



Proportions in Salvatore Caronia Roberti Between Theory and Practice

Francesco Maggio¹ 

Received: 12 February 2022 / Revised: 5 August 2022 / Accepted: 10 August 2022 /
Published online: 23 September 2022
© The Author(s) 2022

Abstract

In 1949 Salvatore Caronia Roberti published the volume *Introduzione allo studio della composizione architettonica*. It is a compendium of his own studies and research came together in his architecture, testifying to the close interweaving of theory and practice. Caronia Roberti was a student of Ernesto Basile, one of the leading exponents of Art Nouveau, a style in which proportions played a marginal place. He later broke away from the Master's school to attempt a new path in which geometry and proportion constitute the core of his theoretical research. This study aims to highlights the organic nature of Caronia Roberti's thought, between architectural history and representation, by restoring a little-known book to collective knowledge.

Keywords Graphic analysis · Theory · Drawing · Project · Caronia Roberti · Archive

Introduction

Salvatore Caronia Roberti was born in Palermo in 1887 to a family of builders. After studying at a classical high school, he enrolled in the School of Application for Engineers and Architects in Palermo. He graduated in 1910. Immediately after graduation he began his professional activity making numerous plans for small villas in Mondello, a seaside resort near the city that was reclaimed to become a new outlet for Palermo, because it was marshy. During those years he worked in Ernesto Basile's studio and at the same time perfected his studies, earning a diploma in architecture at the Royal Academy of Fine Arts in Palermo in 1914. The following year, as assistant professor of Technical Architecture, he began his academic career, which continued until 1962 (Mauro 1987: 564).

✉ Francesco Maggio
francesco.maggio@unipa.it

¹ Dipartimento di Architettura, University of Palermo, Ed. 14, Viale delle Scienze, 90128 Palermo, Italy

Fig. 1 Cover of the book
*Introduzione allo studio della
composizione architettonica*
(Caronia Roberti 1949)



Between the 1930s and 1940s he was the most important figure among the engineers and architects working in the School of Engineering and Architecture in Palermo, and more generally in Sicily. He expressed himself with constancy and vivacity in a period that showed signs of a linguistic renewal. Together with Marcello Piacentini he participated in that vast front of Italian academics who theorized on the recovery of national traditions with particular reference to the strand of classicism, in a renewed desire for cultural stability (La Franca 1987). Alongside his academic activity, the Sicilian architect pursued a professional commitment, designing numerous buildings, from single-family houses to palaces and representative buildings.

Salvatore Caronia Roberti published the didactic volume *Introduzione allo studio della composizione architettonica* (Introduction to the study of architectural composition) a few years after the Second World War (Fig. 1). The book brings together studies concerning his thinking on making architecture and an analytical and operational method aimed at students. More than a didactic text or a collection of lectures, this book should be considered the architect's scientific autobiography. The volume opens with a *Prefazione* by Gustavo Giovannoni, who praises Caronia Roberti's work because, it "stands in opposition to empiricism and arbitrariness and initiates what is to be the theory of modern Architectural

Aesthetics” (Giovannoni 1949: 14).¹ Caronia Roberti sees geometric aesthetics as the premise on which content aesthetics must operate. Despite the fact that he was one of the leading figures working in Sicily from the first decades of the 1900s to the 1960s, in-depth studies only began with Maria Clara Ruggieri Tricoli’s volume *Salvatore Caronia Roberti architetto* (1987). The author points out that lacked a systematic study of Caronia Roberti’s design activity, because he has always been referred to Ernesto Basile.

Teaching and Theoretical Thinking

Although the volume *Introduzione allo studio della composizione architettonica* (1949) is the work by Salvatore Caronia Roberti that best defines his theoretical positions on the concepts of geometry and proportion, before its publication, he had written 26 essays on general topics and on the architecture of Palermo.

In *Architettura ed etica fascista* (Architecture and fascist ethics) (Caronia Roberti 1934) he introduced the themes of ‘inverse randomness’ and ‘direct randomness’ of architecture, that is, whether architecture should follow an evolutionary process or constitute an active element of evolution. His academic references, Gustavo Giovannoni and Marcello Piacentini, are mentioned in the paper “Architettura e tipificazione” (Architecture and typification) (1936a) and the book *Tradizione e modernismo nell’Architettura religiosa* (Tradition and modernism in religious architecture) (Caronia Roberti 1936b) (Fig. 2) in which he praises Giovannoni because “... he thus exalts classicism, but conceives it not as a fixed form, but as a way of feeling Architectural Art” and Piacentini because “... he exalts modernism with due respect for tradition” (Caronia Roberti 1936: 28).

In the paper “Nuove vedute sull’antropomorfismo nell’estetica architettonica” (New views of anthropomorphism in the aesthetics of architecture) (Caronia Roberti 1941) the author notes the rebirth of a “geometric spirit”, in the architectural production of his time that will renew architectural production and the “Mediterranean civilization” in which he finds the manifestation of this new spirit. He makes an *excursus* on irrational numbers and the golden number, citing foreign philosophers and scholars such as Zeising, Fechner, Hambidge, Moessel and Vischer and showing their theories with the help of graphic diagrams (Villa 2008: 26). The architect summarizes his concepts as follows:

... With such a spirit, it is no longer the human body directly suggesting relationships and symmetries, but it is man who provides cues to give the work of art its highest value, namely life, through geometric elements, typically expressive of the organic world, as the prince of living creatures. In the field of form, these elements, as geometric, are specific to Architecture. Therefore, the anthropomorphism does not create constraints since it is no

¹ This and all translations from the Italian that follow are by the author.

Fig. 2 Cover of *Tradizione e modernismo nell'Architettura religiosa* (Caronia Roberti 1936b)



longer a rule or norm. It broadens the horizons of inspiration and creative imagination (Caronia Roberti 1941: 3).

The writings that can be considered exemplifications of his theoretical thought are found in the papers “L’euritmia nell’estetica dell’architettura” (Eurhythm in the aesthetics of architecture) (Caronia Roberti 1943) and “Una legge ritmica nell’estetica dell’architettura” (A rhythmical law of the aesthetics of architecture) (Caronia Roberti 1944). These essays both contain ‘aesthetics’ within their titles, because the search for a science of beauty through geometric sequences and sense-mediated perception have always been themes favoured by the author. In “L’euritmia”, the author states that the concept of ‘proportions of the parts with respect to the whole’ is well expressed by the law known as August Thiersch’s ‘Principle of Analogy’ and that the concepts of proportion, symmetry and eurhythm have number as their common foundation.

As evidence of the strong link between theory and practice, it suffices to look at the elevations of the building for the headquarters of the Banco di Sicilia in Palermo (Fig. 3), the Palazzo Rindone in Catania (Fig. 4) and the Palazzo del Consiglio Provinciale dell’Economia in Enna to verify the coherence of the architect’s thinking.



Fig. 3 Palermo. Banco di Sicilia. Period photo. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

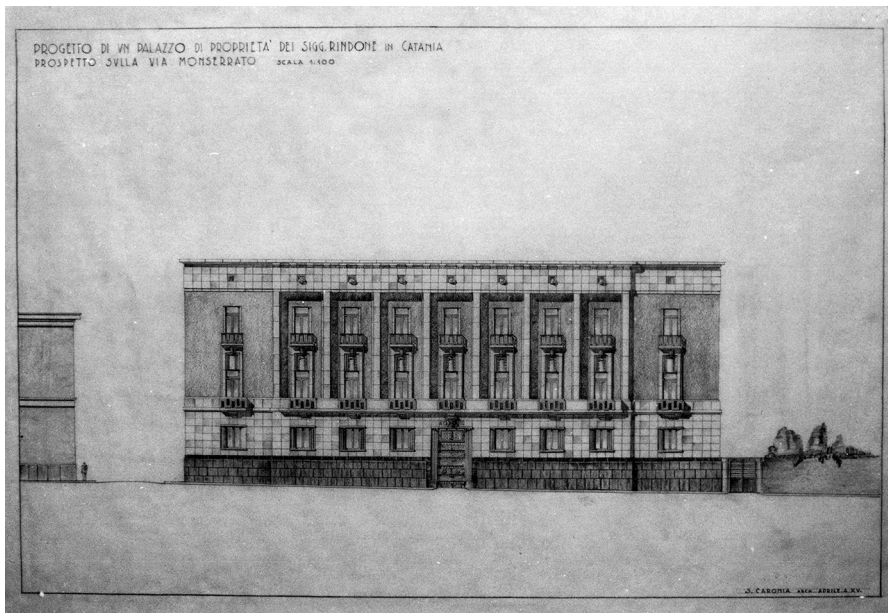


Fig. 4 Palermo. Front of the Palazzo Rindone in Catania. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

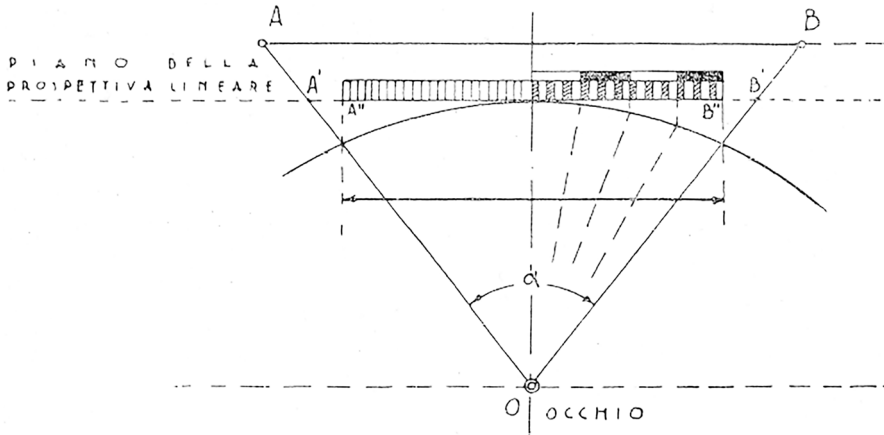


Fig. 5 Principle of “Retinal frame” perspective. Image: Caronia Roberti 1949: Fig. 5, p. 35

By 1949, when he published the volume *Introduzione allo studio della composizione architettonica*, the author’s theoretical frame was established and, above all, solid.

