



HPA

Histories of Postwar Architecture

n.13 2023
vol. VI

Architecture: War and Peace

edited by

Paulo Pereira

Raffaella Maddaluno

Michel Toussaint Alves Pereira
Raffaele Amore
Rosalba Belibani
Alejandro Bocanegra
Ana Paula Borghi de Avelar
Paolo Bortot
Francesca Capano
Michela Cigola
Giusi Ciotoli
Arturo Gallozzi
Pablo Arza Garaloces
Leonor Ferrão
Clara Germana Gonçalves
Daniel Jesus
Antonio Labalestra

Vincenzo Latina
Giovanni Leoni
Laura Lucarelli
Raffaella Maddaluno
Marco Mulazzani
Maria Rita Pais
Maria Ines Pascariello
Elisa Pegorin
Paulo Pereira
Claudio Sgarbi
Christian Toson
Talia Trainin
Alessandra Veropalumbo
Rogério Paulo Vieira de Almeida
Marcello Zordan



Histories of Postwar Architecture

n.13 2023
vol.VI

Architecture: War and Peace

edited by

Paulo Pereira

Raffaella Maddaluno



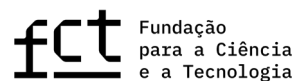
Histories of Postwar Architecture

ISSN 2611-0075

<https://doi.org/10.6092/issn.2611-0075/v6-n13-2023>

"Histories of Post War Architecture" is a scientific journal recognized by ANVUR (Italian National Agency for Evaluation of Universities and Research Institutes) for disciplinary area 10 (Antiquities, philology, literary studies, art history). Since 2018 it is rated "Classe A" Journal for disciplinary area 08 (Civil engineering and architecture). The Journal is indexed in the following databases and search engines: Scopus, ANCP, BASE, DOAJ, ERIH PLUS, Google Scholar, JournalTOCs, PLEIADI, ROAD, Worldcat.

under the auspices of _____



PNRR Partenariato Esteso Cultura umanistica e patrimonio culturale come laboratori di innovazione e creatività

CHANGES

CULTURAL HERITAGE ACTIVE INNOVATION FOR NEX-GEN SUSTAINABLE SOCIETY EXTENDED PARTNERSHIP

Spoke7

PROTECTION AND CONSERVATION OF CULTURAL HERITAGE AGAINST CLIMATE CHANGES, NATURAL AND ANTHROPIC RISKS

Scientific Committee

Nicholas Adams (Vassar College), **Eve Blau** (Harvard University), **Ruth Baumeister** (Aarhus School of Architecture), **Herman van Bergeijk** (Delft University of Technology), **Maristella Casciato** (Getty Research Institute), **Pepa Cassinello** (Universidad Politécnica de Madrid), **Christophe van Gerrewey** (EPFL), **Carola Hein** (Delft University of Technology), **Hélène Janniére** (Université Rennes 2), **Thomas Leslie** (Iowa State University), **Mary Caroline McLeod** (Columbia University), **Daniel J. Naegele** (Iowa State University), **Joan Ockman** (Penn University), **Antoine Picon** (Harvard Graduate School of Design), **Antonio Pizza** (Escola Tècnica Superior d'Arquitectura de Barcelona), **Dominique Rouillard** (Ecole Nationale Supérieure d'Architecture de Paris Malaquais), **Paolo Scrivano** (Politecnico di Milano), **Laurent Stalder** (ETH Zurich), **Martino Stierli** (MoMA), **Rosa Tamborrino** (Politecnico di Torino), **André Carinha Tavares** (University of Porto), **Letizia Tedeschi** (Archivio del Moderno, Università della Svizzera Italiana).

Editorial Team

Editor in Chief

Giovanni Leoni (University of Bologna, Italy)

Deputy Editor in Chief

Matteo Cassani Simonetti (University of Bologna, Italy)

Journal Manager

Ilaria Cattabriga (University of Bologna, Italy)

Publishing Editors

Micaela Antonucci (University of Bologna), **Francesco Benelli** (Università di Bologna), **Lorenzo Ciccarelli** (University of Florence, Department of Architecture, Italy) **Marco Falsetti** (Sapienza University of Rome, Department of Architecture and Design) **Elena Formia** (University of Bologna), **Rute Figueiredo** (Universidade Autónoma de Lisboa (Da/UAL)), **Elmira Jafari** (Delft University of Technology, Holland), **Beatrice Lampariello** (Université catholique de Louvain, Belgium), **Raúl Martínez Martínez** (Universitat Politècnica de Catalunya-BarcelonaTech, Spain), **Gabriele Neri** (Politecnico di Torino), **Anna Rosellini** (University of Bologna), **Matteo Sintini**, (Ministry of the Cultural Heritage), **Ines Tolic** (University of Bologna).

Editorial Assistants

Andrea Anselmo (Université catholique de Louvain, Belgium)

Giovanni Bellucci (University of Bologna)

Arianna Casarini (University of Bologna, Italy)

Chiara Ciambellotti (University of Bologna)

Gloria Lisi (University of Palermo)

Ramona Loffredo (University of Bologna)

Ilaria Maria Zedda (University of Bologna)

Graphic and Design Editors

Stefano Ascari (University of Bologna, Italy)

Ilaria Cattabriga (University of Bologna, Italy)

Giovanni Bellucci (University of Bologna, Italy)



n.13 2023 vol.VI

Architecture: War and Peace

edited by
Paulo Pereira
Raffaella Maddaluno

/ EDITORIAL	Paulo Pereira War. Catastrophe and Disaster	8
/ ARTICLES	Alessandra Veropalumbo, Maria Ines Pascariello A Military Building Project for the Defense of Naples in the Post-Unification 19th Century	11
	Elisa Pegorin The War for the Air. Ilha do Sal airport, between Fascism and Estado Novo	36
	Antonio Labalestra Sta Come Torre. The National Monument to the Italian Sailor and the Construction of the Ritual of Memory During the Fascist Era	52
	Christian Toson Post-War Reconstruction of Nemi Ships Museum. Pushing the Boundaries Between Museography and Memorialization	72
	Francesca Capano Naples, City of War: 1940-1948. An Urban Catastrophe Across Photography, Cinema, and Architecture	94
	Giuseppina Ciotoli, Rosalba Belibani The Rewriting Process in Post-War Cities	115
	Maria Rita Pais Art as Document. Opening Historical Archive to Artistic Registers: Plan Barron 1938-2004	130
	Raffaele Amore Before Frauenkirke. Delayed Reconstruction Work of Historic German Buildings Destroyed During World War II	147
	Ana Paula Borghi de Avelar, Michel Toussaint Alves Pereira The Modern Catholic Architecture of Post-war Germany: Rudolf Schwarz, Dominikus Böhm and other German architects .	170

Daniel Jesus	
Architecture as an Extension of the Domain of Struggle. An Idea of Europe Revisited in View of Three Successive Concepts: Technocracy, Thanatopolitics and Thanatopraxia	193
Alejandro Bocanegra	
Agroindustry as an Object and Representation of Power in the 20th Century	210
Arturo Gallozzi, Michela Cigola, Marcello Zordan, Laura Lucarelli	
WW2 Memorials and Remembrance: German Military Cemetery in Cassino	221
Pablo Arza Garaloces	
Ideological Perspectives on Spanish Architecture in International Journals (1950-1986)	235
Clara Germana Gonçalves, Rogério Paulo Vieira de Almeida	
Conquering Freedom and Identity. Encounters and Convergences in Architecture and Music in the Postwar	247
Claudio Sgarbi, Talia Trainin	
Skeletal Cities, or the “Destructive Character” of the Art of Building	279
/ INVITED PAPERS —	
Leonor Ferrão	
The Cistern of the Portuguese Fortress of Mazagan (1541-1769)	299
Paolo Bortot	
Eigth Forts. Traces of the Modern in Austro-Hungarian Permanent Fortified Works among the Mountainous South-West Borders of The Empire. 1833-1913	312
Marco Mulazzani	
The Cult of Fallen Soldiers. German Cemeteries and Memorials of the First World War in Italy, 1935-1943	343
Giovanni Leoni	
Remembering (with) the Body. Form and Experience in Post-war Memorial Architecture Dedicated to Political and Racial Deportation	376
Raffaella Maddaluno	
Germano Facetti and the Sign as a Necessity of Memory	391
Vincenzo Latina	
Lampedusa. Memorial for the Shipwreck of hte 3rd of October, 2013	408

A Military Building Project for the Defense of Naples in the Post-Unification 19th Century

ISCAG, Camaldoli, Landscape, Militarisation, Digital Model

/Abstract

After the Unification of Italy, the city of Naples did not suffer any particular militarisation. In addition to the reinforcement of castle defences, the monasteries suppressed during the French Decade and the subsequent Bourbon era underwent a change of use into care centres as a result of the damage caused by the war. The few new projects for city defence structures arose in strategic positions, allowing control of the territory in all directions.

The Istituto Storico e di Cultura dell'Arma del Genio (ISCAG) preserves around four hundred cartographies of the Neapolitan territory, which depict the military presence in the city since the early 19th century. Among the reproductions, a project from the 1880s concerning a territorial area that was profoundly modified in the following centuries is of particular interest.

The project relates to a closed construction to be built on the Camaldoli hill, containing plans and sections of the new fortification to be erected, and complete with a conservative variant concerning the preservation of the 16th-century church. The contribution intends to analyse the militarisation projects that were to be established in pleasant, panoramic and uncontaminated places in the Neapolitan landscape, which within a few decades would no longer be recognisable due to the damage caused above all by post-war speculation.

Through the critical investigation of graphic and iconographic sources, the final objective of this work is the construction of a digital model of the projects that, appropriately inserted into a digital territorial context, will make it possible to visualise the Neapolitan hills in the particular connotation that the new interventions would have given them.

