologne, reproduce some of the most important monuments in the history of architecture: Parthenon (447-438 BC), scale 1:50; Mausoleum of Halicarnassus (c. 370-350 BC), scale 1:66; Pantheon (118-128 AD), scale 1:50; Castel del Monte of Frederick II (1240-1250), scale 1:70; Small Temple of San Pietro in Montorio by Donato Bramante (1502), scale 1:15; Newton's Cenotaph by Etienne Louis Boullée (1784), scale 1:400.

28. Oswald Mathias Ungers, "The Doll Within The Doll. Incorporation as an Architectural Theme," *Lotus International*, no. 32 (1982): 15.
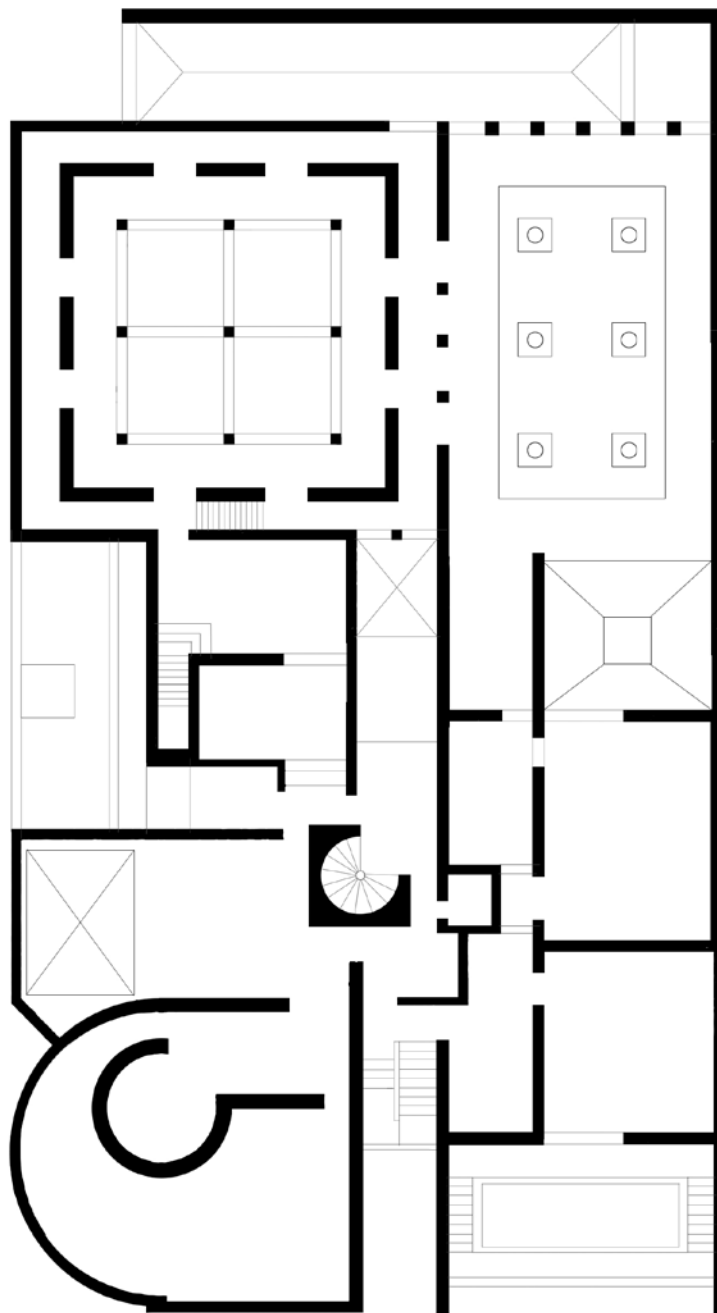
Figure 4. *Kubus-Haus Intervention Plan*
Source: Martina D'Alessandro, 2021.

Figure 5. *Glasshutte Studio Haus Models Room*
Source: Jasper Cepl, *Ungers and his books*, 2007.
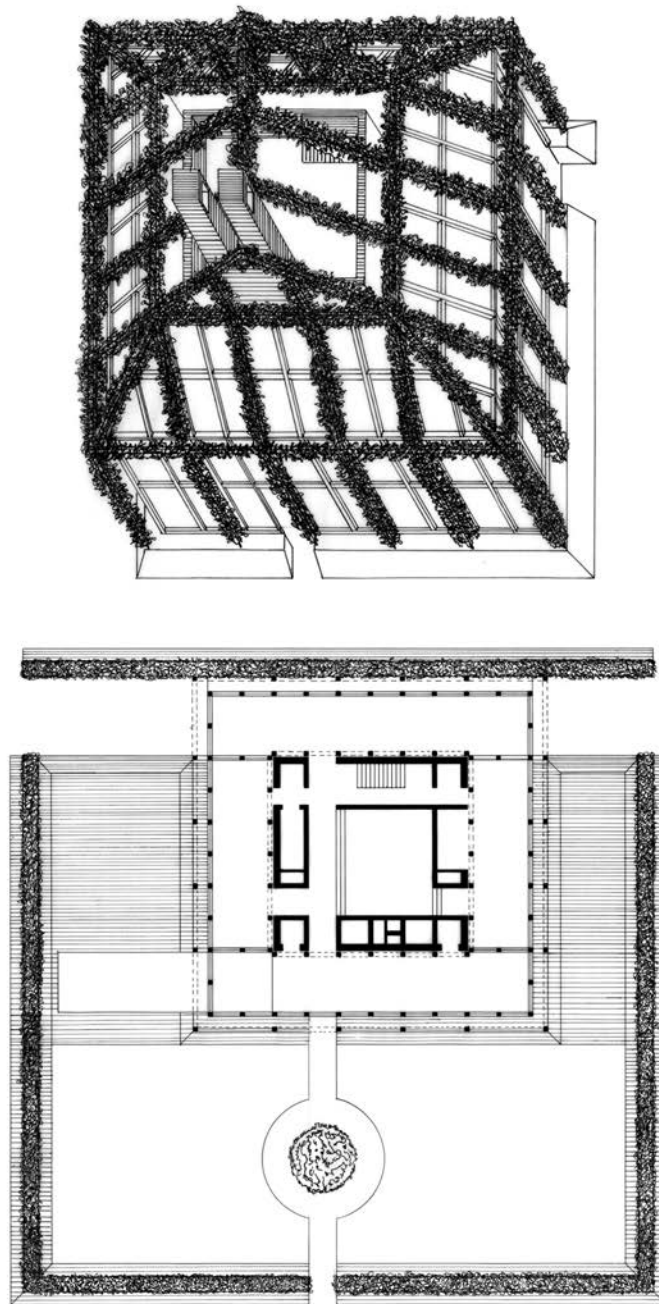
Figure 6. *Solar House: Axonometry, Ground Floor, Cross Section*
Source: Martina D'Alessandro, 2021.

