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## Saverio Muratori and the Italian school of planning typology

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**Abstract.** *This paper outlines the development of the Muratorian school of urban morphology and building typology. Starting from Muratori's experience as a talented architect, deeply rooted in the Roman interpretation of Italian rationalism, the authors describe the growth of Muratori's interest in history as a means of recovering a sense of continuity in architectural practice. Adopting a theoretical approach grounded in architecture and urban design, he started working on a critical framework which could explain the creation and transformation of urban form over the centuries. He had many followers. The resurgence of interest in Muratori's work in the 1990s is described.*

*Key Words: Muratori, Caniggia, history, processual typology, Italy*

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The fiftieth anniversary of the publication of Saverio Muratori's fundamental essay *Vita e storia della città*<sup>1</sup> provides an opportunity to outline the events and evolution of ideas that characterized the school that originated from Muratori's teaching. According to Muratori, over the first half of the twentieth century, urban planning and urban design theory systematically ceased to be cultural devices deeply rooted in history. This reflected the growth of a positivistic approach to building. Planning and design became little more than technical devices. In Muratori's opinion, this had progressively led to an impoverishment of the discipline. Only a systematic understanding of history's laws of reproduction could recreate the role previously claimed by urban design. To achieve such understanding required a new theoretical framework, and it was to this that he devoted himself.

### **Saverio Muratori**

Muratori (1910-1973) did his school and university training during a period of profound renewal of Italian teaching institutions.<sup>2</sup> The Gentile Reform of 1923 was based on an attempt to re-establish scholastic knowledge of the humanities and science. It was finally introduced in 1929. The merging of these two cultures made architecture a pertinent field in which to overcome the clash between Art Schools and Engineering Polytechnic Schools.

It was probably soon after he had graduated from classical school that the young Muratori absorbed the concept of contextualized architecture from the teaching of his early lecturers (Fasolo, Giovannoni, Foschini, Calandra and Piacentini), in particular Gustavo Giovannoni. This was

then incorporated into and developed within his own theory.

After receiving his degree in 1933, a high cultural standard and great intellectual curiosity led Muratori to deepen his knowledge of modern architecture by preparing a series of articles for the magazine *Architettura* on the most recent architectural projects in Europe. This influenced his early projects, mainly carried out in collaboration with Ludovico Quaroni and Francesco Fariello, including a model, in the Universal Exposition of Rome in 1937, of Rome's Imperial Square.

Subsequent projects, carried out on his own, were characterized by an experimental interest in the composition of Italian squares: major urban themes, in which the surrounding consolidated environment is the contextualizing reason for the square and monumental buildings surrounding it.

The war interrupted Muratori's planning activity but not his critical reflection, which, on the contrary, increased in intensity. His essays of 1944-46, published posthumously by Guido Marinucci, testify to this. Concepts of towns as living organisms and as collective works of art, and the idea of planning new buildings in continuity with the building culture of the place, are outlined for the first time in these essays. In a nutshell, there is the idea of 'operative history', which then found an explicit definition in books on Venice.

During the years of post-war reconstruction, Muratori was deeply involved in the house plans of the Istituto Nazionale delle Assicurazioni (INA), which were launched in 1948 and implemented in all major Italian towns. In this regard he was responsible as group leader for certain Roman districts, such as Tuscolano, where the town planning approach and building were influenced by the contemporary so-called Scandinavian empiricism.

During this period Muratori planned four major public buildings in three different Italian towns: the church of S. Giovanni al Gatano in Pisa, the Ente Nazionale di Previdenza ed Assicurazione Sociale office

building in Bologna, the headquarters of the Christian Democratic Party and the incomplete church of Tuscolano, both in Rome. In this way, he could explore the solutions to fundamental modern technical problems (inherent in new materials, especially reinforced concrete) of style and the environment. It is remarkable how in these works Muratori embraces the most significant periods in the history of Italian architecture: from Romanesque in Pisa, to Gothic in Bologna, and to Renaissance and Baroque in Rome. No matter how you assess them, they stand out in the international panorama of contemporary architecture because the themes they embody are decades ahead of their time.