/Author

Alessandra Veropalumbo,
University of Naples Federico II
alessandra.veropalumbo@unina.it

Maria Ines Pascariello
University of Naples Federico II
mipasscar@unina.it

Alessandra Veropalumbo is a research fellow in History of Architecture and the City at the Department of Architecture, University of Naples Federico II. In 2016 she obtained a PhD in History and Conservation of Architectural Heritage and Landscape, with a specialization in History of Architecture, City and Landscape. Since 2017 she has been collaborating with the Interdepartmental Center for Research on the Iconography of the European City (CIRICE), and she is a member of the Scientific Committee of the journal *Eikonocity*. Her lines of research concern the study of the cartography and iconography, through the analysis of historical, bibliographic, and archival sources available for the investigation of the city, the study of the architects and engineers of the pre-unification nineteenth century, contemporary art and its future developments and its traces in the styles of the past and methodological applications for the valorization and protection of cultural heritage.

Maria Ines Pascariello is Associate professor for the science-disciplinary ICAR/17-Design at Civil Construction Environment Department of Engineering at the federico II University of Naples. Since 2001 performs Teaching Activities, both Architecture and Engineering Department. The main fields of research and interest are survey and documentation for conservation and development, urban and landscape scale, in order to save and promote cultural heritage. The studies, after graduation to date, the science-disciplinary, deals with the study of Perspective, in particular architectural perspectives and painted architecture of Roman in Pompeii.



Introduction¹

Naples' architectural and urban transformations following the Unification of Italy involved different types of interventions. Numerous experimental, visionary, and not always easily realizable projects were drafted for the city's modernization. Its first results appeared in the Naples Rehabilitation and Expansion Plan, incorporating the new dictates that called for eclectic structures. In addition, with the suppression of religious orders in 1866, monasteries and convents took on public or military use, hardly respecting the built heritage. These were compounded by militarization work involving the built heritage and ex-novo buildings. This is precisely the case with the fortification of Camaldoli, designed in 1881 at peace in a place that allowed total control of the Neapolitan territory and its expansion routes. Unsurprisingly, the site had been chosen by Camaldoli monks, who sought total isolation from the surrounding reality and were then expelled after Unification.

The project would have ensured the city's defense: from the hill, it would have been possible to spot enemy incursions not only from the sea but especially from inland, along the directions of Capua, Caserta, and Benevento. However, the return of the Camaldoli monks in 1885 did not allow for the fortification to be built.

Historical background. Post-unification 19th century in Naples and interventions in the city

The Unification of Italy, sanctioned in a formal sitting on May 17, 1861, by the Parliament in Turin, brought about several changes and transformations in the bureaucratic and administrative apparatuses of that time. With the loss of its role as the capital of the Regno delle Due Sicilie, Naples also lost its function as the seat of the central bodies of the state. The City Council replaced the Decurionate and the City Corps was replaced by the Municipal Giunta, chaired by the mayor and composed of twelve aldermen.² To have a more regular army distribution in the former Bourbon territories, the VI Grand Command was established in Naples, replacing the General Military Command of all the Neapolitan Provinces, and relocated to Palazzo Salerno.³ The last decades of the 19th century were an interesting scene of architectural and urban experimentation. Architects and engineers attempted to redesign and modernize the city, coming up with overall ideas for the development of the territory and its focal points to make the city

1 Paragraphs: Historical background. Post-unification 19th century in Naples and interventions in the city, Camaldoli, a place of isolation and control; The project of a 'Fortification' at Camaldoli in the ISCAG Archives are by Alessandra Veropalumbo. Paragraphs: The project drawings; Architectural drawings during the 19th century: role and diffusion; Reflections on drawing/seeing/imagining the city at war are by Maria Ines Pascariello.

2 Alfredo Buccaro, *Istituzioni e trasformazioni urbane nella Napoli dell'Ottocento* (Naples: Edizioni Scientifiche Italiane, 1985), 87.

3 Vincenzo Cuomo, "I Comandi militari a Palazzo Salerno. Dall'Unità d'Italia a oggi", in *Palazzo Salerno. Dai complessi religiosi ai comandi militari*, eds. Leonardo Di Mauro, Alba Irollo (Sassari: Carlo Delfino editore, 2017), 143.

'European' in line with the economic-social conditions of other urban contexts.⁴

The Archives of the Prefecture of the Royal Corps of Civil Engineers, which replaced the Corps of Bridges and Roads in 1861, document the work of architects and engineers who designed new public works and infrastructure while restoring old buildings.⁵

The plans and programs drafted since the early post-unification years, with no tangible outcome yet a concerted logic, converged in the Naples Rehabilitation and Expansion Plan.⁶ These revolved around the need to connect the ancient center through tunnels in the hills with the western sector and the lower part of the city with Vomero and Posillipo by funicular railways, widen the shore of Chiaia, and build a working-class neighborhood to the east to support the iron and steel industry, port, and commercial activities, and massive disembowelment.⁷

A little more than a decade earlier, several designers participated in the competition for the 1871 Master Plan. Their proposals were heterogeneous yet shared the attempt to redefine an adequate network of connections and redesign the most emblematic places.

For the Rehabilitation Plan, the great historicists of the time, such as Benedetto Croce and Bartolommeo Capasso, accepted the transformations being advocated as necessary for improving sanitary conditions, albeit with some regret for the ongoing destruction. As early as 1861, the governor-president of the Consiglio Edilizio Enrico Cenni, had expressed to Mayor Colonna the need for an organic plan for the lower districts since, previously, both Ferdinando II and Francesco II had promoted only punctual interventions.⁸

The new buildings followed the rules in the 'Regolamento,' which called for replacing the Precetti d'Arte with the then-widespread eclecticism.⁹ Regulations on building heights, architectural and typological elements dimensions, and building materials remained valid; however, «any manner of architecture»¹⁰ was also declared valid as long as it had «enough logic, attractiveness, and

4 Fabio Mangone, "Antica ma moderna. Il disegno della forma urbana per Napoli dopo l'Unità, 1861-1961", *Neapolis*, no. 14 (December 2011): 19, 26.

5 Adriana Scalerà, "Profile Casa monumentale dei Girolamini", in *Scienziati-artisti. Formazione e ruolo degli ingegneri nelle fonti dell'Archivio di Stato e della Facoltà d'Ingegneria di Napoli*, eds. Alfredo Buccaro, Fausto De Mattia (Naples: Electa Napoli, 2003), 263.

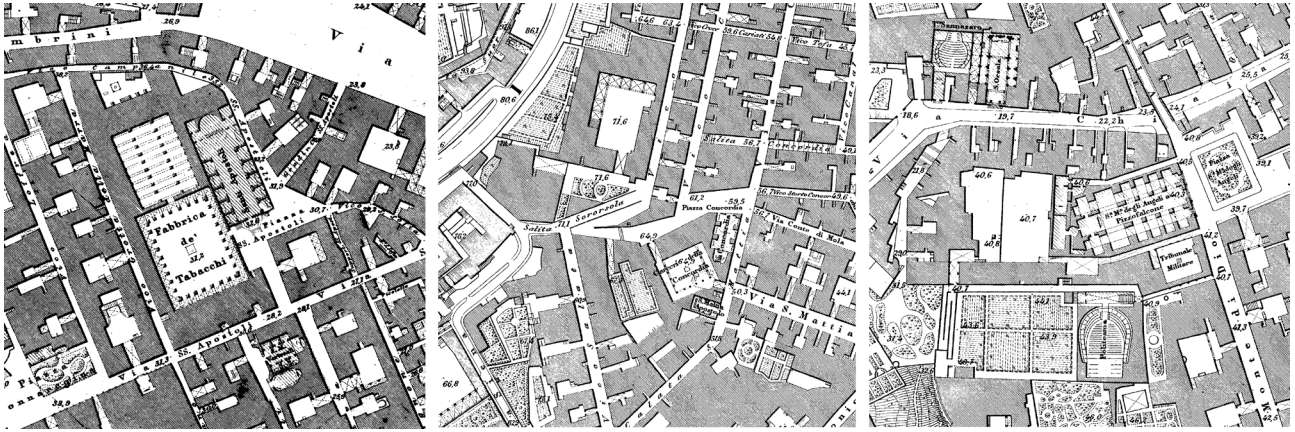
6 Giancarlo Alisio, *Napoli e il risanamento edilizio. Recupero di una struttura urbana* (Naples: Edizioni Scientifiche Italiane, 1981).

7 Cesare de Seta, *Napoli. Dalle origini all'Ottocento* (Naples: Arte'm, 2016), 232.

8 Alfredo Buccaro, *Istituzioni e trasformazioni urbane nella Napoli dell'Ottocento* (Naples: Edizioni Scientifiche Italiane, 1985), 88.

9 Alessandra Veropalumbo, "Progetti inediti tardo-ottocenteschi per l'analisi del tessuto urbano dell'area orientale di Napoli", in *La città globale. La condizione urbana come fenomeno pervasivo/The Global City. The urban condition as a pervasive phenomenon*, eds. Marco Pretelli, Rosa Tamborrino, Ines Tolic (Turin: AISU international, 2020), 97.

10 Translated by the author. 'qualunque maniera di architettura'. ASMuN, *OO.PP.*, minutes of the session of the Giunta of July 4, 1879.



appropriateness».¹¹ The Regolamento, approved by the Giunta but not presented to the City Council, were adopted in 1885 following the enactment of the Law for the Rehabilitation of the City of Naples.¹²

In the same period, the 1866 suppression of religious orders, which had already taken place in the city of Naples during the French Decade, gave a fundamental impetus to the transformation of monasteries, convents, and religious complexes not used for worship into public buildings.¹³

This enabled both governments to acquire considerable assets and real estate. The text of the law of July 7, 1866, no. 3036 recites:

«Regular and secular religious Orders, corporations, congregations, conservatories, and retreats, which import common life and have a pastoral character, are no longer recognized in the state. The houses and establishments belonging to the aforementioned Orders, Corporations, Congregations, and Conservatories and Retreats are suppressed»¹⁴ (Article 1).