The next layer contained by the shell is an empty space, a perimeter passage that surrounds the heart of the library on all sides and on which the entry point from the house is placed. This filtering space, zenithally lit by a system of glazed skylights, not only houses the distributive elements, such as the stairs connecting the two levels of the building, but is transformed into a pathway to knowledge through the display of certain elements of the art collection (Figure 7).

The central block and concentric to this system is the library. Developed according to the square proportion both in plan and in section, and lit by four skylights on the roof, it is characterised by three elements: the external structure of dark wooden shelving containing the collection of rare books; the white geometric structure marking the geometric rhythm of the space and marking the upper level of the library; and the circular staircase detached from the structure of the space and positioned in a quadrant of the library. This pressing rhythm of spaces containing other spaces and objects is also underlined by the choice of materials: from the marked materiality of the outer shell to the candid, rigorous elements of the inner structure.

Heteronomies: The Books and Art Collection

Ungers' *studiolo* is a place imbued with something utopian, bringing together different times, places and ideas. It is a place imbued with a love of knowledge. The root meaning "to know" is homonymous with the root meaning "to be born". To know means to be born together, to be generated or regenerated by the thing known.[29] Not only in this building, but also throughout the author's entire body of work, architecture is born not only from knowledge but together with it.

The author's heteronymous tension, intellectual in nature as well as compositional, towards the sister arts of architecture is unmistakably demonstrated by Ungers' personal art collection, which he began in the early 1950s with his wife Liselotte (1925-2010). This collection has very special characteristics that make it more like a treasure chest of images, ideas and stimuli than a systematic collection of a scientific nature. It should be interpreted as a journey, an exploration of architecture in the dimensions of architecture's other sister arts. It is an open, constantly evolving collection that can only be fully understood if we accept the contrasts and juxtapositions that feed it and if we take the relationship between art, in this case the arts, and architecture as the key to understanding it. This system of works is not only an attempt to bring together a series of different works, but also and above all represents the author's desire to build a personal and private laboratory in which to experience art and generate architecture. It is to be interpreted as an idea, and the explanation for this idea is to be found in the relationship between the works of art Ungers owns and his architecture, a relationship nourished by analogies, similarities, connections and overlaps, forming a general, complicated system similar to a palimpsest.
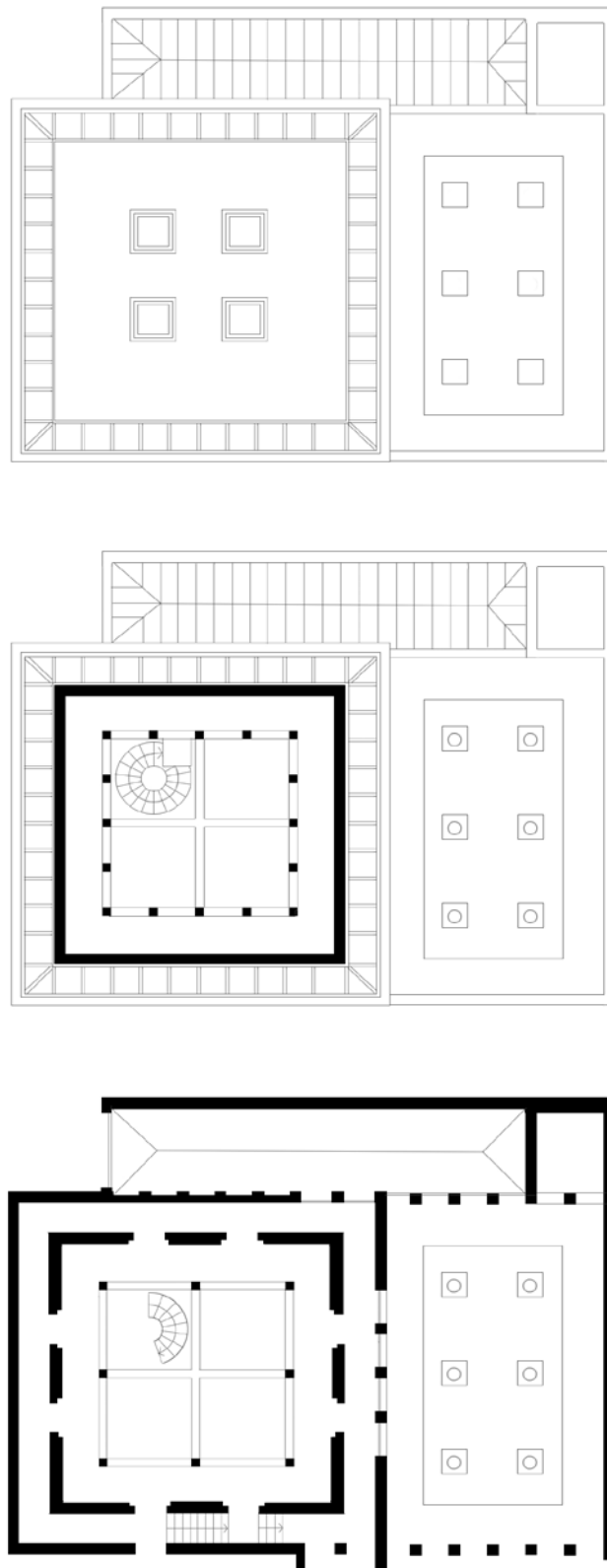
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29. Agamben, *Autoritratto nello Studio*, 14-15.