Most probably these experiences induced in Muratori profound dissatisfaction with the evident conceptual gap between the plans of entire quarters and those of works of architecture. The former, following the functions of the time, he found to be poorly connected to the complexity and originality of the latter.

In 1952 he was called to Venice to the Professorship of Distributive Characteristics of Buildings. Here he was able to re-examine the first urban surveys of the city's hub and the theoretical assumptions of his 1950 essay. He did this employing the fundamental concepts of type, fabric, organism and operative history. *Studi per una operante storia urbana di Venezia* was one year ahead of Paolo Maretto's complementary book on *L'edilizia gotica veneziana* (which contained a critical introduction by Muratori himself), and constituted the first systematic survey of a town's historic buildings.<sup>3</sup>

In 1954 Muratori returned to Rome to replace Arnaldo Foschini as Professor of Architectural Composition. There he endeavoured to renew architectural teaching. His Venetian experience was the trigger for his idea of operative history, which inspired and provided the basis for students' plans. The themes proposed were aimed at understanding the various values inherent in urban formation phases: ranging from the influences

on and implications of projects to join existing buildings in historic downtowns, where the fabric was compact, to suburbs, where sites were susceptible to a wide range of solutions.

Muratori reinforces urban themes with the consideration of architectural organisms, exemplified by the famous 'masonry hat'. Here students are requested to plan a highly coherent representative building in which the spatial arrangement of the form, as synthesis of material, structure and compositional plan, is the main teaching aim.

In the early 1960s, Muratori's team of resident assistants began to form. It consisted of Renato Bollati, Sergio Bollati, Gianfranco Caniggia, Guido Figus, Sandro Giannini, Romano Greco, Paolo Maretto and Guido Marinucci. With Bollati and Marinucci, Muratori was responsible for the great atlas *Studi per una operante storia urbana di Roma*,<sup>4</sup> completed in 1963. With others he joined in major architectural competitions, winning the competition for Barene di S. Giuliano in Venice in 1959. This project comprised the re-creation in a modern version, on the sides of the lagoon, of three particularly significant moments of Venice's urban history. This method of planning through phases<sup>5</sup> had already been applied less explicitly by him in the past in the INA house quarters urban expansion plans in Magliana in Rome.

In the meantime Muratori's teaching, radically removed from fashionable trends, was opposed by early student movements and colleagues on the teaching staff in Rome, who thought it wise to move away from a vexatious person, totally committed to refounding architecture and therefore not inclined to uphold the formalisms and technicalities of the modern movement. In the end, the resulting work, controversies and struggles produced in Muratori an increasing sense of isolation, coinciding with his desire to concentrate his philosophical reflections on wider issues, outside the specific disciplinary field of architecture. *Civiltà e territorio* is the overall culminating point of a speculative course that started in 1962 with *Architettura*

*e civiltà in crisi*:<sup>6</sup> both titles are indicative of his intellectual preoccupations. In the former, the architectural crisis is taken to be an expression of a more general crisis. The latter analyses the processes of self-awareness. For Muratori the only way to solve the crisis lay in the capacity of human beings to establish, on a global scale, a balanced relationship with their territories.

He died in 1973 at a moment of great intellectual fervour, surrounded by a few students and colleagues, including Enzo Flamini, who had a chance to assimilate the last problematic aspects of his thought. The projects of his major *Atlante territoriale* and so-called *Tabelloni*, intended to be a sort of universal logical classification of man-made structures,<sup>7</sup> remained on paper only.