«When vacated by the religious, the buildings of the convents suppressed by this and previous Laws shall be granted to the municipalities and provinces, provided that a request is made within the term of one year from the publication of this Law, and the need and use of schools, kindergartens, begging shelters, hospitals, or other charitable and public works are justified in the report of the municipalities and provinces»¹⁵ (Article 20).

11 Translated by the author. 'sufficiente ragione, avvenenza ed opportunità'. ASMUN, *OO.PP.*, minutes of the session of the Giunta of July 4, 1879.

12 Giuseppe Bruno, Renato De Fusco, *Errico Alvino. Architetto e urbanista napoletano dell'800* (Naples: L'Arte Tipografica, 1962), 78.

13 Maria Perone, "Le trasformazioni nei complessi conventuali salernitani", in *Falsi Restauri. Trasformazioni architettoniche e urbane nell'Ottocento in Campania*, ed. Stella Casiello (Rome: Gangemi Editore, 1999), 79.

14 Translated by the author. 'Non sono più riconosciuti nello Stato gli Ordini, le Corporazioni e le Congregazioni religiose regolari e secolari, ed i Conservatorii e Ritiri, i quali importino vita comune ed abbiano carattere ecclesiastico. Le case e gli stabilimenti appartenenti agli Ordini, alle Corporazioni, alle Congregazioni ed ai Conservatorii e Ritiri anzidetti sono soppressi'.

15 Translated by the author. 'I fabbricati dei conventi soppressi da questa e dalle precedenti Leggi, quando sieno sgombri dai religiosi, saranno conceduti ai Comuni ed alle Provincie, purché ne sia fatta dimanda entro il termine di un anno dalla pubblicazione di questa Legge, e sia giustificato il bisogno e l'uso di scuole, di asili infantili, di ricoveri di mendicanti, di ospedali, o di altre opere di beneficenza e di pubblica utilità nel rapporto dei Comuni e delle Provincie'.

Fig. 1
Detail of cartography made by Federico Schiavoni, *Pianta topografica della città di Napoli*, Firenze, Istituto Geografico Militare, relating to three cases of conversion of religious buildings to public or military use. From left to right: SS. Apostoli (foglio 13, 1877), S. Maria della Concordia (foglio 17, 1879), S. Maria degli Angeli a Pizzofalcone (foglio 17, 1879).

As early as the law of Dec. 22, 1861, the government was granted the power to occupy the Houses of Religious Corporations. This measure allowed for implementing urban-scale projects that had previously been unfeasible because they fell within areas of religious property or were occupied by convent complexes. Making immediately available spaces for new administrations and the needs of the 19th-century city incentivized the redevelopment of convents for new uses. The Houses were converted into barracks, slaughterhouses, prisons, hospitals, museums, town halls, schools, and libraries¹⁶, yet without establishing any methodological-operational scientific criteria.¹⁷ [Fig. 1]

The interventions conducted on religious buildings to establish the new functions in the old complexes were rarely respectful of the pre-existing buildings, providing structures that did not perfectly meet the new functional needs, so much so that Carlo Afan de Rivera said, «The reduction of an old building to an entirely different use must always be avoided. For economic savings, former monasteries or convents were often turned into Intendency or Sub-Intendency palaces, Civil and Criminal Courts, prisons, and Gendarmerie barracks. As the needs were different according to the different use, not only was the distribution changed by opening new rooms and closing the old ones, but some old walls were demolished and replaced by new ones to create large halls, galleries, and chambers, and achieve a suitable distribution for the new use. With all these successive modifications, the old walls, tormented and instigated, did not adhere with the new, threatening ruin».¹⁸

The lack of guidelines for interventions on the built heritage had traumatic effects on many of the confiscated buildings. Along with eclectic choices, it was the practice to resort to gutting and demolition to restore the original style of the building. Reusing convents and monasteries involved transforming them from static religious insulae to dynamic spaces with new functions.¹⁹ The goal was to give the city new dignity and awareness through the presence of state representative buildings.

16 Renata Picone, Laura Donadono, "I restauri otto-novecenteschi della chiesa e del convento dei Girolamini a Napoli (1869-1926)" in *Falsi Restauri. Trasformazioni architettoniche e urbane nell'Ottocento in Campania*, ed. Stella Casiello (Rome: Gangemi Editore, 1999), 23; Renata Picone, "Da conventi ad attrezzature per la nuova città borghese: il caso del Gesù e Maria a Napoli", in *Falsi Restauri. Trasformazioni architettoniche e urbane nell'Ottocento in Campania*, ed. Stella Casiello (Rome: Gangemi Editore, 1999), 33.

17 Giancarlo Alisio, "La distruzione del patrimonio artistico religioso tra soppressione degli Ordini e sisma del 1980", in G.A. Galante, *Guida sacra della città di Napoli*, reprinted by Nicola Spinosa (Naples: Società Editrice Napoletana, 1985), XXI-XXIX.

18 Translated by the author. 'Bisogna evitar sempre la riduzione di un vecchio edificio ad un uso affatto diverso. Sotto le vedute di risparmio si è voluto spesso trasformare gli antichi monisteri o conventi in palazzi d'Intendenza o Sotto-Intendenza, in Corti Civili e Criminali, in prigioni ed in caserme di Gendarmeria. Essendo diversi i bisogni secondo la diversa destinazione, non solamente si è cambiata la distribuzione, aprendo nuovi vani, e chiudendosi gli antichi, ma demolendosi alcuni muri antichi se ne sono rimpiazzati altri nuovi, per formare grandi sale, gallerie e cameroni, e per procurare una distribuzione conveniente al nuovo uso. Con tutte queste successive modificazioni i muri vecchi tormentati e scatenati, non formando adesione coi nuovi, han minacciato rovina', from (General Directorate of Bridges and Roads and Water and Forests and Hunting, *Circolari concernenti il servizio degli Ingegneri di Acque e Strade*, Naples 1840 in Alfredo Buccaro, *Istituzioni e trasformazioni urbane nella Napoli dell'Ottocento* (Naples: Edizioni Scientifiche Italiane, 1985), 49.

19 Ersilia Carelli, "Trasformazioni e restauri nell'ex monastero di S. Patrizia a Napoli", in *Falsi Restauri. Trasformazioni architettoniche e urbane nell'Ottocento in Campania*, ed. Stella Casiello (Rome: Gangemi Editore, 1999), 47-48.



In 1863, specific bodies were established to ensure the protection of monuments. In 1866, they merged into the Permanent Commission for the Preservation of Municipal Monuments. This commission was composed of historians, architects, archaeologists, and artists, who, in 1871, drafted the first inventory of buildings of historical and artistic interest to be safeguarded, which was supposed to ensure the beginning of proper management and protection of this heritage.²⁰

The militarization intervention to control and defend the territory was another element that changed the architectural and urban environment. Indeed, the late 18th-century experiences with the Repubblica Partenopea, the interlude of the French Decade from 1806 to 1815 during the long Bourbon rule lasting until the Unification of Italy, showed the poor functionality of the bodies for the protection of the reign. Under Giuseppe Bonaparte, possible defenses for the capital of the reign of Naples were studied, fostered by Napoleone. Tasked with identifying useful areas for the location of military facilities, General Campredon examined the locations in the gulf, emphasizing their poor adherence to the desired canons and, in parallel, the importance of local knowledge. Modern criteria shifted protection away from population centers and expanded the need for military

²⁰ Renata Picone, Massimo Rosi, "La Commissione municipale per la conservazione dei monumenti di Napoli", in *Tutela e restauro dei monumenti in Campania, 1860-1900*, ed. Giuseppe Fiengo (Naples: Electa Napoli, 1993).

Fig. 2
Reale Ufficio Topografico della Guerra, *Pianta della città di Napoli e de' suoi contorni*, 1828-1873. Archivio ISGAG.

quarters and services for troops and weapons, leading to the solution of ‘campi trincerati’ (entrenched camps). He selected the large hilly areas of Naples, namely Camaldoli, San Martino, Vomero, Arenella, and San Pietro a Patierno, discarding Posillipo and Capodimonte as too small. The goal was to create a large military plaza by placing entrenched camps of different widths, connections, and security levels.

As shown by a plan preserved at the Service historique de l’armée e de terre-Vincennes, the new forts were located on the hills of Miradois, Posillipo, and Camaldoli, and to reinforce Vigliena, the defenses of Castel dell’Ovo and the pier battery as well as with the construction of an artificial island to cover the area between Vigliena and the castle²¹. But despite various proposals, little was built in the Decade and during the Restoration. During the reign of Francesco I in 1828-1829, Captain Colella proposed a reinterpretation of the urban structure and identified points in the city where to intervene to defend against enemies.²² The defense of the reign required the cooperation of all fortified defense structures, from ancient castles to urban town walls, placing numerous military posts in the layout of the territory, ‘militarizing’ it.²³ [Fig. 2] Also, under Ferdinando II, much attention was devoted to establishing the army and navy, with large allocations leading to significant increases in men and equipment, although the Neapolitan defenses remained weak.²⁴

At the end of the Reign of the Two Sicilies, fighting occurred around the strongholds, which surrendered between February and March 1861. Meanwhile, Garibaldi, moving up the peninsula, arrived in Naples on Sept. 7, 1860, then provided military adjustments in 1866 only to the battery of Castel Dell’Ovo.

Notably, Naples – and Italy, more generally – kept a ‘peaceful’ climate. Under Vittorio Emanuele II, the Third Italian War of Independence in 1866 and the annexation of the Papal States, with the subsequent seizure of Rome (September 20, 1870), did not affect the city’s security. In 1878, with Umberto I, the balance was endangered by the outcome of the Russo-Turkish war. However, Chancellor Bismarck, concerned about this, urgently convened a conference in Berlin, participated by Foreign Minister Luigi Corti as the representative of the Reign of Italy. At this congress, the Reign of Italy declared its neutrality. Therefore, the main danger lay in the brigandage phenomena that involved southern Italy following its annexation to the Savoy reign, which developed or continued to be present in several regions of Italy between the second half of the 19th century and the early 20th century.²⁵

21 Vincennes, SHAT, 37/1405, *Cartes*, ff. 35-36, 1807.

22 Maria Raffaella Pessolano, “Napoli e il regno fra antiche fortezze e nuove proposte,” in *Territorio, fortificazioni, città. Difese del Regno di Napoli e della sua capitale in età borbonica*, eds. Giosi Amirante, Maria Raffaella Pessolano, (Naples-Rome: Edizioni Scientifiche Italiane, 2008), 38-39.