Figure 7. *Kubus-Haus: Plans*
Source: Martina D'Alessandro, 2021.

It is precisely through the study of the elements that make up this collection that it is possible to document the similarities and correspondences between Ungers and art, placing the author's figure in its historical and contemporary context.[30] Ungers appears, as critics have often pointed out, to be an isolated figure in the German cultural and architectural system. The dialogues and confrontations that he likes to hold involve his collection of rare books and his models of timeless architecture.[31] They are correspondences of an intellectual and theoretical nature, absolutely diachronic and diatopic, even though the meetings all take place in the same place, in the geometric heart of his library. However, this voluntary solitude finds a point of exception in his relationship with art, through which Ungers manages to establish a link, even if not immediately legible, between his architecture and the debate that characterises contemporary culture. Ungers thus looks to the art world as an interlocutor interested in the same theoretical themes and compositional issues as contemporary art. The world of art is a complementary element of his work in architecture, a tool for verifying compositional processes and, above all, a virtual dimension for experimenting his visions for architecture, in a world, that of art, which is not bound by reality, its conditions and constraints.

We want to give this thematic collection of works the dual value of a path of exploration and intellectual research and at the same time a conceptual and abstract representation of the collector's own characters, which constitutes the image of the creative process of his making architecture. It can be read as an open structure in continuous evolution, in which there are drawings, paintings by different authors and from different periods, sculptures, photographs, rare books and architectural models. The works of art can be divided into two main sections. One section, consisting mainly of sculptures and fragments of antique sculptures and paintings by great masters from the 16th-19th centuries, bears witness to the

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30. Strodthoff, "Eine Privatbibliothek," 831-833.

31. The series of rare books (the library contains about 12,000 volumes) features some of the most important treatises and texts in the history of architecture and art: Leon Battista Alberti, *De re edificatoria libri decem*, Firenze 1485; Luca Pacioli, *Divina proporzione*, Venezia 1509; Vitruvio, *De architettura libri decem*, Fra Giovanni Giocondo, Venezia 1511; Cesare Cesariano, *De Lucio Vitruvio Pollione de Architettura Libri Dece*, Como 1521; Albrecht Dürer, *Vier Bücher von menschlicher Proportion*, Parigi 1532; Andrea Palladio, *I quattro libri dell'architettura*, Venezia 1570; Robert Wood, *Les Ruines de Palmyre*, Londra 1753; Julien David Le Roy, *Les Ruine des plus beaux monumentes de la Grèce*, Parigi 1758; Giovanni Battista e Francesco PiranesiI, *Complete Works in 27 Volumes*, Parigi 1800-1807; Claude-Nicolas Ledoux, *L'Architecture considérée sous le rapport de l'art, des moeurs et de la législation*, Parigi 1804; James Stuart e Nicholas Revett, *The Antiquities of Athens*, Londra 1808-1822; *Déscription de l'Égypte*, Parigi 1809-1822; Johann Wolfgang von Göthe, *Zur Farbenlehre*, Tübingen 1810; Philipp Otto Runge, *Farben-Kugel*, Amburgo 1810; *Schinkel's Möbel-Entwürfe*, Ludwig Lohde, Berlino 1835-1837; *De Stijl*, Theo van Doesburg, 1917-1928; Kasimir Malevich, *On new System in Art. Statics and Speed*, Witebsk 1920; Wladimir Jegrafowitsch Tatlin, *Monument of the III. International*, Nikolai Nikolajewitsch Punin, Pietroburgo 1920; *Gegenstand. Internationale Rundschau der Kunst der Gegenwart*, El Lissitzkij, Ilja Ehrenburg, Berlino 1922; *Staatliches Bauhaus in Weimar 1919-1923*, Weimar e Monaco 1923; *G. Zeitschrift für elementare Gestaltung*, Hans Richter, Berlino 1924; WchUTEMAS, *Works of the Faculty of Architecture WchUTEMAS 1920-1927*, Mosca 1927; *bauhaus. Zeitschrift für Gestaltung (1-4)*, Hannes Meyer, Bauhaus Dessau 1929; Walter Gropius, *Bauhausbauten Dessau, Bauhausbücher, vol. 12*, Walter Gropius e László Moholy-Nagy, Monaco 1930; Le Corbusier, *Une Petite Maison*, Girsberger, Zurigo 1954; Le Corbusier, *original drawings de Une Petite Maison*, 1923.

confrontation with ancient art and Italian culture. The other part of the exhibition focuses on the theoretical, intellectual and abstract dimension of modern art from the 1970s to the 1990s. This section also consists mainly of paintings, sculptures and installations. In particular, the sculptures are a predominant component of Ungers' collection. This makes it possible to ascertain the issues that link these works to Ungers' architecture and, consequently, to understand the architect's reasons for forming his collection.[32] The sculptures in the collection are by different artists[33] and are characterized by a variety of peculiarities. However, they all testify the closeness of Ungers' architecture to some of its fundamental characteristics, such as the reduction to basic geometric forms, the tension towards pure, abstract and dematerialized form, and the importance of the relationship between idea, space and form in the construction of the work, be it art or architecture. It is precisely by reading the works in their deepest meaning that we can understand the value, the programmatic charge of this collection (Figure 8).

According to these premises, the project for the Kubus library in Cologne may be considered one of the works that best synthesizes the author's architectural poetics, because it is capable of condensing, in a small built space, the entire articulated system of references that nourishes Ungers' way of making and thinking about architecture. In this building it is possible to investigate the dense system of references to the world of art and to the theory of architecture, following their traces not only in the proportions, materials and compositional hierarchies of the spaces, but also physically, among the bookshelves and the works in the art collection. By looking at this project it is therefore possible to recognize the formal and theoretical references on which OMU's work feeds, becoming architecture. The Kubus library is therefore not only a container but also, and perhaps above all, a place of assimilation, where architecture feeds on itself, identifying itself with the cognitive lymph that generates it. What is in fact a self-sustaining element? In the process of nutrition – in all nutrition, spiritual or bodily – there is a threshold where it reverses its direction, turns in on itself. Food can only nourish if, at some point, it is no longer other than us, if we have – as they say – assimilated it; but this means – to exactly the same extent – that we have assimilated ourselves to it.[34] The same is true of the light of knowledge in the heart of the Kubus-Haus: heteronomous, it always springs from outside, but the moment comes when inside and outside coincide, we can no longer distinguish between them.