In his last years, Muratori, aware of how little time he had left and of the difficulty in expressing his ideas, was in the habit of recording speeches and lessons, which he prepared using synoptic charts and diagrams. This was the theme for the transcriptions of Guido Marinucci (1924-2001) who, with profound dedication and endless patience, devoted himself to the work of the maestro in subsequent decades. He was largely responsible for the two volumes of posthumous work centred on the methodology of the reality/self-awareness system, the last written evidence of Muratori's thought.<sup>8</sup> A cultured man with numerous interests, a great designer and an architect with an instinct for the problems of forms, Marinucci was so struck by his meeting with Muratori that he chose to be the custodian and propagator of his ideas. Together with the Bollatis, he made an important contribution to drawing up a book on Rome, which he knew well and loved.

### Saverio Muratori's Roman school

The teaching revolution commenced by Muratori in Rome resulted in an intellectual reform, rather than a cultural one, for his assistants coming from different training experiences. Over the years, he had developed with them a seminar, with the participation of a few interested students, in

which each assistant had responsibility for certain topics. Later on this experience led to the so-called free courses of 1965-66, carried out under his supervision.<sup>9</sup> These were an attempt to create the syllabus of a new faculty of architecture, highly integrated in its teaching components. It clashed openly with the innovative proposals for architectural studies introduced some years previously by Bruno Zevi, who portrayed Muratori as an academic and traditionalist. Publicly attacked, Muratori reacted by delivering his famous *Discorso del Roxi* speech,<sup>10</sup> in which he reaffirmed his position and invited to his courses those of the student movement who did not share Zevi's extremism. This gave rise to the formation of a group of highly-motivated students, who held a campaign in support of Muratori in the Faculty. He decided to grant their requests and organized non-institutional planning courses. The failure of such initiatives, due to the Faculty's opposition and the students' uprising in 1968, produced in Muratori that sense of isolation and introversion that came across clearly in the lectures of his last years, which were published posthumously by Marinucci.

Meanwhile, a number of Muratori's assistants had started to conduct personal research programmes on his theme of fabrics, urban organisms and territory. While Marinucci and the two Bollatis helped Muratori with his book on Rome, Caniggia published *Como: lettura di una città* in 1963, at the same time publishing *Esperienze operative sul tessuto urbano di Roma* with S. Bollati, G. Marinucci and A. Giannini. These were followed by the essay of the young scholarship-holder Paolo Vaccaro on *Tipo e tessuto edilizio a Roma*.<sup>11</sup>

The first opportunity to put the typological method into practice arose for an extended group of assistants in Ethiopia in 1964 where some 22 towns had to be planned.<sup>12</sup> In this case, interpreting Ethiopian territorial formation processes provided the conceptual key to formulating individual town plans. These were encapsulated in a single synoptic chart: a classic Muratorian procedure.

Alessandro Giannini, in a series of articles,<sup>13</sup> has left us a written record of these experiences, which is important scientifically and as a historical record of a vanishing post-colonial world.

### The dispersal from Rome

Muratori's demise had deprived his assistants of an essential reference point in their intellectual development, as well as career opportunities in the University of Rome, where they were ostracized by the lecturing staff. However, the architectural studies reforms of 1970, which created new faculties, offered new opportunities for them, aided by Luigi Vagnetti's all-important support.

Almost a contemporary of Muratori, Luigi Vagnetti (1915-1980)<sup>14</sup> distinguished himself as one of the most brilliant pupils of Arnaldo Foschini, becoming his assistant after graduating. His relationship with Muratori intensified during the post-war period following competitions and jobs by professional teams,<sup>15</sup> testifying to the interest he shared with Muratori in the issues of contextualized architecture. Once Muratori had taken over Foschini's professorship, Vagnetti, who stayed on for a few years as an assistant in Rome (before becoming a professor in Palermo in 1962), had a chance to get to know his thought and appreciate his assistants at the same time.