The text is divided into two parts: the first, “Generalità teoriche” (Theoretical generalities), consisting of three chapters; the second, “Le qualità della bellezza architettonica” (The quality of architectural beauty), consisting of seven chapters. The core concerns proportions, symmetry and eurhythmy. In the Foreword Caronia Roberti makes it explicit that geometry substantially provides the basis of his theoretical thought by declaring that “the present work is intended to be a reasoned study of the specific language of Architecture which is geometry. This study results in some suggestion without bias, but only when logical rigor descends from it” (Caronia Roberti 1949: 8). Ratio and geometry are therefore the principles of making architecture.

Caronia Roberti pays special attention to vision, to the eye as an intermediary element for communication between the work and the mind. Starting from the distinction between ‘sensible knowledge’ and ‘intellectual knowledge,’ understood as complex psychic action, he delineates two realities of the architectural work: the geometric and the aesthetic.

With clear graphic examples (Figs. 5, 6, 7, 8) he explains the perspective principle of the ‘retinal picture’, referring for further discussion to Fritz Stark’s book *Netzhautbild Perspektive* (1928).

The Importance of Geometric Logic in Caronia Roberti’s Conception of Architecture

In his *Introduzione* Caronia Roberti writes:

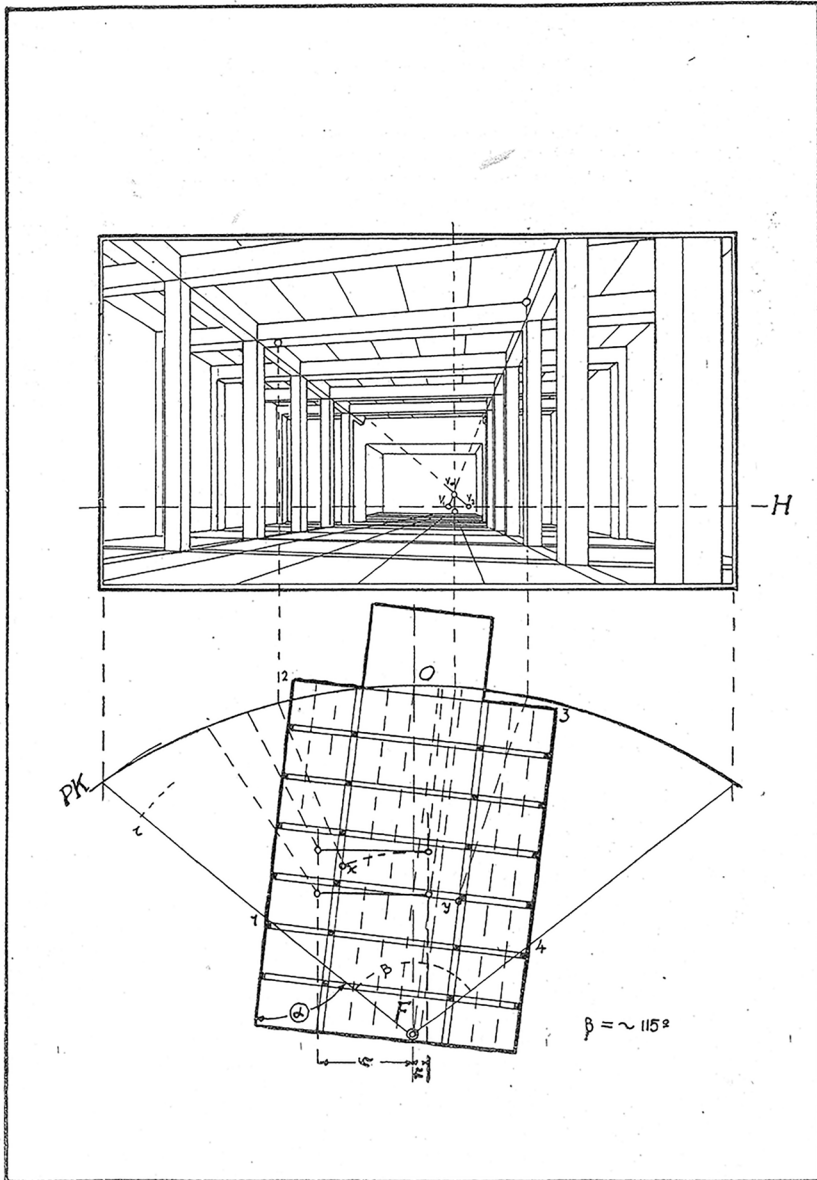


Fig. 6 Application of perspective to "Retinal frame". Image: Caronia Roberti 1949: Tav. III, p. 36

Art aims to give life to matter With its form and color it may interest and delight the eyes and soul. Each art has its own specific language: painting has drawing, and color; sculpture and Architecture have plasticity. The plasticity of Architecture is essentially geometric ... so the language of Architecture is geometry. All that Architecture can say to man must be expressed in geometric

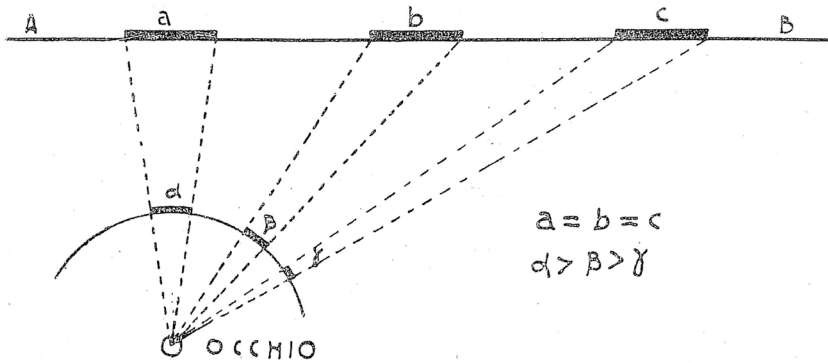


Fig. 7 Effects of angular vision (horizontal). Image: Caronia Roberti 1949: Fig. 6, p. 37

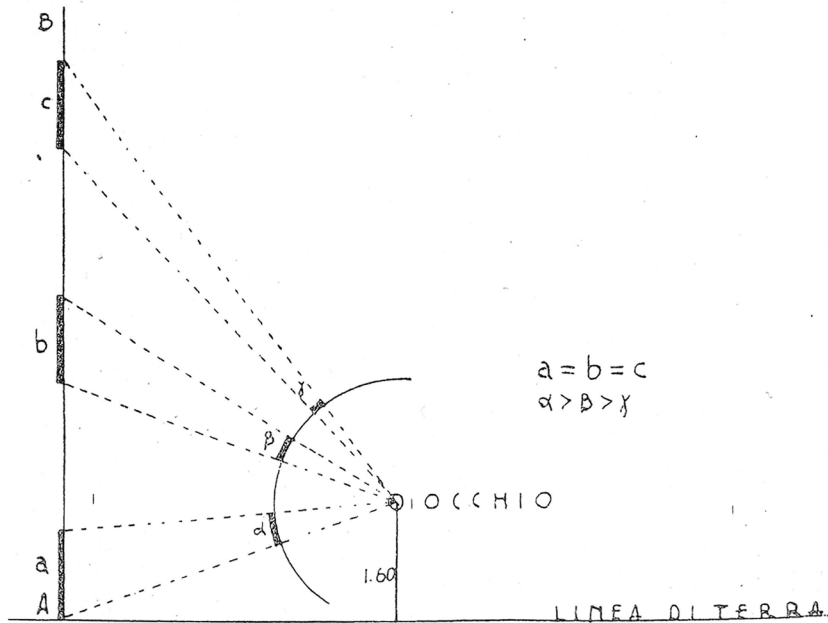


Fig. 8 Effects of angular vision (vertical). Image: Caronia Roberti 1949: Fig. 7, p. 37

terms. The geometry of the Architect is not that of the mathematician, which to all appears arid and cold, but a living and harmonious geometry, of which, moreover, nature itself is unsurpassed master ... Proportions, symmetry and eurythmy comprise all that can be said of architectural geometry or abstract forms ... For these reasons the study of Classical Architecture, called Formal