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32. Kieren, "Konstellationen – Monologe," 49-54.

33. The sculptural works in Ungers' collection of modern and contemporary art include works by Carl Andre (1935), Donald Judd (1928-94), Sol LeWitt (1928-2007), Richard Long (1945) and Bruce Nauman (1941).

34. Agamben, *Autoritratto nello Studio*, 121-122.

Figure 8. *Haus in Belvederestrasse, Interior Courtyard (1977/88)*
Source: Stephanie Tasch, *A Visit to the Architect's House*, 2007.

Architecture as Art: Toward a New Abstraction

The Kubus-Haus represents a radical experimentation of the principle of abstraction in architecture. *Abstraction* comes from the Latin *ab-straho*, which means *to remove, to detach from*: it indicates the process of subtracting matter to arrive to pure form, detaching from reality to represent the essence of a subject. It is the tendency to translate the concrete multiplicity of reality into symbols, through a necessary selection of objects to be replaced according to an idea, a theory or a vision of the world. Ungers' work focuses on this theme in the final part of his production, from the 1980s to the end of the 1990s, starting with the publication of the essay *The new abstraction* (1983). In this essay, which can be interpreted as a manifesto for a new architecture, the author outlines the principles and characteristics of abstract architecture, understood as the architecture of the idea, of the essence and reason, placing appearances and the functional, economic and technological demands of the project in the background. "The new abstraction in architecture has to do with a rational geometry that includes clear and regular forms both in plan and in elevation. In this context the project is not the result of interpretations of functions and structural conditions but of logical geometric systems, based more on a proportional relationship and on coherent sequences."[35] The idea is everything: this sentence is like an arrow pointing straight to the core of the theoretical basis that Ungers has been working on in recent years. It is the definition of a theory according to which architecture is nourished by the *idea* and is a direct and clear expression of the *idea* itself. Architecture must establish a logical and reasonable order that allows all the fragmentary images of history to be related in continuity or discontinuity. It sounds like an axiom. It marks the furrow of the disciplinary field in which rational and transmissible architecture can and must move. It is peremptory and leaves no room for misunderstanding. Architecture must not only respond to needs and necessities but must be an expression of universal ideas. It is based on the knowledge and recognition of the intrinsic elementary principle of things: the idea, the theme, allows us to reach the true substance of architecture, going beyond the surface of things, expressing universal, cultural and spiritual values. The words Ungers often uses in his essays perfectly express his thinking and his way of doing architecture.[36]

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35. Oswald Mathias Ungers, "The New Abstraction," *Architectural Design*, no. 53 (1983): 36-38.

36. All of Ungers' most important theoretical writings of the 1980s focus, from different points of view, on the centrality of the idea in the logical construction of architecture. There are numerous texts by Ungers that deal with these topics. We will refer here to those considered most significant and clear with respect to the concept of *theme and idea* in architecture. Among these, Oswald Mathias Ungers, "Architecture's Right to an Autonomous Language," in *The Presence of the Past. First International Exhibition of Architecture, the Corderia of the Arsenale, La Biennale di Venezia* (Venezia: Edizione La Biennale di Venezia, 1980), 319-324, in which he enunciates the theory of an absolute architecture that, freed from external and ideological conditioning, imposes itself as an autonomous and self-determined thought, that contrasts the mechanical with the poetic, and function with metaphor. Oswald Mathias Ungers, "The New Abstraction," 1983, 36-38, in which Ungers reduces architecture to a limited number of *ideas and themes*, addressed through the application of rigorous geometry. It is from the idea that the architectural form is born, and procedures of metamorphosis and transformation are applied to it, linking the project to history and place. Like Oswald Mathias Ungers, "Five Lessons from Schinkel's Work," *The Cornell Journal of*

"Every building that does not have itself as its theme is, from the point of view of the spirit, a banality,"[37] or "the new abstraction means exactly this: the transformation of ideas and concepts in the course of history. A new abstraction in architecture will revive more concretely fundamental concepts of space [...] which, like a universal order of abstraction, represent a quality of permanence."[38] This type of approach to architecture has led critics to investigate these arguments in depth, denouncing the direct descent of Ungers' thought with the philosophical heritage of Plato and Aristotle, contextualizing the theoretical figure of Ungers in the broader and more varied German and international cultural panorama as a great theorist of architecture. As already mentioned, the research and tension towards an abstract architecture as an expression of the idea occupies the last phase of Ungers' activity as architect and theorist. These were the years in which he published some of his most important theoretical contributions on architecture, such as *Architecture's Right to an Autonomous Language*[39] in 1980, *Architecture as Theme*[40] in 1982 and *The New Abstraction*[41] in 1983. In these writings, each of which deals with specific aspects of the architectural dimension, Ungers' fundamental question is what is the art of architecture. The buildings he designed and constructed in the second half of the 1980s legibly express how his answer to this question is the search for the archetype, as a principle of order to be translated into form and space in architectural design. For Ungers, architecture starts from the more or less abstract concept of subdividing and ordering objects of different volume and form in space through the process of conceptualization, i.e., the abstraction of images and systems of spatial orders.[42] In this search for order, the concept of *archetype* assumes for Ungers a primary importance as a synthesis of the meaning of abstraction in architecture. The search for the universally valid and recognized model, the tension towards the achievement of the *Urform* is the foundation on which the projects for Ungers House in the Eifel, Glashütte (1986-1988) and the new Kunsthalle in the Museum Island in Hamburg (1986-1996) are based. The archetypal spatial concepts traceable in these two works constitute the spatial and formal model in which the project identifies new forms and a new architecture. In the same years Ungers designed and built a house for a couple of abstract art collectors, the Jeromin House in Königswinter (1989-1992) (Figure 9). This building marks one of the developmental moments in OMU's work on the meaning of abstraction in architecture.