As head of the scientific committee of the new Faculty of Reggio Calabria, Vagnetti invited Paolo Maretto and Gianfranco Caniggia to become lecturers, the former having in some respects become more independent of the maestro. Later, in Genoa and Florence, Vagnetti confirmed his historic role as enhancer and promoter of Muratori's school, supporting the calls of Giannini, the two Bollatis and Vaccaro. In time, groups of lecturers formed in Reggio, Genoa and Florence, reviving in their teaching the method of working learnt in Rome from Muratori.

As a student, Paolo Maretto (1931-1998) assisted Muratori in Venice, studying the lagoon city as soon as he graduated. His last

book, *La casa veneziana nella storia della città*, published in 1986<sup>16</sup> concluded a cycle of passionate research, whose starting point was *L'edilizia gotica veneziana*. He also published books on southern Calabrian towns and territory and on Genoa's historic core.<sup>17</sup> His main theoretical texts<sup>18</sup> express the desire to organize typological study according to the four fundamental interrelated scales of man's context. He also showed a great interest in linguistic experimentation, evident in the parish complex of Sarmeola in the province of Padua.<sup>19</sup>

Right from the beginning Renato and Sergio Bollati (both born in Atlanta, USA in 1929), who were trained at the Roman school during the 1950s, showed a marked inclination towards architectural working practice. Together with Guido Marinucci, they were the maestro's most faithful assistants. Under his guidance they helped to produce the book on Rome, the incomplete territorial Atlas, the Magliana plans, the Venetian Barene, the Chamber of Deputies and the Churches in Rome. Called by Vagnetti to Reggio Calabria, it was here that they did all their teaching, with wide-ranging research on numerous Calabrian and Sicilian towns and fabrics. This major research was virtually unknown owing to their reluctance to exhibit it outside university circles.<sup>20</sup> Their projects<sup>21</sup> show how Muratori's teaching influenced them to create organic, contextual solutions.

Sandro Giannini (born in 1929) has a life course complementary to that of Bollati, with whom he shares paternity of the *Tabellone*, as a graphic exemplification of Muratori's work.<sup>22</sup> He was the first assistant to follow the maestro in large-scale territorial studies, firstly in Reggio and then in Genoa, having started with the aforementioned articles on Ethiopia, and later undertaking fundamental studies on Liguria.<sup>23</sup> He also took part in the interpretation of types and fabrics in Ostia Antica and made a systematic comparison between architecture, music and philosophy.<sup>24</sup> He has revived Muratori's thought<sup>25</sup> in an original way, redefining and updating the fundamental terms of the maestro's lexicon.<sup>26</sup>

During his later years he developed a specific methodology for territorial interpretation with special emphasis on the outskirts of cities and he directed attention to the analysis of 'empty spaces' as opposed to 'built-up' spaces.<sup>27</sup>

### Gianfranco Caniggia

As far back as his university days, Gianfranco Caniggia (1932-1987) was outstanding. He followed in the footsteps of his father Emanuele, who involved him at a young age in major works, including the Trinità dei Pellegrini complex in Rome, built in three sequential phases, demonstrating his progressive acquisition of Muratori's planning themes. Welcomed by Muratori among his assistants, he applied the interpretation method in studies on Como, a planned town of Roman origin.<sup>28</sup> The 'switchback' interpretation of the process of urban development enabled him to grasp, *vis-à-vis* Roman row houses, the persistence of the *domus* as a type of substratum. This was a fundamental intuition that opened a line of research on the formation procedures of medieval courtyard houses in European historic cities.<sup>29</sup>

Like Muratori's other assistants, Caniggia was obliged by the Roman diaspora to teach in Reggio and then Genoa and Florence. In the last two towns he developed a line of research in his courses on planning, further specifying the methodology for the interpretation of towns and their components. He thus managed to progressively accumulate sound teaching experience, forming the material for *Composizione architettonica e tipologia edilizia*, in four volumes. The first two, published with Gian Luigi Maffei's all-important contribution, are on the interpretation and design of basic building:<sup>30</sup> conceived as a manual, they have been used in many architectural courses and have been translated into Spanish, French and English.<sup>31</sup> Volumes on the interpretation and design of special building were in draft form at the time of his death.