23 Colella Domenico, *Rapporto ragionato su’ la classificazione, e Riconoscenza generale delle Piazze, Forti, Castelli e Batterie [...]*, 2 agosto 1828, BNN, Mss. Bibli. Prov., vol. 18, 1-74; Colella Domenico, *Memoria militare ragionata su la piazza e posizione di Napoli*, 1829, BNN, Mss. Bibli. Prov., vol. 21, 1-119.

24 Mariano D’Ayala, *Napoli militare* (Naples: Stamperia dell’Iride, 1847).

25 Giovanni De Matteo, *Brigantaggio e Risorgimento. Legittimisti e briganti tra i Borboni e i Savoia* (Naples: Guida

Camaldoli, a place of isolation and control

Due to their orographic position and the pristine nature of the soils, Camaldoli represented an ideal place both for the settlement of hermit monks and as a military stronghold for the defense of the territory.

According to what Celano wrote: «from this place, all the loveliest shores of our Tyrrhenian Sea could be seen»,²⁶ and it is no coincidence that the first name was 'Prospetto' (Prospect) because of the magnificence of the view.

The first construction, founded in the 5th century by St. Gaudioso, bishop of Abitina, and dedicated to the Most Holy Savior, was replaced in 1585 by the Hermitage of the Camaldoli congregation of Montecorona. At that time, the hill took on the name that still marks it today. In a late Renaissance style, the work is attributed to Domenico Fontana, who constructed the Santa Maria Scala Coeli church on the ruins of the first core – community rooms and sixteen cells. It was completed in five years. The acquisition of the area was possible thanks to the lord of Nazareth and the entire summit part of the mountain, Giovan Battista Crispo – who had the church ceded and donated it to the Camaldoli hermits along with the surrounding territory – and to Giovanni d'Avalos, nephew of the king of Naples Ferdinando I of Aragon and son of the Marquis of Vasto, who made significant contributions for the new construction. In the 17th century, the hermitage was greatly expanded and became the most important in southern Italy.²⁷

In historical iconography, the Camaldoli have played a particularly prominent role in defining the Neapolitan *skyline*. We find them in many 18th-century views depicting Vesuvius on fire when the volcano's eruptive activity was intense and frequent. Some examples are the one by Francesco Geri and Filippo Morghen in 1752 or the one by Pietro Fabris in 1776, where the hill stands out in the panorama of the Neapolitan *hinterland*. [Fig. 3] In the same year, the latter artist also represented the view from the hill of Camaldoli toward the Campi Flegrei, starting a strand of open representations from the hinterland toward the gulf. Its landscape *tópoi* did not include just Vesuvius but also the pristine character and morphology of the places. This latter viewpoint was then portrayed by Jakob Philipp Hackert, a Bourbon court painter, in 1792 [Fig. 4] and appreciated in the 19th century by Consalvo Carelli in 1842 and Gianni Girolamo in 1863. Instead, the view toward Vesuvius is found in numerous *gouaches* from the first half of the 19th century,²⁸ as well as in Anton Sminck Pitloo's 1836 painting.²⁹ [Fig. 5]

Editore, 2000), 263.

26 Translated by the author. 'da questo luogo si scorgevano tutti i più ameni lidi del nostro Tirreno' in Carlo Celano, *Delle Notitie del bello, dell'antico e del curioso della città di Napoli per i signori forastieri date dal canonico Carlo Celano napoletano, divise in dieci giornate* (Naples: Nella stamperia di Giacomo Raillard, 1692), vol. VI, 62.

27 Augusto Crocco, *L'Eremo di Camaldoli, breve guida storico-artistica* (Naples: Tiresia, 1984).

28 Renato Mammucari, *Napoli. Il paradiso visto dall'Inferno* (Marigliano: Ler Editrice, 2006), 188, 196.

29 Antonio Sminck Pitloo, *Luci e colori del paesaggio napoletano*, eds. Marina Causa Picone, Stefano Causa (Naples: Electa Napoli, 2004), 182.



3



4



5

Fig. 3
Pietro Fabris, *L'Eruzione del Vesuvio dal 23 dicembre 1760 al 5 gennaio 1761, 1776.*

Fig. 4
Jakob Philipp Hackert, *Veduta dei Campi Flegrei dall'Eremo dei Camaldoli in Napoli, 1797.*

Fig. 5
Anton Sminck Pitloo, *Il Vesuvio dai Camaldoli, 1836.*



6



7



8

Fig. 6
Alessandro Baratta,
*Fidelissimae Urbis Neapolitanae
cum Omnibus Viis Accurata
et Nova Delineatio*, 1629,
Bibliothèque nationale de
France, département Estampes
et photographie, detail. The
number 146 is indicated in the
legend as 'S.M. Scala Celi in
Nazareth'.

Fig. 7
Giovanni Carafa duca di Noja,
*Mappa topografica della città
di Napoli e de' suoi contorni*,
1750-1775. Napoli, Museo
Nazionale di San Martino, detail
of the *Veduta scenografica a
ponente della città di Napoli in
Campagna felice*.

Fig. 8
Giovanni Carafa duca di Noja,
*Mappa topografica della città di
Napoli e de' suoi contorni*, 1750-
1775. Napoli, Museo Nazionale
di San Martino, detail of 'Eremo
dei PP. Camaldolesi detto Il
Salvatore'.

In historical cartography, Alessandro Baratta's 1629 landscape portrait *Fidelissimae urbis* shows a detailed reproduction of the Camaldoli hill with a legenda reporting the indication of the church of 'S.M. Scala Celi a Nazareth.' [Fig. 6] Instead, the *Mappa topografica della città di Napoli e de' suoi contorni* (Topographic map of Naples and its surroundings) by Giovanni Carafa, Duke of Noja, from 1750-1775, shows a barely sketched outline.³⁰ [Fig. 7] However, in the plan, the 'Eremo de' PP. Camaldolesi detto Il S. Salvatore' (Hermitage of the Camaldoli monks known as Il Salvatore) is represented in detail among the settlement buildings, in the enclosure wall, and the indication of cultivated and forest land. The *Mappa* also shows a network of trails tracing the ancient paths made carriageable, rectified, and widened during the 20th century. [Fig. 8]



9

The situation reported in 18th-century cartography is the same that can still be read today. [Fig. 9] The monastery's entrance portal is in the wall that encloses the churchyard to the church's left. There are the monks' dwellings, now occupied by Brigidine nuns or guests, consisting of low one-story houses covered with trusses, surrounded by a boundary wall with a small plot of land on the pattern of the *hortus conclusus*, functional to the Benedictine rule, and divided into those "of the Novitiate" or of the monks.

30 Leonardo Recchia, Renato Ruotolo, eds., *Parco Metropolitanamente delle Colline di Napoli. Guida agli aspetti naturalistici, storici e artistici*, (1-4), *La Collina dei Camaldoli. I Casali di Soccavo e Pianura, La Vigna di San Martino*, vol. 4 (Naples: Clean Edizioni, 2010), vol. 4, 20-21.

Fig. 9

Carta austriaca. Regno di Napoli, portion of the province of Naples of Terra di Lavoro and Principato Citra, section 7 column IV. Years 1821-1847.

After the expulsions in 1808 based on the laws on ecclesiastical property promulgated by Giuseppe Bonaparte during the French Decade and in 1860 relating to those of the Italian state, the Camaldoli monks always managed to return to their structure. The first time was in 1820, under Ferdinando I's reign, then in 1885, thanks to Cardinal Sanfelice's intercession of Cardinal Sanfelice.³¹ Finally, in 1998, they were replaced by Brigidine nuns.

Until the mid-20th century, the hill still had a rural character, covered with forests, farms, and villages. This changed since the '20s, with the urbanization of large areas and the opening of new roads.

The project of a 'Fortification' at Camaldoli in the ISCAG Archives

Useful materials for the project of transforming the hermitage into a military structure are preserved at the Archives of the Historical and Cultural Institute of the Corps of Engineers. ISCAG is based in Rome, at the Lungotevere della Vittoria. It was under the Ministry of War and the Inspectorate of the Engineer Corps within the latter.

It was Luigi Durant de La Penne who had the idea of using it as a Museum of Weapons, later the Italian Military Engineering Museum, to rescue Castel Sant'Angelo from the degradation of its use as barracks; thus, by 1902, exhibition materials began to flow from all parts of Italy. In 1911, on the occasion of the Exposition for the Fiftieth Anniversary of Rome's Capital City, the museum was moved to Urbano VIII's Casermette, wishing to use the fortress as a venue for retrospective exhibitions. It took the name of the Historical Museum of the Military Engineers, officially recognized by the February 5, 1911 decree. In 1928, the Institute of Military Architecture was added in-house and dependent on the same museum.

Both were based at Castel Sant'Angelo until 1932-1933, when the demolition of the Casermette was carried out according to the master plan of that time. In 1934, the museum materials and the Institute's headquarters were moved to Piave barracks, with the unification of the Historical Museum of Military Engineering and the Institute of Military Architecture sanctioned by the Royal Decree of June 28. By 1940, the thus-formed Historical and Cultural Institute of the Engineer Corps was moved to its present location.³²

The documentary material preserved in ISCAG is divided into three sections: museum, library, and archives. The archive consists of photos, documents, and drawings. Moreover, it collects valuable iconographic and cartographic material for analyzing urban and territorial history from the mid-16th to the 20th century. The drawings include about 1,500 tables, divided among prints, military buildings, and fortifications from all over Italy.