Architecture, no. 1 (1981): 118-119, and Oswald Mathias Ungers, "Architettura come Tema," *Quaderni di Lotus*, no. 1 (1982).

37. Ungers, "Five Lessons from Schinkel's Work," 118-119.
38. Ungers, "The New Abstraction," 36-38.
39. Ungers, "Architecture's Right to an Autonomous Language," 319-324.
40. Oswald Mathias Ungers, "Architettura come Tema," Quaderni di Lotus, no. 1 (1982).
41. Ungers, "The New Abstraction," 36-38.
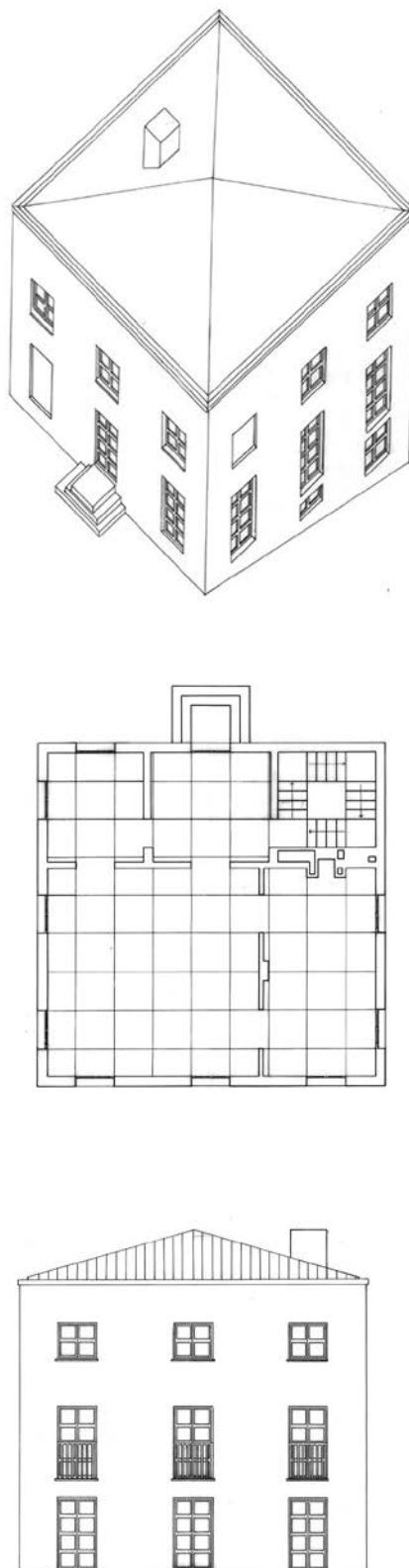42. Cepl, Oswald Mathias Ungers. Eine intellektuelle Biographie, 436-469.

Figure 9. *Jeromin House, Königswinter: Axonometry, Ground Floor, Façade*
Source: Martina D'Alessandro, 2021.

The control of space through the modular grid, the sharper geometry and the simplicity of form and space achieved in this work anticipate the rigour and absoluteness of the author's later buildings. The reworking of the archetype through the control of form and space using the tools of geometry, measurement and proportion clearly expresses Ungers' interest in antiquity and the meaning of Renaissance architecture.

The urban projects for Düsseldorf (1990-1991) and Ungers' third house in Cologne-Kämpchensweg (1994-1996) take this research, conducted both theoretically and practically for over twenty years, to the extreme conclusion of an architecture reduced to form and space, without any narrative expression or descriptive quality. These hermetic architectures, which reveal the absolute idea of space and form, are subjected to a complex process of *reduction* that leads to an abstract outcome so extreme that it is difficult to recognize the idea behind the work.

In the design of the library, the importance of this reasoning in the design process of the building is evident. Ungers succeeds in applying the compositional principle of abstraction in a coherent and absolute manner to all the questions posed by the project. In the densest years of this tension towards abstraction, Ungers designed a building to which one can attribute the theoretical depth of experimentation on certain fundamental questions of Ungers' thought. The experimental character of this architectural episode gives the work unique qualities that are often not repeatable outside the context of the verification in which it was conceived: the particularity of the project theme and the design freedom offered by the opportunity to be his own client have greatly influenced the radicality that characterizes this building. It is among the shelves of his library, among the works in his collection, that Ungers keeps a system of references for understanding the value of this building's work.

According to these hypotheses, the concept of composition is the hinge element that opens the way for dialogue between art and architecture. Composition according to OMU is superordinate as a primary creative capacity and constitutes the basis of all creative capacity. Architecture and composition can be assimilated from a conceptual point of view. According to these premises, architecture can be seen as the mother of all arts and it is also understandable that we talk about architectural structure in music, poetry and also in nature. "It can also be said that without composition there is no architecture. [...] Architecture is composition."[43] Art is part of composition, in synergy with the space of architecture. Ungers explains how a world made up of palimpsests sees art and architecture supporting and overlapping each other. "Ideal spaces lie between the layers and overlap. Banal and solemn, idea and nature complement and annihilate each other, in a continuous process of overlapping. [...] Art lies in architecture and elements of architecture are found in art. Layer after layer, one approaches the other. Between the spaces of architecture, art becomes visible and from art comes the space of architecture. The boundaries between the two can be blurred: roof, wall, floor

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43. Oswald Mathias Ungers, "Antrittsvorlesung, Sommersemester 1964. Was ist Architektur?" *Archplus*, no. 179 (2006): 13. Our translation. Original text "Man kann also sagen, ohne Komposition gibt es keine Architektur. […] Architektur ist Komposition".

disappear and lead through art into new realities, illusory worlds and spaces. Abstractions merge with the same images and systems, configurations disappear, become blurred, the window becomes an image, the surface becomes an abstract composition and the monochrome becomes a homogeneity of materials."[44] Ungers sees this interweaving as one of the many ways in which art and architecture can merge and unite. Pure forms have the same basic structures through which elective affinities are established between artistic trends and architectural concepts.