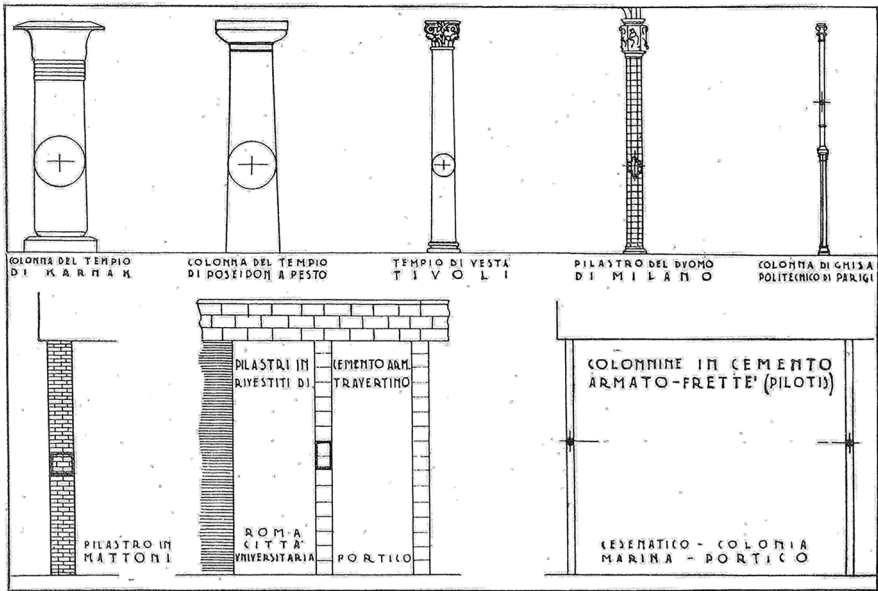


Fig. 9 Example table on the proportions of isolated vertical support. Image: Caronia Roberti 1949: Tav. VIII, p. 89

Architecture, with their geometric refinements, is the most fruitful gymnasium for knowledge of the best language of architecture, as grammar, as syntax, as prosody (Caronia Roberti 1949: 53-54).

This book is fundamental for a history of graphic analysis.² Caronia Roberti begins addressing the topic of proportions by noting that they represent one of the three aesthetic categories treated by Vitruvius (*Firmitas, Utilitas, Venustas*), with proportion understood as the principle of all architectural beauty. In a footnote, the author quotes St Thomas Aquinas's *Summa Theologiae*:

Pulchritudo ... consistit in quadam claritate et debita proportione. Utrumque autem horum radicaliter in ratione invenitur, ad quam pertinet et lumen manifestans, et proportionem debitam in aliis ordinare.

(Beauty ... consists in a certain clarity and due proportion. Now each of these is found radically in the reason; because both the light that makes beauty seen, and the establishing of due proportion among things belong to reason) (*Somma*

² The study of architecture through the aid of graphical analysis was a method adopted in Italy by Vincenzo Fasolo in 1956, later by the school of Rome that referred to Mario Docci, and lastly by Giuseppe Pagnano. Fasolo, in the bibliography of his volume *Analisi grafica dei valori architettonici* (1960), along with essays by Ghyka, Hambidge, Funck Hellet, and Thiersch, includes two texts by Caronia Roberti, including *Introduzione allo studio della composizione architettonica*, as evidence of the value of the text.

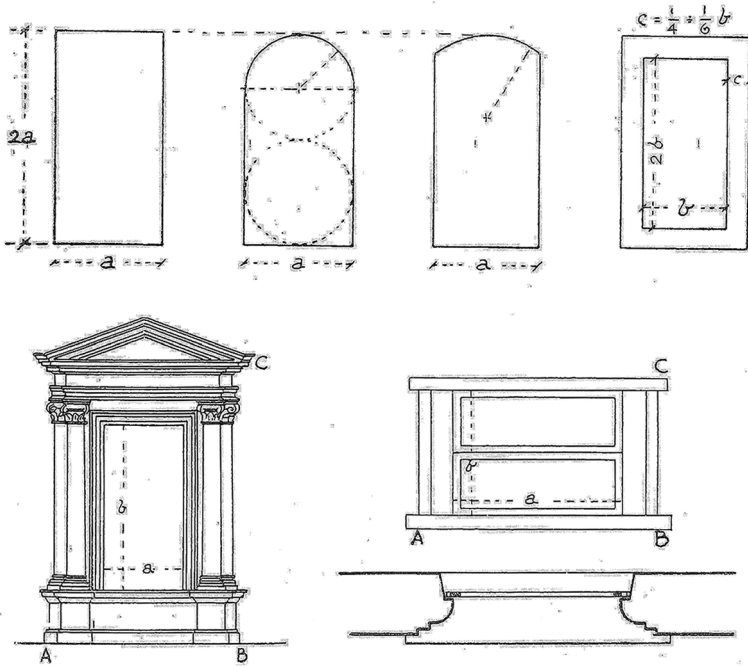


Fig. 10 Proportions of door and window. Image: Caronia Roberti 1949: figs. 59–60, p. 95

teologica, II-II, 180, art. 2, reply to obj. 3, trans. Fathers of the English Dominican Province).

Graphic examples, starting from the construction of the golden section and the proportions of the human body, show the proportions of the columns, colonnades, frames and pediments, doors and windows, and interior volumes (Figs. 9, 10); for the proportions of the latter, Caronia Roberti, for defining the height of a room with a flat ceiling, proposes the following three formulas: $h = \frac{1}{2} \div \frac{1}{3}(l + w)$; $h = \frac{2}{3} \div \frac{3}{4}l$; $h = \frac{1}{2}d$, where h is the height of a room, l the length, w the width, and d the diagonal in plan.

Caronia Roberti states that:

it is theoretically vain to seek rules or regularizations when it comes to architectural proportions. What remains of general and current value can be summarized in the following points: (1) The study of the proportions of an architectural work should be done by relating not the real (geometric) dimensions, but the apparent (aesthetic) ones from the most frequent real points of view; (2) Proportions have expressive capacities of their own, and these are those translated with the adjectives of stocky, massive, heavy, agile, slender, light, even abstractly considered as juxtapositions of only geometrical values; (3) Proportions in Architecture have a foundation conditioned and determined by practical needs and constructive functionality: only beyond this determination (technical activity) can one operate in the abstract to reveal

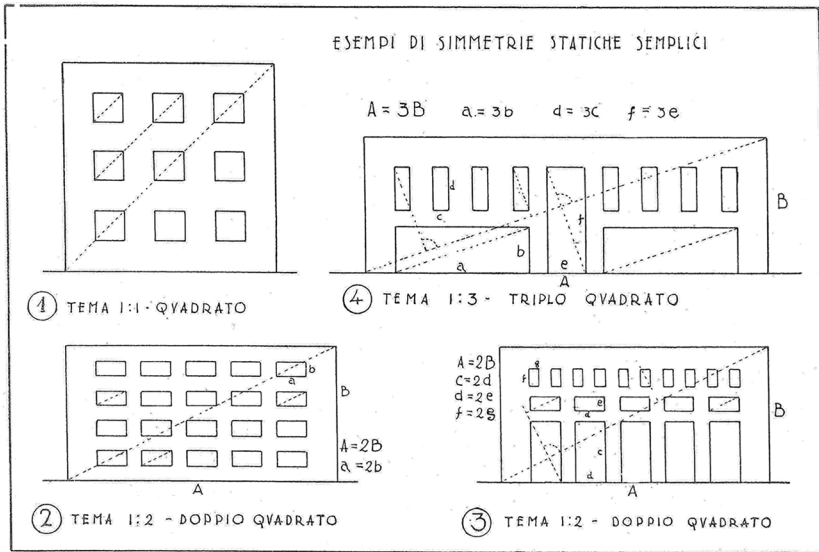


Fig. 11 Examples of simple static symmetries. Image: Caronia Roberti 1949: Tav. IX, p. 103

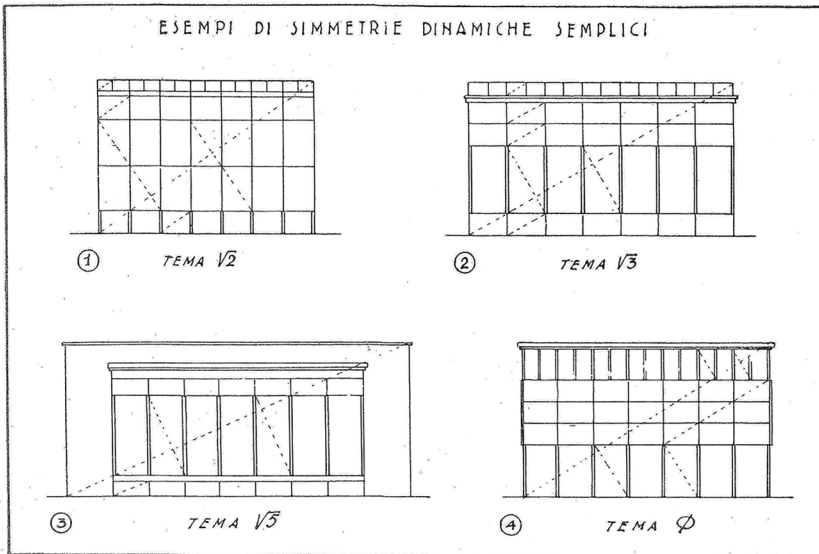


Fig. 12 Examples of simple dynamic symmetries. Image: Caronia Roberti 1949: Tav. X, p. 105