31 Assessorato all'ambiente, ed., *Il Parco dei Camaldoli* (Naples: Electa, 1999), 4.

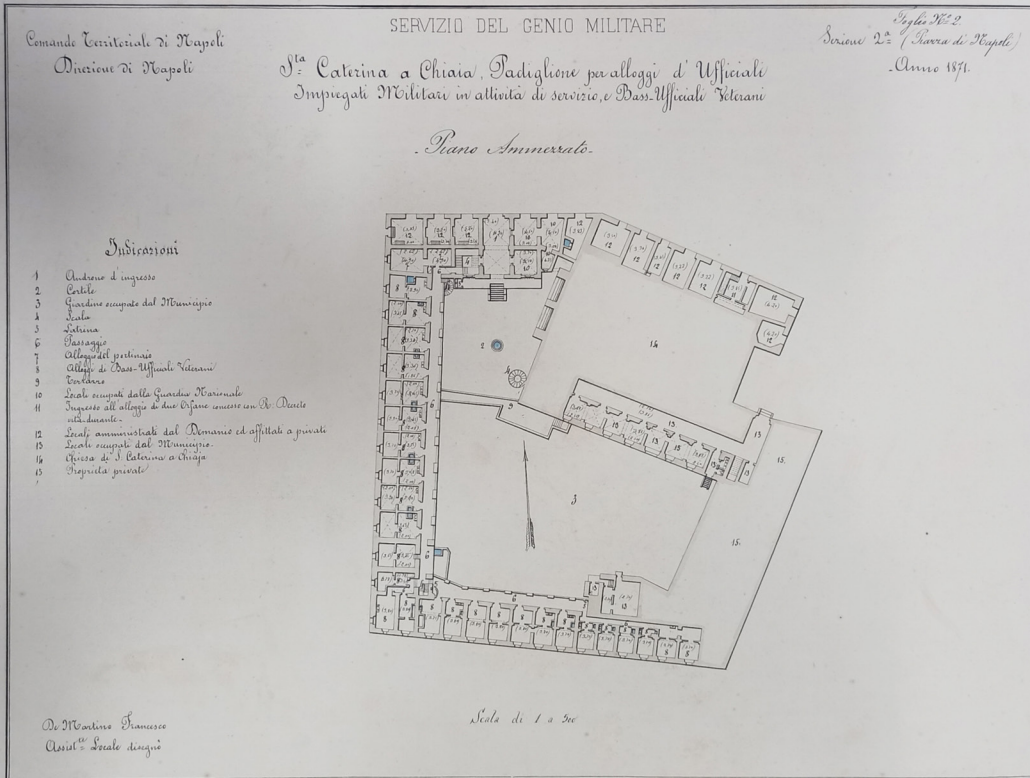
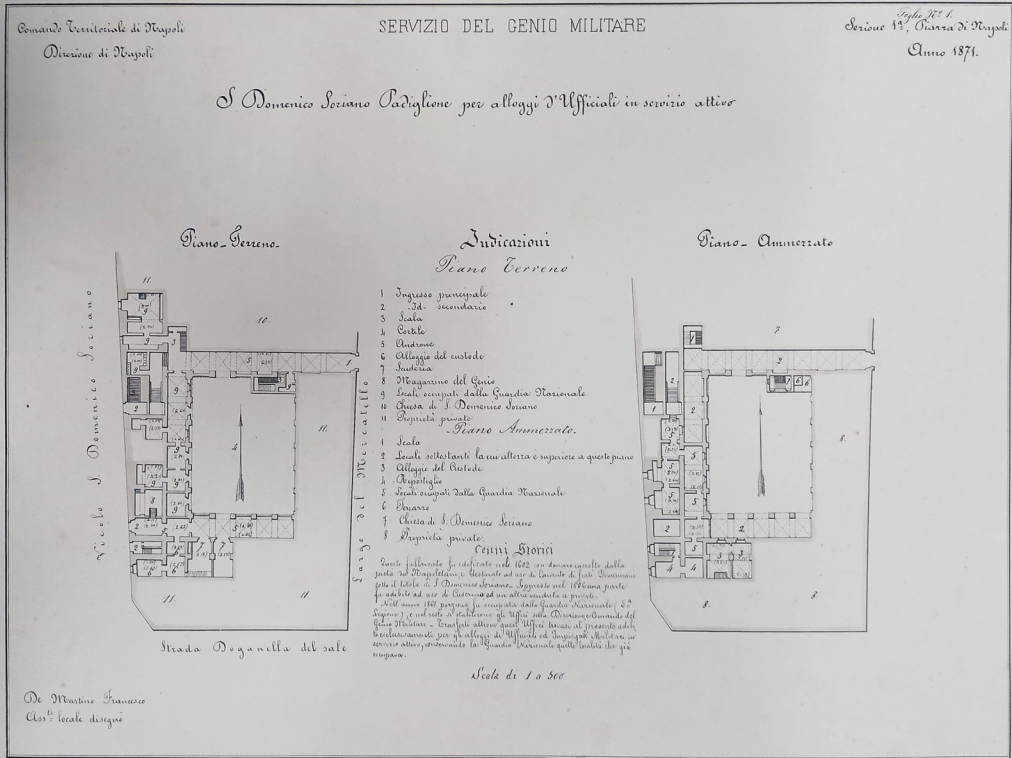
32 Amelio Fara, Caterina Zannella, *La città dei militari. Roma Capitale nell'Archivio dell'ISCAG*, eds. Enrico Guidoni, Ilario Principe (Rome: Edizioni Kappa, 1984), 27.

Fig. 10

Francesco De Martino, S. Domenico Soriano. Padiglione per alloggi d'Ufficiali in servizio attivo, 1871. Archivio ISCAG.

Fig. 11

Francesco De Martino, S. Caterina a Chiaia. Padiglione per alloggi di ufficiali, impiegati militari in attività di servizio e Bass. Ufficiali Veterani, 1871. Archivio ISCAG.



The second category concerns barracks or military buildings within urban centers or suburbs. In addition to building-scale and urban-scale military engineering projects, the last includes entrenched camps.³³

In the '80s, the Historical Institute received funding from the Ministry of Education for research on studying and cataloging the archived material, which led to exciting results for several regions of the peninsula.³⁴

Drawings and prints related to the Campania region allow reconstruction of the military presence in the territory since the early 19th century, thanks to many projects from the pre-unification period.

The ISCAG collection is interesting due to drawings that cannot be found elsewhere, illustrating destroyed or profoundly transformed buildings, such as the Serraglio and the cavalry barracks at the Magdalena Bridge.

A large part of the collection concerns religious buildings, convents, and monasteries that were converted into military architecture following their suppression, such as St. Domenico Soriano, [Fig. 10] St. Caterina da Siena, [Fig. 11] St. Potito, St. Maria di Bethlehem, the convent of Monte di Dio, and the Trinità delle Monache complex. The tables also include some interesting historical notes that contextualize the various evolutionary phases of the buildings.

In addition, there are the projects for converted palaces, such as Palazzo Croce, Palazzo Salerno, Caserma Vittoria barracks, or the new fortifications of Neapolitan castles, such as Castelnuovo, [Fig. 12] Carmine Castle, [Fig. 13] and Castel Sant'Elmo.

The object of study is the *Progetto di Massima di un'Opera chiusa da costruirsi sull'altura dei Camaldoli* (Preliminary Project of a Fortification to be constructed on the Camaldoli hill) stored in the archives of the Historical and Cultural Institute of the Engineer Corps. The project is dated October 25, 1881. It consists of a *pianta d'insieme* (general plan) (tab. 1), a *pianta della batteria* (plan of the battery) (tab. 2), a *pianta dei ricoveri e delle riserve* (plan of shelters and artillery storages) (tab. 3), a *pianta delle murature e del piano basso* (wall and lower floor plan) (tab. 4), *sezioni longitudinali e trasversali* (longitudinal and cross sections) (tab. 5), *variante conservando intatta la chiesa dei Camaldoli* (variant preserving the Camaldoli church) (tab. 6).³⁵

All tables, drawn in red, blue, and black ink, include dimensions and metric scales.

33 Tiziana Ancarola, "Piante e vedute di città nella collezione delle stampe dell'Istituto Storico di Cultura dell'Arma del Genio di Roma (ISCAG)" (Ph.D. Thesis in Architectural and Urban History, tutor Alfredo Buccaro, co-tutor Ilario Principe, University of Naples Federico II, 2007-2008), 15-16.

34 Amelio Fara, Caterina Zannella, *La città dei militari. Roma Capitale nell'Archivio dell'ISCAG*, eds. Enrico Guidoni, Ilario Principe (Rome: Edizioni Kappa, 1984); Ilario Principe, *La città dei militari. Calabria, Basilicata, Sicilia* (Vibo Valentia: Edizioni Mapograf, 1986); Caterina Zannella, *La città dei militari. Abruzzo Molise* (Vibo Valentia: Edizioni Mapograf, 1986); Leonardo Di Mauro, Isabella Di Resta, Paolo Mascilli Migliorini, Maria Perone, *La città dei militari. Campania* (Vibo Valentia: Edizioni Mapograf, 1987).

35 ISCAG, *Napoli, Fortificazioni*. F. 4545-4550.

Fig. 12
Pianta dimostrativa della caserma e Forte Nuovo.
Archivio ISCAG.

Fig. 13
Pianta dimostrativa della caserma e Forte del Carmine.
Archivio ISCAG.

The plan of the fortification is an irregular pentagon. Table 1³⁶ shows the state of the site, including the project of the fortified work to be settled. The choice of Camaldoli Hill was strategic as its approximate 450-meter height allowed a 360-degree view. The goal was to control the gulf, the Neapolitan hinterland, with the roads from Capua, Caserta, and Benevento.