Caniggia's main concern was to transmit Muratori's ideas in architectural terms,

starting from the conviction that their diffusion was somehow obstructed by comprehension difficulties inherent in Muratori's thought. Caniggia therefore tended to simplify and reduce the theoretical system, highlighting its more directly operative aspects. In this sense, significance lies in the use and importance in his writings of the terms and concepts of 'type', 'building fabric' and, above all, of 'basic building', intended as the formative matrix of specialized building. It was not by chance that Caniggia used the last expression instead of 'architecture', openly disputing Zevi's views of works of architecture as purely invented, unrepeatable phenomena.

The plan of the Teramo Law Court (1971-75) was clearly influenced by themes that Caniggia developed during Muratori's courses. His period of closer observance of Muratori also includes the plans of the Chamber of Deputies and churches in Rome.

After the maestro's death, Caniggia went his own way, putting into practice in the Quinto quarter in Genoa what he had learnt about the peculiar characteristics of the Genoese urban environment.<sup>32</sup>

During the 1980s Caniggia and his colleagues took part in major national competitions. The Pescara and Bologna railway junctions, the Murate area in Florence, the building expansion of the Giudecca in Venice and the 'holes' in Rome<sup>33</sup> were steps in a single, consistent planning process, intended to demonstrate the conviction that the only really innovative way of planning in towns is to interpret them according to history, avoiding extemporaneous solutions, linked to unjustified individual inventions.

Continuous dialogue with Caniggia stimulated Adelaide Regazzoni Caniggia to apply the method to mobile elements that contribute to the dimensional and qualitative definition of internal spaces. Her volume *Profilo di tipologia dell'arredo*, in combination with other studies, represents a major contribution to knowledge of interior decoration.<sup>34</sup> This interior scale appeared in Muratori's classification of man-made

structures (and also in the Bollatis and Giannini's version)<sup>35</sup> as the first of the built scales.

After Caniggia's premature death, his numerous unfinished studies were integrated and published by Gian Luigi Maffei, his pupil and closest colleague. In this connection, Maffei's books on Florentine and Roman houses are of particular significance. The methodological approach and contents explicitly refer to Caniggia,<sup>36</sup> whose last writings, which are mainly unpublished, were collected by Maffei in the posthumous volume *Ragionamenti di tipologia*.<sup>37</sup>

### The present school

There is now a generation of Muratorian followers who did not directly know Muratori. They are present in numerous universities throughout Italy, notably Reggio Calabria, Genoa, Florence, Rome and, more recently, new faculties of architecture such as those at Ferrara, Cesena and Bari.

The Florentine group has without doubt been the most active, academically established reference centre for the school since Caniggia's death. For its members, the first occasion for reciprocal collaboration was provided by the *Cortona, struttura e storia* exhibition of 1987, supervised and coordinated by Paolo Vaccaro, with Giancarlo Cataldi and Enrico Lavagnino responsible for territorial interpretation, and Gian Luigi Maffei and Vaccaro for building and urban interpretation.<sup>38</sup> It was a major occasion for methodological discussions: for comparison and interdisciplinary exchange with archaeologists and historians, especially to verify and examine in the Etruscan town the relationships at various scales between spontaneous and planned phases.

At the same time Giancarlo Cataldi and his assistants investigated the unexplored series of primitive architecture. The results were displayed in a series of international exhibitions, conferences and publications.<sup>39</sup> This research is based on the general tabulation hypothesis of typological processes.

In the mid 1990s other major Florentine research, supervised by Gian Luigi Maffei, dealt with historic Tuscan buildings subject to earthquakes.<sup>40</sup> The comparative study of numerous settlements, including small- and medium-sized towns highlighted, in the context of a common cultural identity, the distinctive characters of the various sub-regional areas.