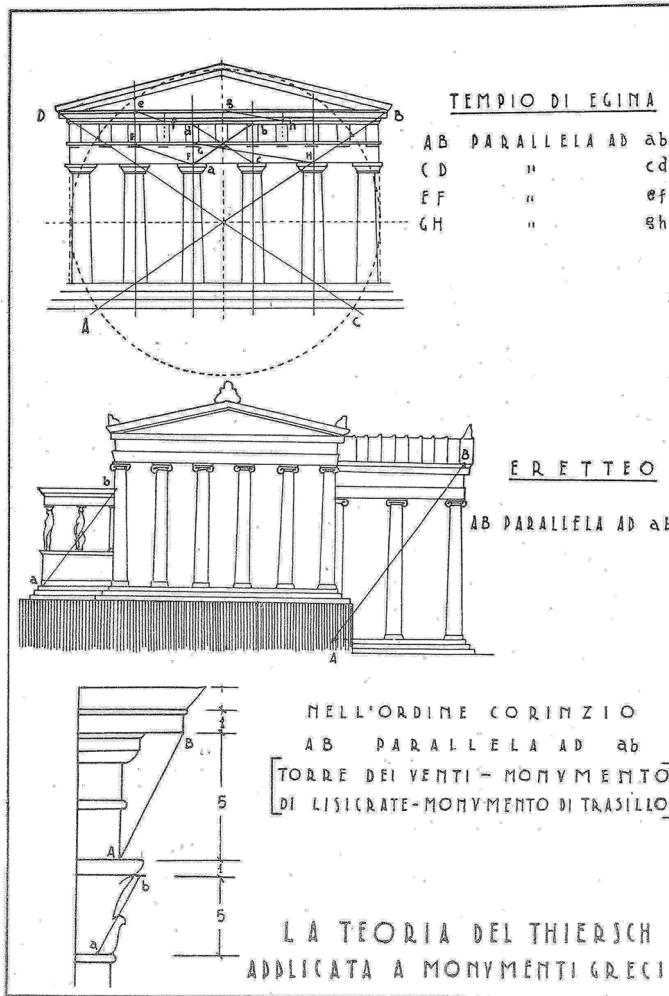


Fig. 13 Applications of Thiersch's theory to Greek monuments. Image: Caronia Roberti 1949: Tav. XV, p. 116

or accentuate an expressive functionality (artistic activity) (Caronia Roberti 1949: 100).

The accompanying plates in the chapter "Della Simmetria" (On Symmetry) also concern simple static symmetries and simple dynamic symmetries (Figs. 11, 12).

Particularly interesting is the indication of why these symmetries are the ones routinely used:

We shall call simple symmetries those those founded upon a single topic. The topics based on the numbers 2, 3, 5 and their radicals numbers, $\sqrt{2}$, $\sqrt{3}$ and $\sqrt{5}$ represent the most frequent symmetries in architectural works,

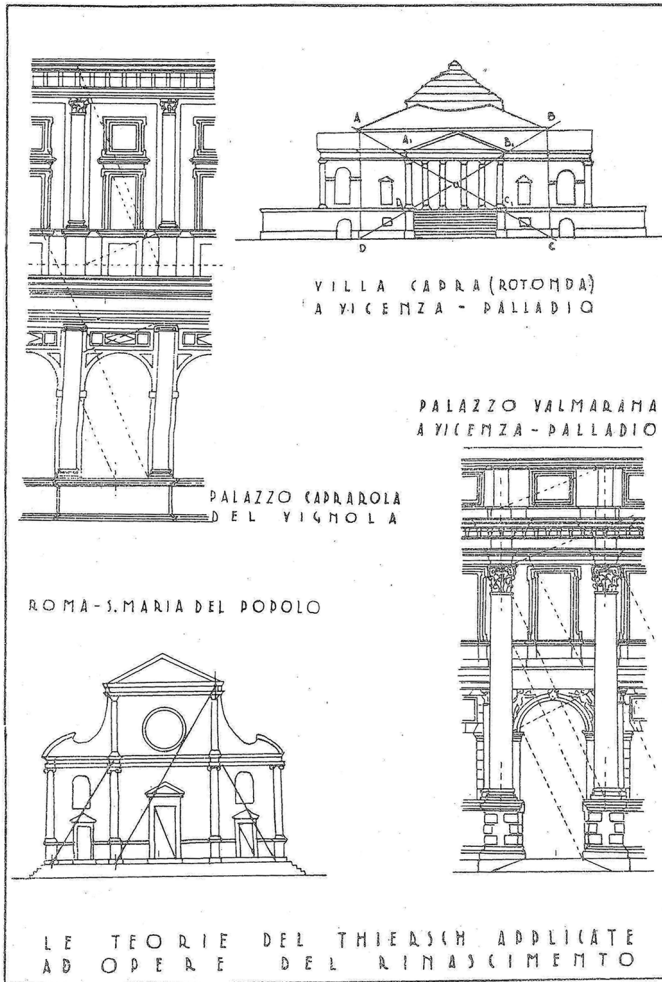


Fig. 14 Applications of Thiersch's theory to Renaissance monuments. Image: Caronia Roberti 1949: Tav. XVI, p. 117

because these numbers easily give rise to geometric compositions of immediate drawing. In fact, we can divide 'Euclideanly', that is, with a ruler and compasses, a circumference into 2 into 3 into 5 equal parts (this last construction is based on that of the golden section), but we cannot divide 'Euclideanly' the circumference into 7, 9, 11, 13, parts. Other numbers, namely 4, 6, 8, 10, 12, 15 and 16, are multiples of 2, of 3 and of 5 and therefore do not represent new proportions compared to those governed by the three fundamental numbers (Caronia Roberti 1949: 104).

Caronia Roberti concludes by describing the "Principle of Analogy", August Thiersch's theory in which the value of harmony prevails over that of proportion

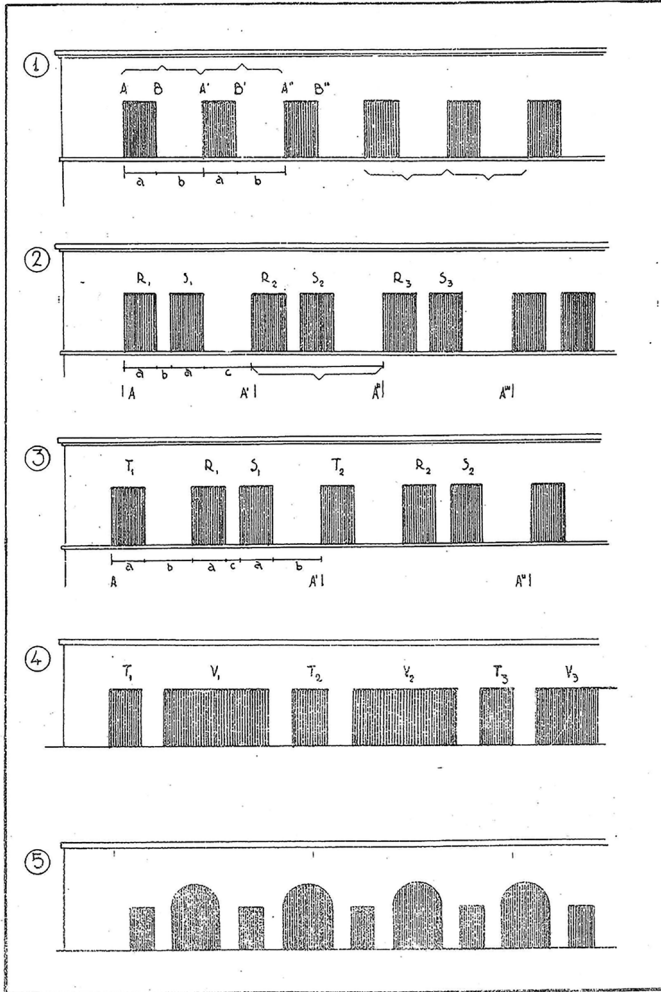


Fig. 15 Examples of horizontal rhythms. Image: Caronia Roberti 1949: Tav. XIX, p. 131

because an infinite number of fundamental figures conveniently coordinated with each other produce the harmony of architectural composition. Two explanatory plates provide the reader with comprehensive applications of the theory as applied to Greek monuments and Renaissance works (Figs. 13, 14).