The project would be located between the properties of the Camaldoli monks, Marquis Auletta's and Giovanni Casolari's properties, placed between Cupa Camaldoli and the northeastern hill park, calculating a total expropriated area of 12,000 sqm. The project also required the construction of a new road adjacent to the fortification called the 'Strada di Nazareth' ('Strada di Nazareth') with a water channel along its route and the cancellation of the pre-existing 'strada della selva Ricciardi' (Ricciardi's Forest Road). The sections and contour lines show the impervious orography of the sites, useful both for the primary destination – hermit monks' retreat – and for the control and defense of the Neapolitan territory. [Fig. 14]

There is a variant of the project preserving the Camaldoli church; however, it involved demolishing the guest quarters, monks' cells, infirmary, library, kitchen, and telegraph. The church would have fallen within the fortified work's boundaries, and the territory to be expropriated would have been greatly reduced, affecting only Camaldoli monks' properties [Fig. 15].

The project reports sight radii, section lines, and measurements³⁷. From the second half of the 19th century, significant technological innovations led to new defensive possibilities related to the use of cannons. The range increased significantly, as well as accuracy and speed. [Fig. 16]

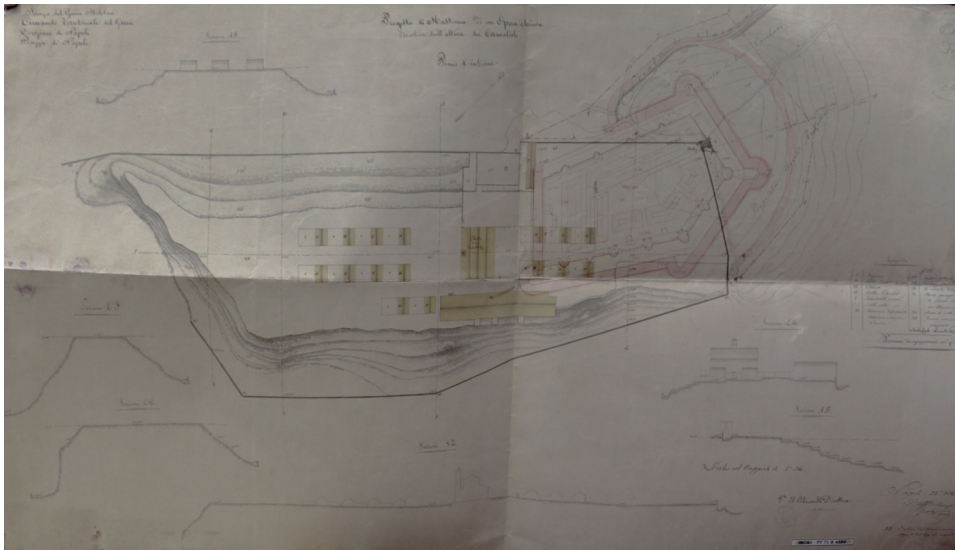
The longitudinal and cross sections³⁸ show that the troop quarters would have been arranged along two underground levels, reaching a depth of ten meters. The aboveground construction was placed within trenches that would not exceed four meters in height, including natural barriers and the designed masonry walls. The nature of the soil, composed of white and yellow tuff – the Archiphlegraean stratigraphy – easily allowed drilling to create these cavities.

Thus, the project was for an underground fort with an entrenched camp placed above. The spaces consisted of offices, two dormitories for non-commissioned officers, and twenty-eight for troops, artillery and food storage, prisons, and stables. Specifically, the dormitories were designed with 80 cm of wall per man and a total capacity of 600 men.

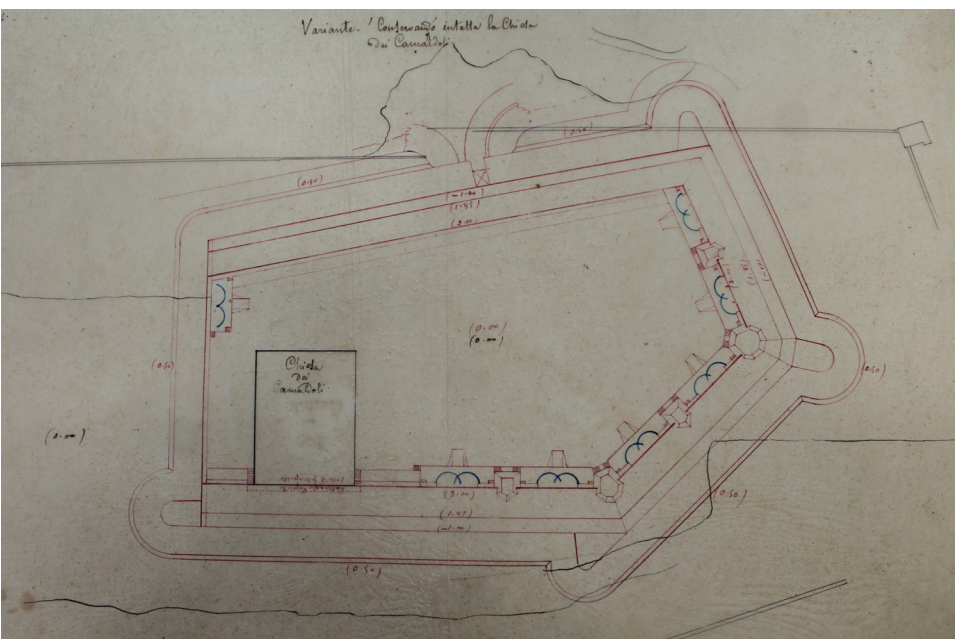
36 ISCAG, *Napoli, Fortificazioni*. F. 4550. *Piano d'insieme*.

37 ISCAG, *Napoli, Fortificazioni*. F. 4545. *Pianta della batteria*.

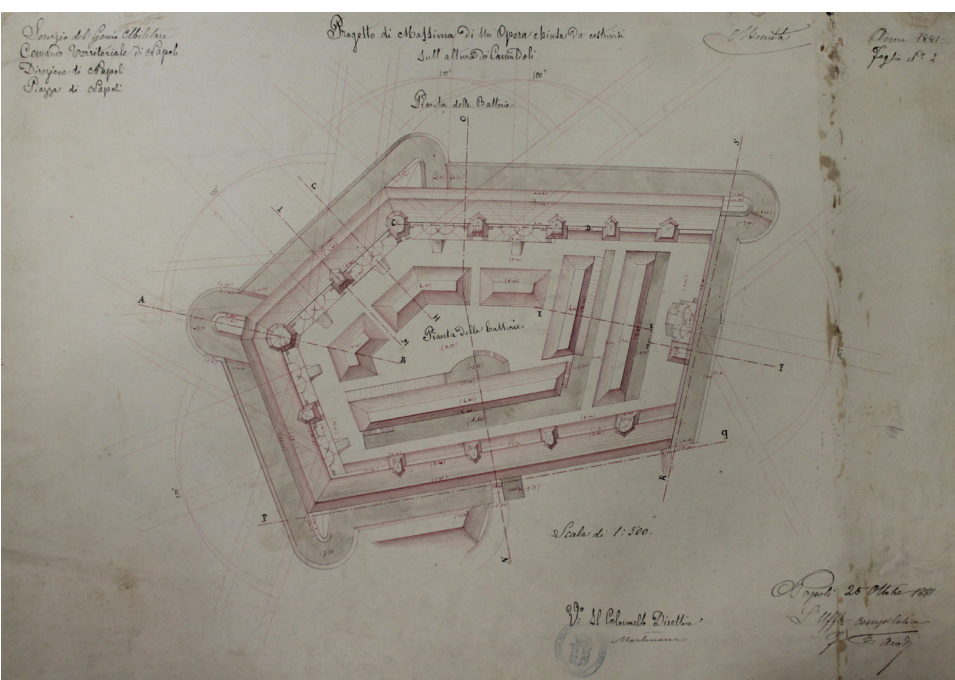
38 ISCAG, *Napoli, Fortificazioni*. F. 4547. *Sezioni longitudinali e trasversali: sulla AB, sulla CD, sulla EF, sulla GH, sulla LM, sulla NO, sulla PQ, sulla RS*.



14



15



16

Fig. 14

Progetto di Massima di un'Opera chiusa da costruirsi sull'altura dei Camaldoli. Piano d'insieme (tav. 1). 25 ottobre 1881. Archivio ISCAG.

Fig. 15

Progetto di Massima di un'Opera chiusa da costruirsi sull'altura dei Camaldoli. Variante conservando intatta la Chiesa dei Camaldoli (tav. 6). 25 ottobre 1881. Archivio ISCAG.

Fig. 16

Progetto di Massima di un'Opera chiusa da costruirsi sull'altura dei Camaldoli. Pianta della batteria (tav. 2). Archivio ISCAG.

The project drawings

Constructed by the projective principles of orthogonal projections, the project drawings avoid deception; instead, they are rooted in construction logic and respectful of visual principles. Thanks to appropriate graphic choices, the drawings express the smallest configurational details of architectural components while making them visible in a single glance.