What matters to him is the unity of the conception, because art and architecture need each other: they have common roots and to separate them would destroy and annihilate their value. The system of art is also the system of architecture. The connection between architecture and art through the act of composing can be traced back to Ungers' interest in the theoretical and compositional issues of art, explored through the study of the artistic, philosophical and psychological debate that characterised the European cultural context between the end of the 19th and the beginning of the 20th century. His readings focus in particular on the question of form in art, analysing its figurative, perceptive and spatial instances. In this context, the work of Adolf von Hildebrand (1847-1921) provides an important and indispensable antecedent for understanding the relationship between art and architecture in Hungarian work. *The problem of form in painting and sculpture*[45] (1893) is a text that has had a remarkable capacity to penetrate the artistic culture of the 20th century. The text, which constitutes a contribution to the discipline of aesthetics, offers an answer to the question of form and its representation. Hildebrand, through his investigation of the art of sculpture - he himself is a sculptor - focuses on the architectural configuration of the work of art in order to investigate the problems of form. According to his theory, the work of art takes on its meaning only if it succeeds in attributing to its content, understood as an imitation of nature, a superior artistic structure capable of reworking and transforming, in an artistic metamorphosis, the contents of the work. The construction of the work of art thus understood takes place thanks to the construction of relations and relationships between the meanings of the work within a general and unifying totality, identified by Hildebrand in the *architectural configuration of the work of art*. "Plastics and painting, in opposition to

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44. Ungers, "Zwischenräume," 7. Our translation. Original text: "Gedankliche Räume liegen zwischen den Schichten auf- und übereinander. Banales und Erhabenes, Idee und Natur ergänzen und löschen sich in einem ständigen Prozeß der Überla gerung. Das eine ist in dem anderen eingelagert. Die Kunst liegt in der Architektur und in der Kunst lagern Elemente der Architektur. Schicht für Schicht nähert sich das eine dem anderen. Zwischen den Räumen der Architektur wird die Kunst sichtbar und aus der Kunst entsteht der Raum der Architektur. In den Zwischenräumen amalgamieren die Begriffe und werden ein und dasselbe. Decke, Wind, Hoden lösen sich auf und führen durch die Kunst in neue Wirklichkeiten, in illusionistische Welten und Räume. Abstraktionen verschmelzen zu den gleichen Bildern und Systemen. Die Grenzen verlaufen und werden unscharf. Das Fenster wird zum Bild, die Fläche zur abstrakten Komposition und die Monochromie zur Homogenität der Materialien".

45. Adolf von Hildebrand. *The Problem of Form in Painting and Sculpture* (New York: G. E. Stechert & co., 1907). The Ungers Archiv für Architekturwissenschaft in Cologne preserves Hildebrand's text in the edition *Das Problem der Form in der bildenden Kunst* (Strasburg: Heitz, 1910).

architecture, have mostly been designated as imitative arts. This designation only expresses the differentiating elements and neglects the common ones. As long as we are dealing with the imitative, in figurative art we find a kind of naturalistic research, to which artistic activity remains bound. In this context, the problems that form poses to the artist are immediately given by nature, dictated by perception. If only these problems are solved, i.e., if the product only exists in this relationship, then it, as a structure in itself, has not yet become an autonomous whole that can assert itself alongside and in front of nature. In order to achieve this, its imitative content must be developed into a higher artistic reason, from a broader point of view, which I would generally designate as architectural, obviously ignoring the current meaning of the word "architecture". I understand this term only as the construction of a formal totality independent of formal language. A drama, a symphony possess this architecture, this internal construction; they are organic totality of relationships, just like a painting, a statue, even though the various arts live in completely different formal worlds. The problems of form, as they emerge in this architectural configuration of a work of art, are not spontaneous and immediately posed by nature, but are in fact absolutely artistic. The architectural configuration is what makes the artistic research of nature a superior work of art. What we have designated as "imitative" thus represents a world of forms taken from nature itself, which only becomes a true work of art if it is architecturally elaborated. Only in this way do plastic and painting enter the sphere common to all the arts, the world of true art, leaving the world of mere naturalism."[46] Just as for Ungers, architecture is composition, so for Hildebrand the work of art is the result of composition: the world is understood as something stratified, composed of elements that are homogeneous in terms of function and cognitive activity. The theory of value is of a formal nature: the work of art is understood as the structure of spatial configuration, as the architecture of the work. This structure is like a spatial scaffolding, present in all the arts. In this conception, the work of art is produced by the coexistence of two different components: firstly, the compositional structure of the work, which is responsible for characterising the specificity of the different arts; secondly, the artistic communication of the work, which is determined by the coexistence of the emotional and rational elements. For Hildebrand, the concept of the unitary image consists in thinking of the work of art as a whole, a consciously calibrated concert of effects selected from all the possibilities and alternatives. The question of the construction of the object, starting from its spatial appearance, is one of the central themes of Hildebrand's theory of art and is also one of the aspects that strongly and explicitly influenced the figurative processes of 20th-century art movements. In particular, this theoretical vision shattered the conception of the figure as a form of representation, and the validity of the mimetic and imitative principle of nature in the work of art collapsed: form was no longer considered as a figure and was reduced to its constitutive structure, its geometry. The artistic experimentation, evident in the works of artists such as Paul Klee (1879-1940), Vasilij Vasil'evič Kandinskij (1866-1944), Piet Mondrian (1872-1944), Vladimir Evgrafovič Tatlin (1885-1953) and El Lissitskiy (1890-1941), is carried out precisely by verifying how elementary geometric figures and

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46. Hildebrand, *The Problem of Form in Painting and Sculpture*, 35-36.

colours combine to generate spatial effects: through the composition of form, therefore, space is structured.[47] Ungers' interest in plastic art is no less strong and no less explicit. Ungers is indifferent to the diversities and specificities of architecture and sculpture, because after all he sees them as two artistic disciplines united in the conception of form, as two arts that pursue the same task and the same objective, namely that of conferring spirituality to a monument: architecture becomes abstract sculpture through geometric purification.[48]

OMU's interest in abstract architecture strikes an ever stronger bond between art and architecture in the author's work.