Caronia Roberti, like Miloutine Borissavlièvitich (1926), argues that analogy cannot be an aesthetic science. Based on geometric similarity, it is a science that derives from man and sensible experience.

Finally, the concept of rhythm is a theme that Caronia Roberti addresses and puts into practice. He argues that in every architectural composition the co-presence of horizontal and vertical rhythm must be avoided because each achieves maximum

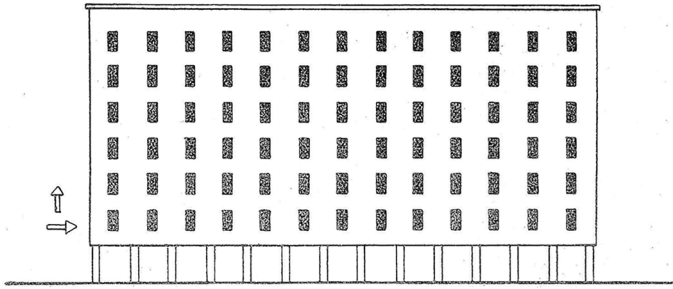


Fig. 16 Presence of horizontal and vertical rhythm. Image: Caronia Roberti 1949: Fig. 109, p. 150

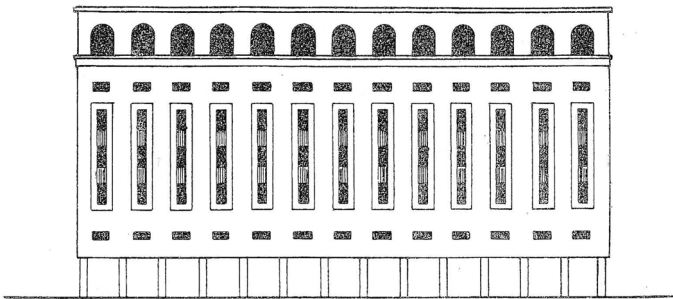


Fig. 17 Reduction in the co-presence of rhythms and predominance of the horizontal rhythm. Image: Caronia Roberti 1949: Fig. 110, p. 151

aesthetic value when it is alone. In a table of examples he defines horizontal rhythms highlight those with uniform cadences, rhythmic cadences with two or three uniform cadences, and also with elements varied in size and shape (Fig. 15).

Two graphic diagrams explain how this aesthetic drawback can be overcome. In the first diagram (Fig. 16) the author shows a profile, very extensive in both length and height, characterized by homogeneous elements aligned both horizontally and vertically. There is therefore competition between the two rhythms. In the second scheme Caronia Roberti shows how to mitigate this contrast by eliminating the vertical rhythm by grouping the perforations together in this direction (Fig. 17).

This expedient was very often adopted by the architect, and the various versions of the elevations for the project for the Banco di Sicilia in Palermo bear witness to how he put his theory into practice (Figs. 18 and 19).

Graphic Analysis as a Theory and Practice Test

In order to ascertain the relationship between theory and practice, we analyse some of the architect's representations by relating them to the explanatory diagrams in

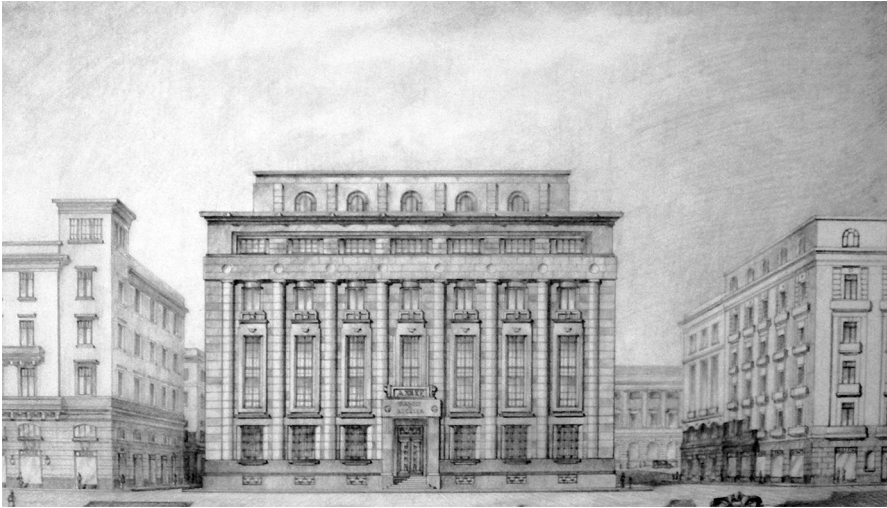


Fig. 18 Project for the Banco di Sicilia in Palermo. Study for the elevation, 1932. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

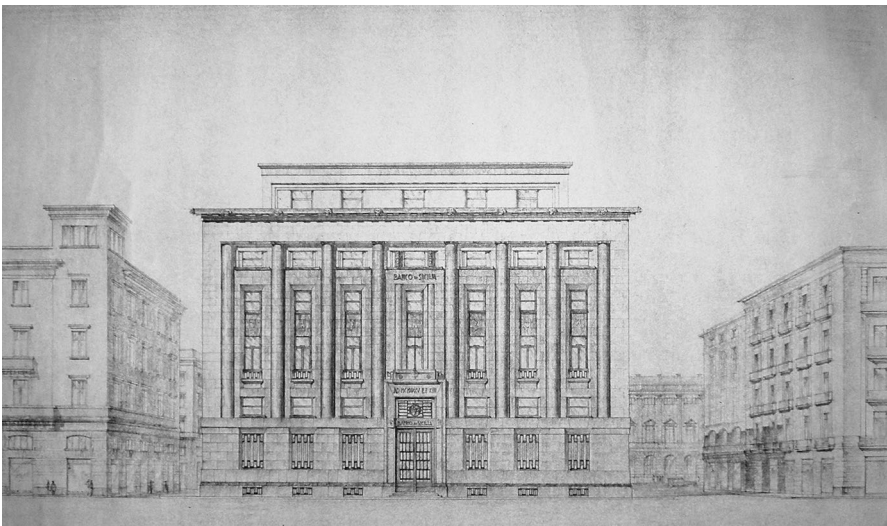


Fig. 19 Project for the Banco di Sicilia in Palermo. Study for the elevation, 1933. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

his book. The images have been straightened with RDF software after measuring in the original drawings the distances in two straight lines orthogonal to each other at one point. We obtained an image file as close as possible to the original by this operation, having in mind that a graphic analysis on geometric matrices refers to a reading closer to physiological optics than to metric precision. This procedure

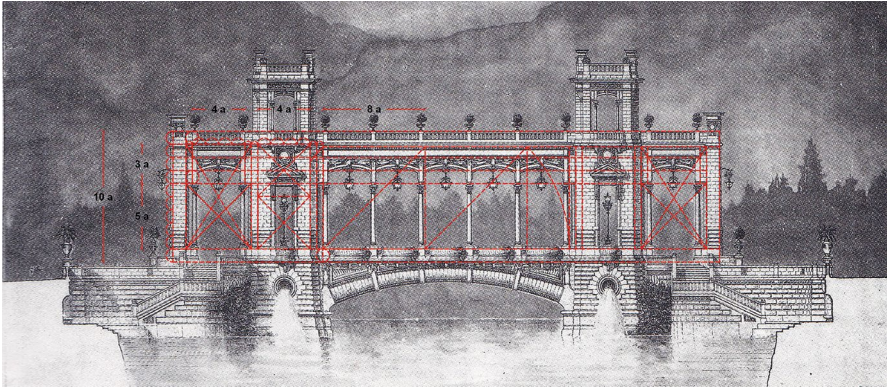


Fig. 20 Graphic analysis by the author on the archive photo of the study for a Bridge, 1914. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

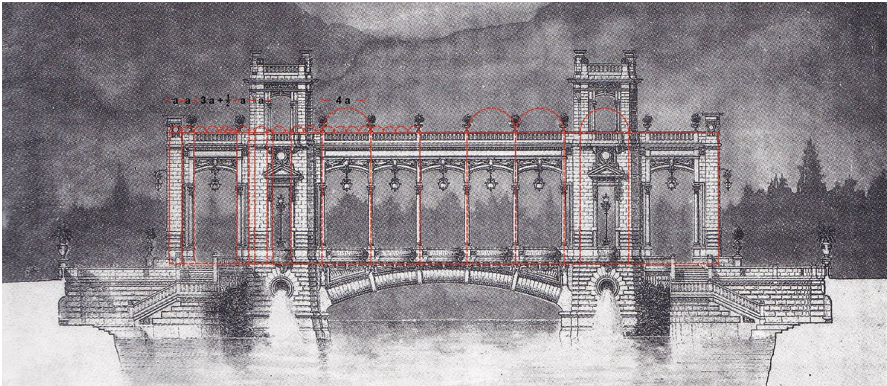


Fig. 21 Graphic analysis by the author on the rhythm of the vertical lines on the archived photo of the study for a Bridge, 1914. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

admits some tolerances but certainly not considerable discrepancies and achieve a good degree of accuracy. The interpretation of the archival drawings was carried out with reference to Caronia Roberti's text in order to verify the 'words' and 'things' of architecture.