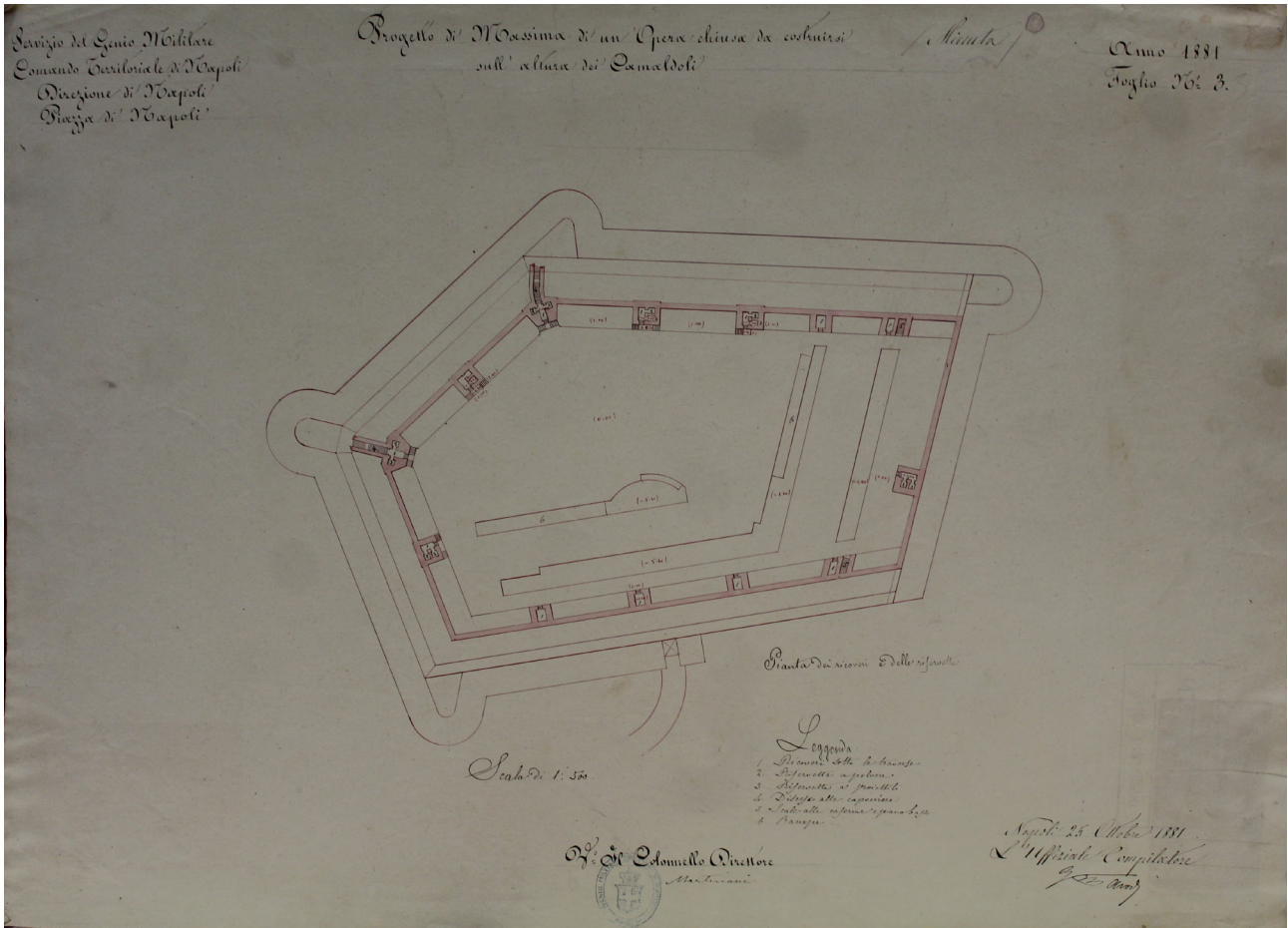
Starting from two orthogonal axes, a modular grid is established in the drawings. It takes the role of a structural spatial warp, where architectural elements are hierarchically ordered. Structural supports, walls, foundations, openings, and floor slabs are at the first level. At the second level are the parts produced by horizontal and vertical combinations of the elements, i.e., porches, atriums, vestibules, courtyards, stairways, and rooms. At the third level are the sets, i.e., buildings as wholes. It is, therefore, an objective process aimed at the search for truth.

These are not views but actual constructions, where the designer breaks down architectural space and splits architecture into often simultaneous or overlapping representations that aid in its investigation and comprehension.

Drawing is useful to take consciousness of one's ideas, both when studying architecture and when composing building plans; it is useful to consolidate one's ideas, to re-examine them at one's leisure and, if necessary, correct them; finally, it is useful to communicate those ideas. To offer a complete idea of a building, three drawings have to be produced, which are called plan, section, and elevation; the first represents the horizontal section of the building, the second its vertical design or construction appearance, and finally, the third, which is and can only be the result of the other two, represents its exterior. There is no use of atmospheric or shadow effects to allude to the real three-dimensionality, crushed and eluded altogether in Mongian images, nor of watercolor, which is preferred by those who believe that the purpose of architectural drawing is to provide images close to vision.³⁹

In parallel projections, the object is at the center of representation, and figuration requires total respect for the natural form of things and for the calligraphic gesture that poetically evokes their essence. This marks the most profound difference between the so-called "convergent" method – the Perspective – and the "parallel" method: indeed, while through representation with a single, finite center of view, the drawing relies on a form that accepts to be deformed to be beautiful, using the center of projection to infinity the drawing places the observer or, instead, the observation in a privileged position of panoramic and instantaneous view, in which, already at first glance, everything is provided immediately and simultaneously. The preservation of parallelism then coincides

³⁹ We find this concept in Jean-Nicolas-Louis Durand, *Précis des leçons d'architecture*, Paris 1813, 32-33. There is, however, an earlier edition of 1802-1805, where Durand's position toward Monge's method is anything but benevolent, attributing the task of providing the precise image of a building only to perspective. We can read in Vittorio Ugo essay, *Fondamenti della rappresentazione architettonica*, Bologna, 1994, 101-102.

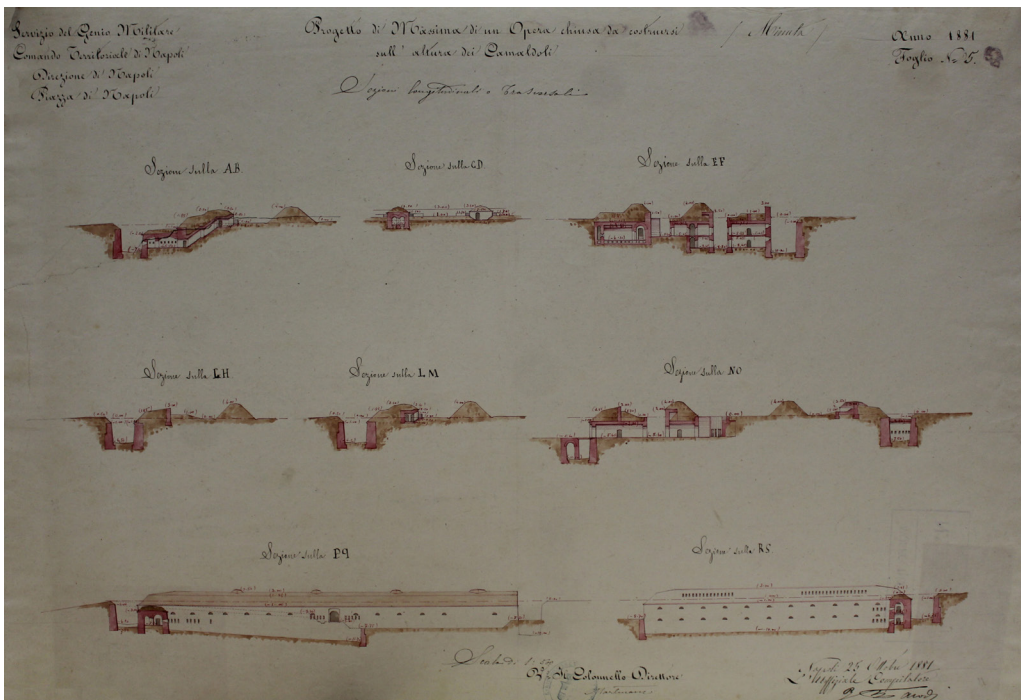


with the preservation of the measurability of the object, intended at the same time as the possibility of its visual control, as the spatial and configurational domain of the object, and as faithful adherence to actual metrical and formal characteristics. The figures of measurement have no viewpoint: they are traces, prints. [Fig. 17]

Since everything far away is indeterminate and, therefore, imperfect, the only view true to reality is the close-up view; then, to be an objective image, objects must be drawn in a close-up view, in all details, without shadows and depth. The eye must thus become similar to the object. The latter, in turn, must be observed and represented through an inner eye that cancels all space between observer and object, where there are no points of view but only directions.

In particular, parallel projection is chosen more or less consciously among the representation methods when, rather than the object in space, the object's space is the attempt of the representation, favoring its real three-dimensional characteristics. It is a different representation outside the centrality of the pictorial view. It is more like a particular view of the world, art, and artwork; it is an expression of a non-anthropocentric world, which is not ordered by any view but consists of infinite points radiating rays. In the projection from a center placed at an infinite distance, there are no privileged viewpoints but only directions that make convergent representation completely impractical and the idea of a single, finite point at which the visual rays concur impossible.

Fig. 17
Pianta dei ricoveri e delle riserve (tav. 3). 25 ottobre 1881. Archivio ISGAG.