When he writes: "A new abstraction in architecture will revive more concretely fundamental concepts of space, which have been thought of in all historical periods, such as [...] the square, the circle, the cylinder, the pyramid and the perfect cube, regular volumetric and geometric forms which, like a universal order of abstraction, represent a quality of permanence. And it is not the differentiation of colours and shapes, materials and styles that will be important or significant, nor the abundance of forms, volumes and spaces, but the parsimony and economy of means. The new abstraction should be the representation of the essential."[49] The reference that these reflections found in the work of the exponents of abstract art in the first half of the century emerges very clearly. In particular, the theoretical and artistic work of Kasimir Malevič (1878-1935) constitutes an indispensable precedent for understanding the author's tension towards abstraction.[50] The concept of autonomous, anti-figurative, rational and objective art, based on the reduction of form and on the rigid and coercive control of geometry, identifies the sphere of the Russian artist's pictorial experimentation, from which Ungers seems to take the themes on which to base his manifesto towards abstraction. At the beginning of the 20th century, the artistic world witnessed the assumptions that would pave the way for the most radical developments in the field of painting. In this context, the work of Malevič emerges with primary importance. He elaborates an organization of pictorial composition that is increasingly reduced through the definition of autonomous elements, in which the object is lost and dissolved. Unique forms that clearly establish the furrow that separates them from traditional painting of pure description of nature. The forms are absolute, totally autonomous and free from

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47. In particular, the connection to Hildebrand's work is evident in Mondrian's art, for whom paintings are true compositions in which the spatial aspect of the composition is the most important element of the work. In the sculptures and installations of Tatlin and Lissitsky, the concept emerges whereby the direct relationship of the work to the space makes it possible to understand the link between the object and its perception.

48. Cepl, *Oswald Mathias Ungers. Eine intellektuelle Biographie,* 509.

49. Ungers, "The New Abstraction," 237.

50. Proof of the closeness of Ungers' and Malevič's thinking is the presence of a series of Malevič's texts in Ungers' private collection, which frame the author's interest in the work of the Russian artist and his contemporaries. Countless artists continued Malevič's experiments in the development of abstract painting in the 20th century. Among them El Lissitsky translated Malevič's geometric compositions into architectural constructions, while Vladimir Tatlin developed Malevič's two-dimensional Suprematist painting into three-dimensional compositions. It is also interesting to note that there are other works of art in Ungers' collection that are rooted in the matrix of Malevič's work, such as Piet Mondrian, *Composition with Red, Yellow and Blue*, 1927; Josef Albers, *Homage to the Square: Waiting*, 1962.

any kind of link or relationship with the natural figurative model, aiming to claim their own independent realism. The radical reduction of formal vocabulary exhibited in the canvases of the 1910s explodes in the works shown in exhibition 0.10 (Zero-Ten)[51] in which Malevič for the first time presents his *Black Square*,[52] which marks the radical shift towards an objective, anti-figurative, autonomous and abstract pictorial experimentation. In this work, form expresses a new, increasingly sublimated sensibility that leads towards a liberation from materiality towards pure sensation. As Malevič wrote in his commentary on this exhibition, Objects have vanished like smoke for a new culture of art and art proceeds towards the autonomy of creation, towards the domination of the forms of nature.[53]

In this process of liberation and reduction of art and architecture towards the essence, Ungers traces the matrix of pure form and geometry in Malevič's work. The words with which the Russian artist traces the outlines of his new abstract art, Suprematism, seem to outline Ungers' aims in achieving a new abstraction in architecture. "I moved into the zero of forms and went beyond the zero, that is, towards Suprematism, towards the new pictorial realism, towards non-objective creation. [...] The square is not a subconscious form. It is the creation of intuitive reason. It is the face of the new art. The square is a living royal infant. It is the first step of pure creation in art. Before that there were only naive deformities and copies of nature."[54] In 1989, when Ungers wrote of his cube-library in Cologne, "what in painting was the black square, in my architecture is the black cube,"[55] he made the reference to Malevich's work unequivocally clear.

Ungers sees in this theoretical and formal interweaving with contemporary art a matrix on which to found a new unity between art and architecture. Looking at the project for his private library, imagining it devoid of any component linked to the place, the construction and the relationship with the existing house, one could see the true and essential formal structure of the work. A regular block, cubic, geometric and compact, containing, in a progression of incorporation, formal structures that are progressively dematerialized and reduced to pure structure, rare books, paintings, sculptures and models. The building, restored to its pure spatial structure, shows a clear closeness to the research on form and space conducted by some of the artists Ungers knows. The correspondences between the work and the artistic sphere can be traced not only to research into pure geometric forms and the role of geometry in the composition of spaces and shapes, even though these constitute a system of affinities that are evident even on a first analysis of the work, but also, and above all, to theoretical and methodological affinities between artistic trends and architectural concepts.

According to these hypotheses, therefore, Ungers' approach to the world of art is not without consequences for his conception of architecture. The horizons of

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51. The exhibition, entitled *Poslednja futurističeskaja vystavka kartin '0.10', or 0.10. The Last Futurist Exhibition*, took place in 1915 in St Petersburg.

52. *Black Square* (1915), oil on canvas, 79.6 x 79.5 cm, kept in the Tretyakov Gallery, Moscow.

53. Kasimir Malevič, *Ot kubizma i futurizma k suprematizmu. Novyj živopisnyj realizm*, (Mosca: Mihail Matjušin, 1916), 31.

54. Malevič, *Ot kubizma*, 51-52.

55. Oswald Mathias Ungers, "Aphorisms on Building Houses," *Lotus International*, no. 90 (1996): 8.

his architecture broaden and merge with those of art. One of the main aspects of this close dialogue, in the name of an abstract and autonomous art and architecture, is the sharing of a series of artistic, literary[56] and philosophical references that form the basis of their dialogues. Ungers' interest now opens up to the work of authors such as Gottfried Benn (1886-1956),[57] Barnett Newman (1905-1970), Ad Reinhardt (1913-1967)[58] and Ludwig Wittgenstein (1889-1951). Above all, Paul Valéry's Eupaline (1871-1945)[59] became an important reference for Ungers, rediscovered during his friendship with Gerhard Merz (1947), to the extent that this text would become a daily breviary for Ungers.