In 1981 Giancarlo Cataldi, with Nicholas Adams, Lero Di Cristina, Fausto Formichi, Laura Marcucci and Henry Millon founded CISPOT (Centro Internazionale per lo Studio dei Processi Urbani e Territoriali). The intention was to provide occasions for architects and architectural historians to meet and make comparisons, and to verify from the point of view of various disciplines the outcomes of Muratori's method, in particular in relation to Pienza and its territory.<sup>41</sup>

On the tenth anniversary of Muratori's death, in 1983, CISPOT organized in Pienza, with the all-important contribution of its assistants, an exhibition and conference on the maestro's thought and work.<sup>42</sup> It was followed by other international conferences on building and towns.<sup>43</sup> Since 1993, CISPOT meetings have been held once a year, creating major occasions for the school's internal debate.

After Pienza, the exhibition on Muratori moved to other Italian towns: Reggio Calabria, Genoa, Modena and Bologna, and then the Zurich Polytechnic Institute (invited by Sylvain Malfroy), the Strasbourg School (invited by Pier Giorgio Gerosa) and some United States colleges and universities (through the initiative of Nicholas Adams). During the 1980s, Caniggia was invited by Malfroy and Anne Vernez Moudon to hold courses and lessons in Lausanne and Seattle.

During the 1990s, the time was ripe for an international gathering of groups and schools dealing with towns and their transformation processes. The first of these was held in Lausanne in 1994. Among those present were Gian Luigi Maffei, Sylvain Malfroy, Bruno Marchand, Paolo Maretto, Anne Vernez Moudon and Jeremy Whitehand. This led to the founding of ISUF. During the

second half of the 1990s the theoretical and methodological standpoints of the English, French and Italian schools emerged more and more clearly. After the Birmingham conference in 1997, ISUF became the main international point of reference for studies of urban form, aided by *Urban Morphology*, which has quickly become an effective tool for diffusion, debate and comparison.

For our school, the subsequent conference in Florence in 1999<sup>44</sup> represented important recognition that strengthened our will to work more and more as a team. In this respect, the drawing up of our *Lexicon* under the auspices of ISUF is particularly important. This seeks to fulfill the need to clarify the use and significance of terms in various languages. For this purpose a number of seminars have been held.<sup>45</sup> An epistemological contribution has been made by Pier Giorgio Gerosa and Pierre Larochelle. At the seminars there is debate and comparison on the basis of an in-depth thesaurus of so-called 'fragments' of the main definitions used by Muratori.<sup>46</sup> The more streamlined, functional critical redefinition of terms, filtered in the light of 'fragments', should form the basis for the future lexicon, which we intend to translate into English, French and Spanish.