The reference to 'classicism' or the construction of the project according to harmonic relationships is a substantial phase of the graphic research on Caronia Roberti's work. Without it, it would be useless to attempt the construction of three-dimensional models because they would not be based on the knowledge of the cultural substrate that determined the construction of the form. Reading a work in fact presupposes both initial knowledge of the design activity and the author's thinking. This study is the basis of any re-drawing operation in order to establish a kind of empathy between the two subjects, the one investigating and the one being

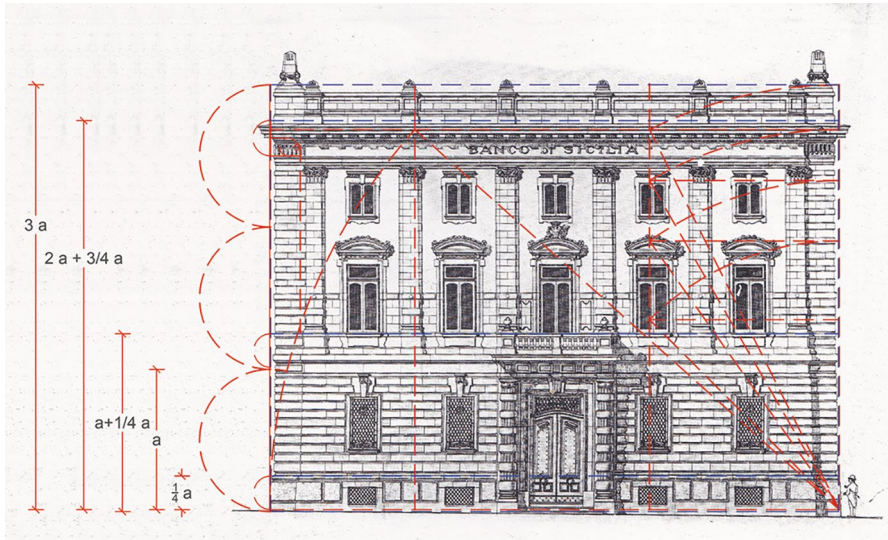


Fig. 22 Author's graphic analysis of the layout of the Banco di Sicilia elevation in Siracusa, 1927. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

investigated. If this does not happen, the operation is not a critical analysis but a mere graphic process as an end in itself.

Graphic analysis makes it possible to fully explore aspects that verbal language can only skim over. It does not force one to rediscover the rules of architecture but allows one to understand what rules the architect used and why he formulated certain solutions rather than others. Investigating architecture with drawing not only means using the language that was used to design it but also using a privileged key to understanding the form (Pagnano 1975). Graphic analysis is a useful tool for architectural criticism and architectural history because it provides a contribution to the knowledge of the drawing of an architectural work. It is a kind of sinopia, no longer hidden, that allows with greater immediacy the reading of a possible procedure of the construction of the project.

Geometry as a tool of design control is present in Caronia Roberti's early design period marked by the influences of the Secessionists and his master Ernesto Basile. In the study for a bridge of 1914, the control of the overall design and the rhythm of the horizontal and vertical lines is evident. The analysis was carried out starting from a photograph in the archive and its comparison with the original drawing. A graphic analysis was carried out on it in order to trace proportions and harmonies. The structure consists of a span with two access pillars in front on each side. The platform, on the other hand, consists of five intercolumniations that support the entablature and the crowning balustrade.

In the overall height, at the balustrade, a module a has been traced that defines the relationship between the horizontal lines of the entire composition and the

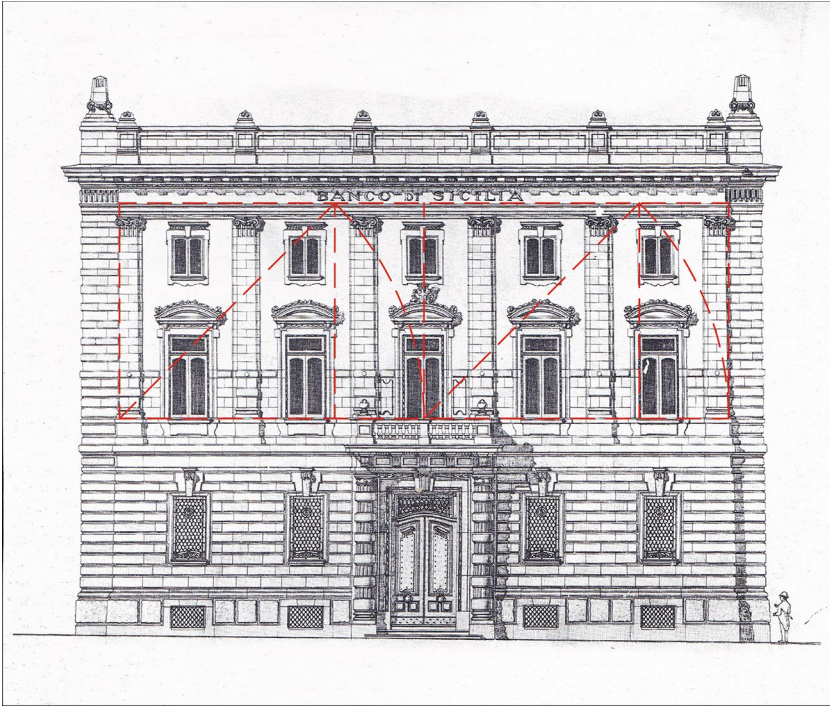


Fig. 23 Graphic analysis by the author on the layout of the Banco di Sicilia in Siracusa, 1927. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

width and the ratios of the parts of the pillars. The latter are formed, the former, by a square $5a$ that defines the width at the side frames adjacent to the columns and the height of the latter from the base to the abacus. Above the columns, the system concludes with a lowered arch and an entablature supporting the crowning balustrade in which the ratio of width to height is enclosed in a *diatessaron* (3:4), again of module a (Fig. 20). The width of the highest pillar has also four modules. Through the adoption of setbacks of the wall structure and frames, in relation to the module, Caronia Roberti determines the rhythm of the vertical lines (Fig. 21).

In the project for the Banco di Sicilia in Siracusa, designed in 1927 and completed in 1930, the main elevation is defined, at the imposing frame, by a dynamic rectangle $\sqrt{2}$. The overall height from the largest side of the rectangle $\sqrt{5}$ has been established from a square with a side equal to $1/3$ of the base of that $\sqrt{2}$ rectangle.

The overall form obtained with this graphic analysis is a *diatessaron* (3:4) of module a whose parts, considered in height, define from the ground line the threads of the plinth, $1/4 a$, of the main floor, $a + 1/4 a$, and the top of the frame, $2a + 3/4 a$; the corner canton is $5/8 a$ (Fig. 22). Further graphic inspection determined that the layout of the main floor and the floor above is enclosed in two $\sqrt{2}$ rectangles determined by the square of side equal to the height of the parastas (Fig. 23).



Fig. 24 Author's graphic analysis of the archive drawing. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

In small-scale projects, the geometric and proportional control of the overall form and its component elements is even more evident. The design for the elevation of the 'Cerere' store designed in Palermo in 1931 is a clear example of this. An analysis of the overall drawing of the composition shows that it is enclosed in a rectangle whose sides are in a 4:6 ratio. Upon closer inspection we find that he has managed to configure, consistent with the physio-psychological aesthetic issues addressed in his book, the perceived image in a rectangle of a *sesquiquarta* (4:5). In fact, the architect draws the ground attachment with a continuous cladding of light-colored stone while enclosing the composition with a thick black marble frame that defines the *sesquiquarta* relationship. The fold of the frame also has a relationship to the whole. In fact, its drawing is in a 1:2 ratio where the unit is half of the value a , which is equal to the height of the white base (Fig. 24).

All the elements of the composition have precise proportional ratios with each other. The entrance has the height of $b + 1/2 b$ equal to two and a half times the width b ; the rectilinear vitrine, the torus that concludes the form of the entryway, and the large black stone frame that surrounds the composition have, with respect to b , the ratios of $1/6: b$, $1/12: b$, and $3/8: b$ testifying to strict proportional control (Fig. 25).