Looked at in this way, the studio building, in its rigour and simplicity, reveals the system of correspondences between architectural structure and artistic research into form, the affinity between the tension towards abstract architecture and Ungers' artistic concepts. In this work, the author orchestrates the rigorous control of form with great skill: the use of geometry, the imposition of the rule of reduction of the elements, the characterisation of space, the research into colour, light and proportions are the elements through which the compositional process is implemented. The same compositional criterion of abstraction, which takes shape in the construction of a single space, takes on unexpected meanings when investigated through the tools of art, revealing correspondences and other values. In this work, Ungers embarks on a path of experimentation with the reduction of architecture into body and space. It is precisely in this type of approach to design that the deepest artistic matrices of Ungers' work can be found: the tension towards the most radical, hermetic abstract art, reduced to the composition of the primary elements of geometry, colour and space. In short, the artistic research conducted by Ad Reinhardt (1913-1967) between the 1950s and 1960s. For Reinhardt, art represents the essential manifestation of human freedom, as a liberation from subjectivity and the everydayness of life towards purification and individual and autonomous expression. According to the American artist, art enacts the process of purification and liberation towards the absolute through the imposition of rigid rules and coercive discipline, against arbitrariness and subjectivity. Reinhardt's artistic career continues in the progressive simplification of pictorial compositions, in paintings made up of geometric surfaces of primary colours, such as red, blue and black, until the most extreme reduction of forms and colours in the production of the *Black Paintings* series (1958-1967).

Reinhardt's vision of architecture, a vision in which Ungers finds many characteristic instances of his own thinking, displays great coherence and continuity with the principles on which his art is based. Architecture, like art, is an expression of integrity, symmetry, logic and geometry. Reinhardt's interest in the cultural

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56. Including Samuel Beckett (1906-1989), with *A Piece of Monologue* (1980) and *Stirrings Still* (1985).

57. The Ungers Archiv für Architekturwissenschaft in Cologne contains the text Gottfried Benn, *Doppelleben. Zwei Selbstdarstellungen* (Stuttgart: Klett-Cotta, 1984).

58. Ungers is the owner of the text Ad Reinhardt, *Schriften und Gespräche* (Monaco: Verlag Silke Schreiber, 1984).

59. Paul Valéry, *Eupalinos or the Architect* (Oxford: Oxford University Press, 1932). The Ungers Archiv für Architekturwissenschaft in Cologne has the edition *Eupalinos oder über die Architectur. Eingeleitet durch Die Seele und der Tanz* (Leipzig: Insel Verlag, 1927).

matrices of the East, in monuments, architecture and artistic research is clearly visible. The words with which the American artist describes the architecture of Angkor express all the interest he has in the process of reducing elements to their essence and purity: "Architecture and Art: The terraced pyramid-temples, cementless, stone on stone by sheer weight and gravity, are unequaled in magnitude and magnificence, greater than anything in Greece and Rome, and infinitely more impressive, lovely, than anything that can be seen in China. No sultan, no mikado, no viceroy of India could offer his guest a comparable spectacle. The temples were heavenly spheres, holy shrines, monasteries, sanctuaries, palaces, fortresses, royal tombs, storehouses, libraries, hospitals, courts of justice. Everything is square, cruciform, unified, absolutely clear. Orderly and balanced and logically symmetrical, it is easily comprehensible, and what may be described as a complete architecture."[60] Ungers seems to have intertwined and overlapped the artistic paths of Malevich, Reinhardt and Merz, in an attempt to achieve abstract architecture through the noble instruments of art. Ungers wants to measure himself with art, and through art he wants to unite his architecture with abstraction, although he is aware of the limits of this attempt to measure and compare with abstract art, since architecture cannot follow the same path as art can follow in the absence of an object. The radicalism demonstrated by his fellow artists in the field of architecture is unattainable.

Conclusions

Looking at the images describing the interior of the library, one's attention is immediately captured by the multitude of books, models and sculptures. These art objects are *arranged* in the space through the white, static and abstract geometry of the structure and the constant, rhythmic scanning of the dark bookcases. The geometric and architectural order is only manifested in its clarity by the presence of the collected art objects and, vice versa, the miscellany of artworks only takes on the value of a collection if it is harnessed by the architectural geometry that guards it. This biunivocal relationship between collected object and formal structure is based on a complex and dialectic relationship with history that characterises Ungers' architecture and, specifically, the project investigated by this paper. In the resumption and study of philosophical and artistic references, investigated from a formal theoretical and methodological point of view, Ungers sees the possibility of inserting his own work in continuity with history: through the new abstraction, the history of architecture is developed through the deepening of its fundamental and specific concepts, with the aim of reaching a general and universal vision of ideas. From this type of dialectical approach to the project, carried out on two compositionally different levels, on the one hand the investigation of the archetype of reference and on the other the criteria of abstract geometry on which the project is based, an apparent contradiction emerges. In fact, we can understand both the collection of art and rare books and geometry as two categories that relate to history. While the view of art and theory of architectural thought represents an attempt to

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60. Ad Reinhardt, *Art as Art* (Berkeley-Los Angeles: University of California Press, 1991), 222.

identify a translation and operational codification of history in the architectural project, geometry represents an element of total astoricity, in that it seeks a principle of order and rule that aims to isolate architecture from history. We believe that the opposition between these two aspects is precisely the element that characterizes the Ungers way of thinking about architecture and making architecture. For Ungers, architecture must necessarily be born within tradition and history, appropriating and absorbing the permanent components and transmissible aspects of history. Once the project is anchored to tradition, however, it must necessarily find its own space of *inventio*, expressing, through the most rigid and radical geometry, its concept, its deepest vocation.

It seems that in this project Ungers has succeeded in merging knowledge and space, art and architecture, reason and emotion. Ungers in Belvederestrasse seems to have transformed his studio into a small museum in which to lead visitors by the hand through his own cultural DNA, preparatory to a profound understanding of the meanings of his architecture. Ungers in Belvederestrasse thus appears to be an epigone in the literal sense of the word, a being that is generated only from others and never denies this dependence, living in a continuous, happy epigenesist (Figure 10).

Figure 10. *Library Interior*
Source: Casabella 761/762, 2008.

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