## Notes

1. Muratori, S. (1950) 'Vita e storia delle città', *Rassegna critica d'architettura* 11-12, 3-52.
2. Cf. Cataldi, G. (1982) 'Muratori, Saverio', in Placzek, A.K. (ed.) *Macmillan encyclopedia of architects* (Macmillan, London), Vol. 3, 258-9; Cataldi, G. (ed.) (1984) 'Saverio Muratori architetto (1910-1973). Il pensiero e l'opera', *Studi e Documenti di Architettura* 12, 5-14; Marcucci, L. (1984) 'Regesto critico dell'opera di Saverio Muratori', *Storia Architettura* 1-2; Pigafetta, G. (1990) *Saverio Muratori architetto. Teoria e progetti* (Marsilio, Venezia).
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4. Muratori, S., Bollati, R., Bollati, S. and Marinucci, G. (1963) *Studi per una operante storia urbana di Roma* (Consiglio Nazionale delle Ricerche, Roma).
  5. Cf. Cataldi, G. (1998) 'Designing in stages: theory and design in the typological concept of the Italian school of Saverio Muratori', in Petruccioli, A. (ed.) *Typological process and design theory* (AKPIA, Harvard University and MIT, Cambridge, MA) 35-54.
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  7. Cf. Cataldi, G. (ed.) (1984) *op. cit.* 125 (note 2).
  8. Muratori, S. (1976) *Autocoscienza e realtà nella storia delle ecumeni civili*, Lectures 1971-72 (G. Marinucci ed.) (Centro Studi di Storia Urbanistica, Roma); Muratori, S. (1978) *Metodologia del sistema realtà-autocoscienza. Dalle ultime lezioni dell'a.a. 1972-73* (G. Marinucci ed.) (Centro Studi di Storia Urbanistica, Roma).
  9. Cf. Muratori (1967) *op. cit.*, vols 2-3 (note 6).
  10. Cf. Cataldi (ed.) (1984) *op. cit.* 114-21 (note 2).
  11. Bollati, S., Caniggia, G., Giannini, A. and Marinucci, G. (1963) *Esperienze operative sul tessuto urbano di Roma* (Istituto di Metodologia Architettonica, Roma); Caniggia, G. (1963) *Lettura di una città: Como* (Centro Studi di Storia Urbanistica, Roma) (2nd edn, 1984); Vaccaro, P. (1968) *Tessuto e tipo edilizio a Roma, dalla fine del XIV sec. alla fine del XVIII sec.* (Centro Studi di Storia Urbanistica, Roma).
  12. Bollati, R., Bollati S., Caniggia, G., Figus, G., Flamini, E., Gasparri, M., Giannini A., Greco, R., Maretto, P. and Marinucci, G. (1967-68) *General Analysis and the Report on the Master Plan, Imperial Ethiopian Government* (Ministry of Interior) 22 vols.
  13. Giannini, A. (1970) 'Etiopia immaginaria', *Casabella* 355, 17-32; *idem* (1970) 'Partita a tre', *Casabella* 354, 23-28; *idem* (1972) 'Africa continente', *Casabella* 368-369, 72-79.
  14. Cf. Cataldi, G. (1982) 'Vagnetti, Luigi', in Placzek, A.K. (ed.) *Macmillan encyclopedia of architects* (Macmillan, London) vol. 4, 248-9; Cataldi, G. and Rossi, M. (eds) (2000) 'Luigi Vagnetti architetto (Roma, 1915-1980). Disegni, progetti, opere', *Studi e Documenti di Architettura* 21, 33-132.
  15. Cf. Cataldi (ed.) *op. cit.* (note 2); Cataldi and Rossi (eds) *op. cit.* (note 14) 43, 62.
  16. Maretto, P. (1986) *La casa veneziana nella storia della città. Dalle origini all'Ottocento* (Marsilio, Venezia) (4th edn, 1992).
  17. Cataldi, G. (1975) 'Il territorio della piana di Gioia Tauro', *Studi e Documenti di Architettura*, 4; Maretto, P. (1975) 'Edificazioni tardo-settecentesche nella Calabria meridionale', *Studi e Documenti di Architettura*, 5; Maretto, P., Genovesi, E., Rocco, M.G., Rocco, L., Filippi, G., Morozzo, D., Boccardo, A. and Tucci, M. (1977-78) 'Restauro edilizio di via della Maddalena a Genova: Studi di storia territoriale urbana edilizia della città. Rilievo e saggio di riqualificazione dei tessuti edilizi', *Quaderni dell'Istituto di Progettazione Architettonica* (Genova) 16-18.
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  19. Cf. Cataldi, G. (1978) 'Centro scolastico di Villa del Conte (arch. P. Maretto)', *L'Industria delle Costruzioni* 79, 21-28; Cataldi, G. (1980) 'Complesso parrocchiale a Sarneola presso Padova (arch. P. Maretto)', *L'Industria delle Costruzioni* 102, 25-30; Cataldi, G. (1984) 'Una villa veneta sulle colline di Vicenza (arch. P. Maretto)', *L'Industria delle Costruzioni*, 24-27.
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