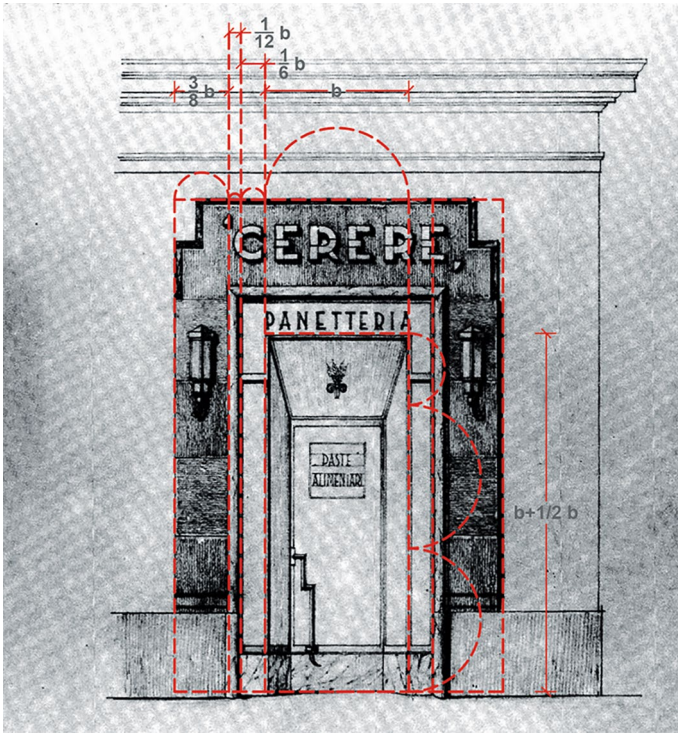


Fig. 25 Author's graphic analysis of the rhythm of the elevation. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

Between 1936 and 1937 Salvatore Caronia Roberti realised the Palazzo Rindone in Catania, the construction of which ended in 1941 (Maggio 2006). An analysis of the main elevation shows that it is determined by a square and a rectangle $\sqrt{2}$ adjacent to it (Fig. 26). The height ratios are very clear; in fact, assuming the height of the loggia as module a , it is found that the basement is $1/4 a$, the height of the mezzanine floor $5/8 a$, the crowning $1/4 a$ and that the layout of the loggia is determined by two adjacent $\sqrt{2}$ rectangles built on the square of side equal to the module (Fig. 27).

In the *Introduzione allo studio della composizione architettonica* Caronia Roberti writes:

Horizontal rhythms are of considerable importance in two-dimensional architectural composition because very frequently the horizontal dimension prevails. Let us follow up with a few observations in this regard ... In a facade that is very extensive in length, a rhythmic cadence of voids and solids in the center, realized with the tight alternation of columns and intercolumniations, of compartments and walls, sandwiched between two solid areas on the ends, gives a definite unified character to the composition, like a lively trill of sounds closed between two severe sustained notes, or

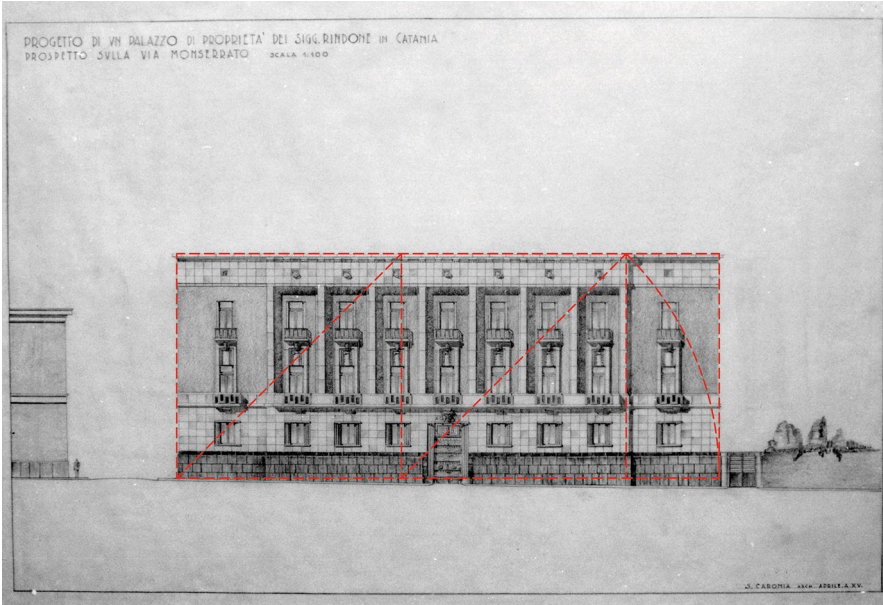


Fig. 26 Author's graphic analysis of the elevation of Palazzo Rindone. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

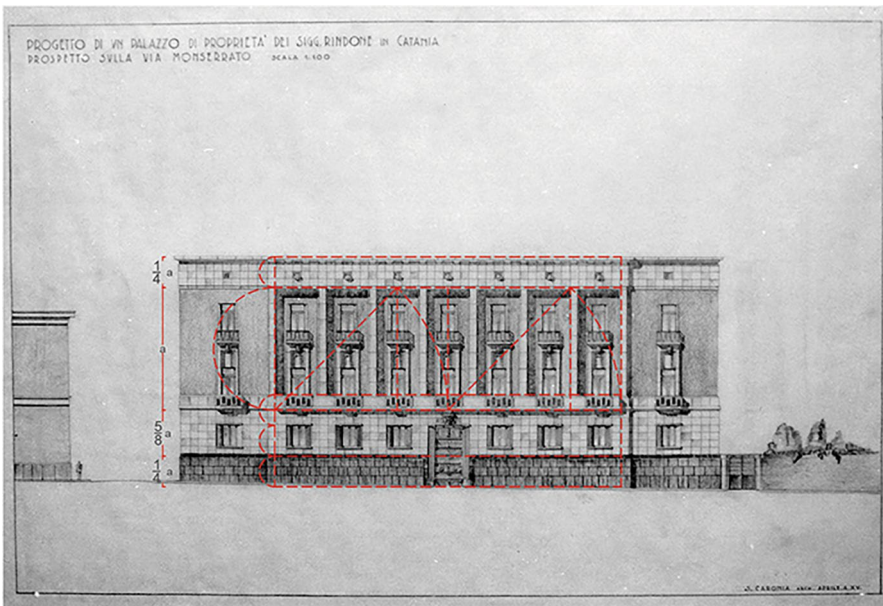


Fig. 27 Author's graphic analysis of the proportions of Palazzo Rindone. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo

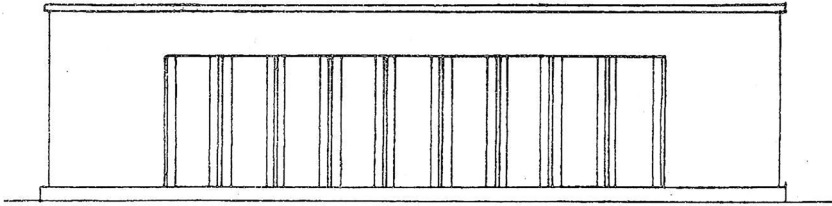


Fig. 28 Caronia Roberti, Diagram on rhythmic counterpoint. Image: Caronia Roberti 1949: Fig. 94, p. 138, with author's overlay

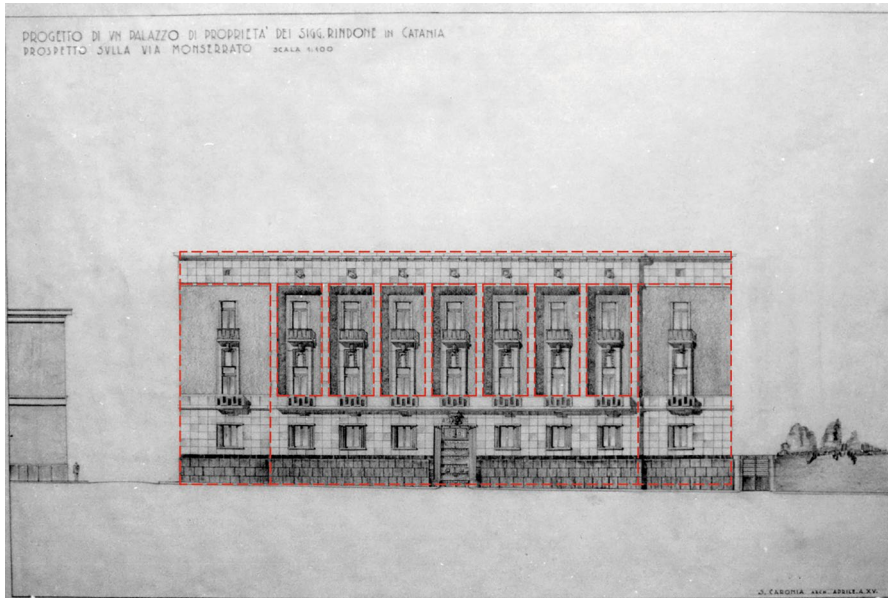


Fig. 29 Analysis of the application of the rhythmic counterpoint scheme on the elevation of Palazzo Rindone. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo, with author's overlay

like a lively chiaroscuro play concluded and bordered by a serene frame (Caronia Roberti 1949: 132-134).

Caronia Roberti associates these words with a clear illustrative graphic (Fig. 28) which, shown on the elevation of Palazzo Rindone (Fig. 29), makes evident the author's consistency between theory and practice, which is also found by applying on the main facade, thus verifying August Thiersche's 'Principle of Analogy', a theory whose aesthetic value he appreciated (Fig. 30).

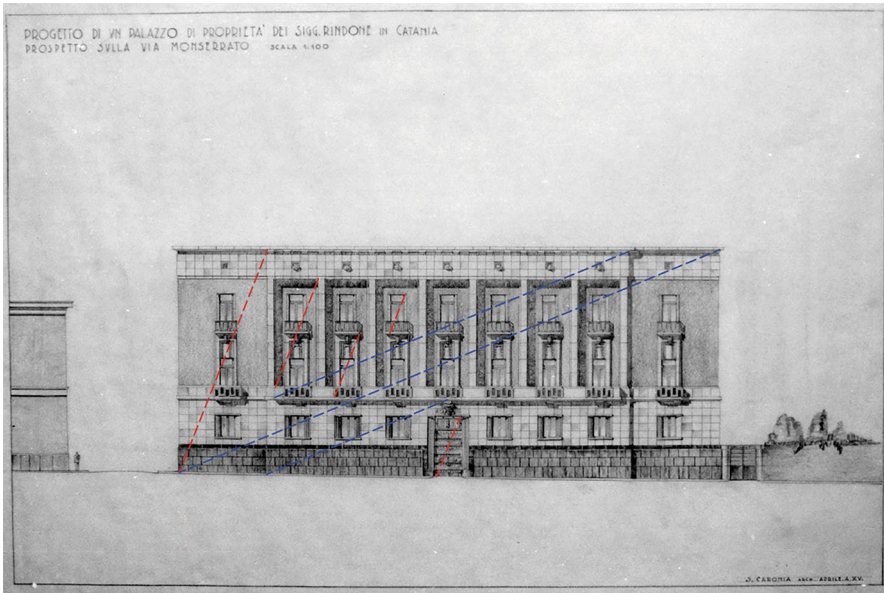


Fig. 30 Analysis of the application of Thiersch's theory on the elevation of Palazzo Rindone. Image: Fondo Caronia Roberti, Scientific Collections of the Department of Architecture, University of Palermo, with author's overlay

Conclusions

Salvatore Caronia Roberti's coherence between theory and practice is evident in his writings and in his architectural works, which testify to his pursuit of architectural beauty through a hierarchical arrangement of the extrinsic qualities of architectural composition that contribute to aesthetics. Caronia Roberti makes clear references to Benedetto Croce, whose *Estetica* (1902) was the aesthetic theory par excellence in Italy for the first thirty years of the twentieth century. To Caronia Roberti the need for a rational study of the specific language of architecture through geometry is the equivalent of the study of the *tecnica interiore* (inner technique) which Croce encouraged.

The key to reading Caronia Roberti's *Introduzione*, as Manfredi Nicoletti (1987) states, is found in the first pages where the author, in discussing the concept of unity, quotes Saint Augustine. The philosopher stated in *De Vera religione*, that an original sovereign, eternal and perfect unity exists above our spirits and is the reason for beauty.

Another tool for investigating the themes discussed in the book is the drawing. Graphic analysis, while being a hermeneutic procedure, has an exclusive relationship between the inquiring and the investigated subject, and allows the study of architecture through one of the modes of representation that assists architectural criticism. It is a procedure that makes clear reference not to metrical precision

but to the instinct of proportion proper to every architect.³ It is to be hoped that this seemingly obsolete procedure will once again acquire a value in teaching and research in the fruitful marriage of architectural history and representation. The words and diagrams of Salvatore Caronia Roberti directed the graphic reading of some of his projects to restore to knowledge the figure of a militant yet isolated architect, who set the standard in the first decades of the 1900s.

The themes he addressed in *Introduzione allo studio della composizione architettonica* were later presented by him in 1951 during the *De Divina Proportione* conference, organized as part of the IX Triennale of Milano, which was attended by, among others, Wittkower, Ghyka, Ackerman, Bairati, Giedion, Rogers and Le Corbusier, among others (Cimoli and Irace 2007). That he reaffirmed his theories on that historic occasion is patent testimony to his firm theoretical coherence in which geometry studies play a prominent role.

Acknowledgements The Department of Architecture of the University of Palermo, custodian of the Fondo Salvatore Caronia Roberti in the Scientific Collection, made it possible to photograph some of the architects projects and acquire photographic reproductions useful for graphic verification. All images are reproduced with kind permission of the Department of Architecture, University of Palermo.

Funding Open access funding provided by Università degli Studi di Palermo within the CRUI-CARE Agreement.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Borissavliévitch, Miloutine. 1926. *Les théories de l'architecture: essai critique sur les principales doctrines relatives à l'esthétique de l'architecture*. Paris: Payot.
- Caronia Roberti, Salvatore. 1934. *Architettura ed etica fascista*. Palermo: Priulla.
- Caronia Roberti, Salvatore. 1936a. Architettura e tipificazione. Extracts from *Realtà* (gennaio 1936a)
- Caronia Roberti, Salvatore. 1936b. *Tradizione e modernismo nell'architettura religiosa*. Palermo: Priulla.
- Caronia Roberti, Salvatore. 1941. Nuove vedute sull'antropomorfismo nell'estetica architettonica. Extracts from *Bollettino della Società di Scienze Naturali ed Economiche di Palermo XXIII*. Palermo: Scuola Tipografica Boccone del Povero.

³ Reference is made to Le Corbusier's famous remark: *Je suis un âne mais qui a l'œil. Il s'agit de l'œil d'un âne qui a des capacités de sensations. Je suis un âne ayant l'instinct de la proportion. Je suis et demeure un visuel impénitent* (I am an ass that has an eye. It is about the eye of an ass that capacities for sensation. I am a donkey with the instinct of proportion. I am and will remain an unapologetic observer) (Le Corbusier 1966: 20).

- Caronia Roberti, Salvatore. 1943. L'euritmia nell'estetica dell'architettura. *Atti dell'Accademia di Scienze, Lettere ed Arti*, serie IV, volume VI, parte II. Palermo: Reale Accademia di Scienze Lettere e Arti.
- Caronia Roberti, Salvatore. 1944. Una legge ritmica nell'estetica dell'architettura. *Atti dell'Accademia di Scienze, Lettere ed Arti*, serie IV, volume IV, parte II. Palermo: Reale Accademia di Scienze Lettere e Arti.
- Caronia Roberti, Salvatore. 1949. *Introduzione allo studio della composizione architettonica*. Palermo: Edizioni Pantea.
- Cimoli, Anna Chiara and Fulvio Irace. 2007. *La divina proporzione. Triennale 1951*. Milan: Electa Milano.
- Croce, Benedetto. 1902. *Estetica come scienza dell'espressione e linguistica generale*. Bari: Laterza.
- Fasolo, Vincenzo. 1960. *Analisi grafica dei valori architettonici*. Rome: Università di Roma, Istituto di Storia dell'Architettura
- Giovannoni, Gustavo. 1949. Prefazione. In: Salvatore Caronia Roberti, *Introduzione allo studio della composizione architettonica*, 11–14. Palermo: Palermo: Edizioni Pantea.
- La Franca, Rosalia. 1987. I progetti del regime: dossier dei protagonisti, In: *Palermo: architettura tra le due guerre (1919–1939)*, 195–230. Palermo: Flaccovio Editore.
- Le Corbusier. 1966. *Mise au point*. Paris: éditions Forces Vives.
- Maggio, Francesco. 2006. *Analisi grafica di un'opera di Salvatore Caronia Roberti*. Palazzo Rindone a Catania. *Ikhnos* 4 4 163 192
- Mauro, Eliana. 1987. Caronia Roberti Salvatore (Sicilia). In: *Archivi del Liberty italiano*, Rossana Bossaglia, ed., 564. Milano: Franco Angeli.
- Nicoletti, Manfredi. 1987. La qualità del bello come utopia dell'eterno presente. In: *Salvatore Caronia Roberti Architetto*, ed. Maria Clara Ruggieri Tricoli: 11–31. Palermo: Edizioni Grifo.
- Pagnano, Giuseppe. 1975. La lettura critica: Analisi di cinque opere di Adolf Loos. *Supplemento al Quaderno n. 7 dell'Istituto Dipartimentale di Architettura e Urbanistica dell'Università di Catania*. Catania-Caltanissetta: Cavallotti Editore.
- Ruggieri Tricoli, Maria Clara. 1987. *Salvatore Caronia Roberti Architetto*. Palermo: Edizioni Grifo.
- Stark, Fritz. 1928. *Netzhausbild Perpektive*. Neuss am Rhein: Self-published
- Villa, Marcella. 2008. *Lettura grafica del Banco di Sicilia a Palermo di Salvatore Caronia Roberti*. Siracusa: Dipartimento Astra.

Francesco Maggio is an Architect, Ph.D., Full Professor of Representation at the Department of Architecture, University of Palermo. Since 2018 he has been part of the Technical Scientific Committee of UID (Unione Italiana per il Disegno). His research interests concern the history of representation, study of archive drawings, graphic analysis of architecture to interpret the project. Author of numerous publications on the research investigated. He has presented his research at national and international conferences in his scientific sector. A reviewer of books and articles in journals, he is editor, with others, of the journals *Diségno* and *Agathòn*. His current research concerns the contribution of women to the development of modern architecture.