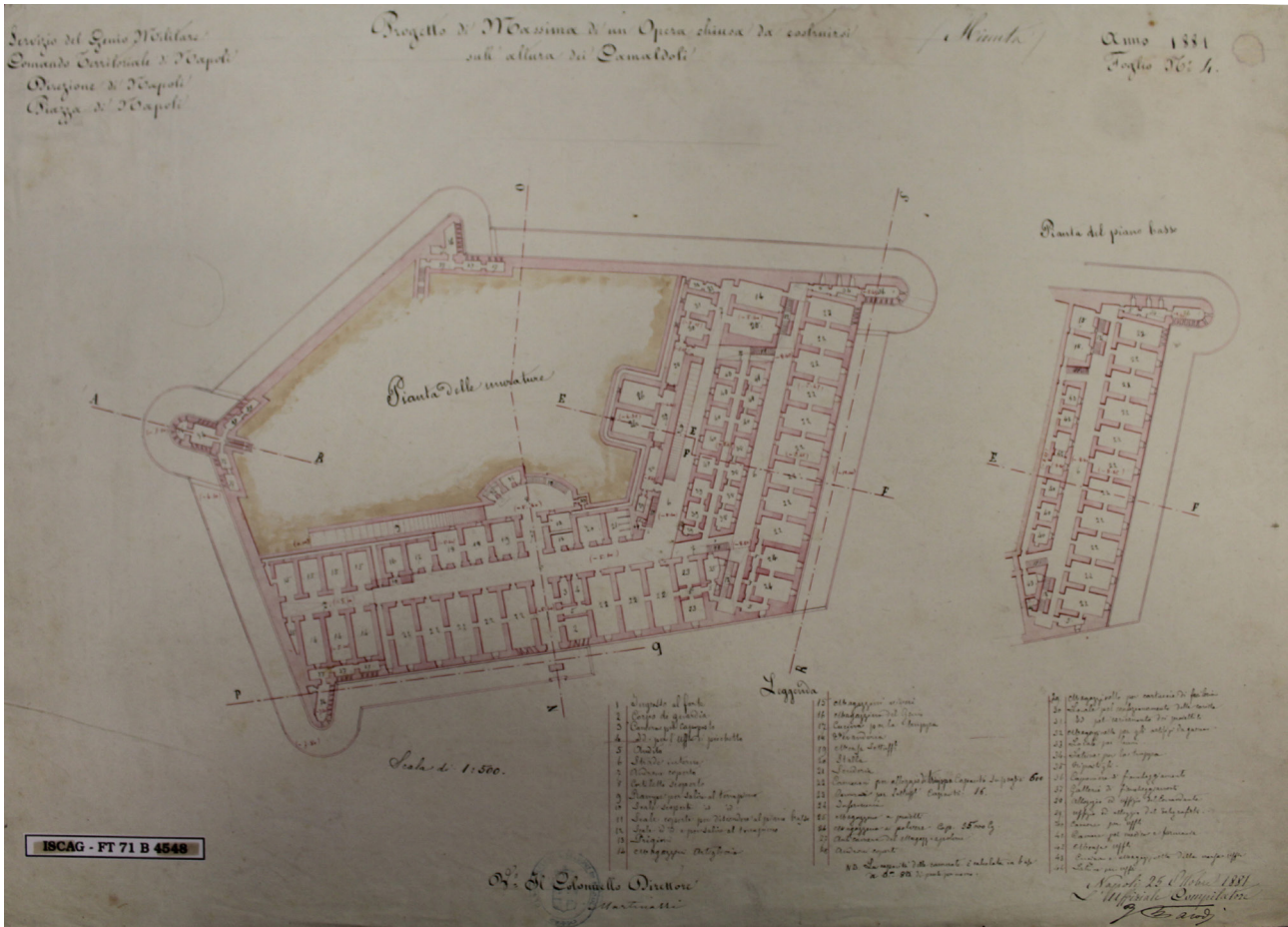
As early as the first decades of the 19th century, a revolutionary era for vision and its various related scientific apparatuses was approaching. In this period, before the advent of photography, the observer's new devices established a new relationship between the observer and the observed object, between interior and exterior, between the inside and the outside, which progressively abandoned their discontinuous relationship to converge into a single seamless perception. This is linked to the coeval interests of optical philosophy and the finalization of tools such as the optical camera.

This relationship is even more decisive when the concept of object representation extends to the representation of space where the object is. First, appropriating architecture and the city by exploring them in the drawing dimension, as a logical consequence of visual and geometric-descriptive methods, allows study images to evoke events distant in time. Moreover, re-elaborating those events through the perceptual relationship established between the observer and the observed object and their graphic representation, consolidating the symbolic code of graphic signs, reveals the substantial structure of space. Drawing is an intellectual opportunity between the parts of this relationship, which reconstructs the memory of places with hypothetical yet concrete forms, capable of developing the faculty of distinguishing configurations often turned into fragments and recognizing their traces even more often erased by time.

Drawing contributes to accustoming the scholar's eye to understand the configurational characteristics and morphological aspects of the observed space, to understand the volumes and surfaces making up space, breaking it down in the mind and recomposing it in the representation, to distinguish intersections between the planes and surfaces that delimit space; to identify geometric primitives and perform a critical description of significant elements. [Figs. 18-19]

Fig. 18

Progetto di Massima di un'Opera chiusa da costruirsi sull'altura dei Camaldoli. pianta delle murature e del piano basso (tav. 4). 25 ottobre 1881. Archivio ISCAG.



Architectural drawings during the 19th century: role and diffusion

19

Throughout the entire 19th century, drawing production was vast, both in Italy and in Europe. On the one hand, this was contributed by the great events known as Espositions Universelles, exhibiting drawings expressly intended for the general public's enjoyment. On the other hand, it was fostered by the spread of trips to Italy – *Grand Tours*, as in the best-known Anglo-Saxon expression. Previously, they were exclusive to a small group of artists, architects, or scholars; then, they became more accessible.

However, the remarkable drawing production of that century, in which architectural drawing came to compete with architecture itself, was also majorly stimulated by representation methods, which show that the drawing practice is organized according to functional and educational principles. Despite being now well-known and codified, at that time, they had not been reconducted yet to the projective origin.

The idea of subjecting the art and practices of architecture to scientific rules of geometry and mathematics is an aspiration with very ancient origins, which became tangible in the new teachings structured in polytechnic schools as early as the mid-18th century.

The drawings produced according to the rules of Monge's *Géométrie Descriptive* method, which considers the orthogonal triad of plan, elevation, and section

Fig. 19

Progetto di Massima di un'Opera chiusa da costruirsi sull'altura dei Camaldoli. sezioni longitudinali e trasversali: sulla AB, sulla CD, sulla EF, sulla GH, sulla LM, sulla NO, sulla PQ, sulla RS (tav. 5). 25 ottobre 1881. Archivio ISCG.

inseparable and unitary, acquired an objective scientific and quasi-mathematical character. The metric system's introduction produced a renewed approach to architecture, its details, and how it is reproduced in images.

Indeed, the development of representation methods coincides with the development of human culture. The production of images is used to surrogate the observer's visual experience and to translate it into concrete form, ideas, attitudes, and intellectual content. In this sense, the image, rather than an art form, can be likened to an expression of thought. Even better, it can be associated with projecting a way of life: different cultures' ideological and philosophical expression through figuration, intended as a visual and conceptual image.

Throughout the 19th century, drawing production was intended as an exercise of reality imitation rather than an interpretive tool of the designer's intentions. This is influenced by the relationship with the ancient that permeates the culture of this century, according to which the ancient represents a reality model to replicate/duplicate.

There was a keen interest in the knowledge of architecture, its need to be preserved or restored, and a new way of conceiving the architectural survey.

After all, every civilization, in every age, has included all the imaginary, figurative, and expressive material in the geometric substructure underlying the construction of drawings. Through a logical scheme and graphic language, such material shapes the symbolic content of the representation itself.

Indeed, according to Jean Jacques Wunenburger's famous expression in his essay *Philosophie des images*, in 1997, the image lies somewhere between the concrete and the abstract, between the real and the thought, between the sensible and the intelligible. It allows reproducing and internalizing the world, mirroring it as it is, either on an immaterial level or by virtue of material means; it allows acquiring the real datum of experience but also modifying it, transforming it to the point of producing entirely new data and experiences.

When a culture transfers everything that appears to the eye and exists in real space into figurative action, the natural projective device inherent in the human intellect immediately comes at use. Then, the dialogue between the object in space and the representation of the object begins.

Reflections on drawing/seeing/imagining the city at war

The novelty is the use of parallel projection by the so-called fort builders – the designers and builders of military forts – who apply orthogonal projections as a three-dimensional demonstration of the manufacturability and functionality of the objects of their representations.

They solve the problem of the metric and functional representation of objects by bringing the space of the object's functionality back into the representation and, using the same method of representation, also give technical legitimacy to

the projection from points at infinity that is thus stably constituted as the statute of scientific-engineering representation. In the history of Representation, practical issues have often provided a stimulus to innovate the spatial coherence of images, reconciling mathematical rigor and vision and devising projective systems first only intuited and then more consciously used and codified.

In operational practice, after establishing the mathematical-geometric aspects of the drawing space, orthogonal projections' image points and image lines allow highlighting both the spatial aspects and formal relationships of an object while visually expressing the phenomenological aspects born by the geometric space.

Mongian projections, which make drawing measurable and executable through rigid orthogonality, take a decisive role in this cultural horizon because of their lack of ostentation and difficulty, enhanced by the possibility of including them all in a single sheet. The distance between object and subject is canceled as the latter identifies with the former, giving rise to a representation where the preservation of parallelism coincides with the preservation of measurability, where the action of representing coincides with the action of measuring, which is more about understanding than seeing.

Bibliography

- Alisio, Giancarlo. *Napoli e il risanamento edilizio. Recupero di una struttura urbana*. Naples: Edizioni Scientifiche Italiane, 1981.
- Alisio, Giancarlo. *La distruzione del patrimonio artistico religioso tra soppressione degli Ordini e sisma del 1980*, in Gennaro Aspreno Galante, *Guida sacra della città di Napoli*, reprinted by Nicola Spinosa. Naples: Società Editrice Napoletana, 1985.
- Ancarola, Tiziana. "Piante e vedute di città nella collezione delle stampe dell'Istituto Storico di Cultura dell'Arma del Genio di Roma (ISCAG)", Ph.D. Thesis in Architectural and Urban History, tutor Alfredo Buccaro, co-tutor Ilario Principe, University of Naples Federico II, 2007-2008.
- Bruno, Giuseppe, and Renato De Fusco. *Errico Alvino. Architetto e urbanista napoletano dell'800*. Naples: L'Arte Tipografica, 1962.
- Buccaro, Alfredo. *Istituzioni e trasformazioni urbane nella Napoli dell'Ottocento*. Naples: Edizioni Scientifiche Italiane, 1985.
- Carelli, Ersilia. "Trasformazioni e restauri nell'ex monastero di S. Patrizia a Napoli." In *Falsi Restauri. Trasformazioni architettoniche e urbane nell'Ottocento in Campania*, edited by Stella Casiello, 47-60. Rome: Gangemi Editore, 1999.
- Celano, Carlo. *Notizie del bello, dell'antico e del curioso della città di Napoli per i signori forastieri date dal canonico Carlo Celano napoletano, divise in dieci giornate. vol. VI*. Naples: Nella Stamperia di Giacomo Raillard, 1692.
- Crocco, Augusto. *L'Eremo di Camaldoli, breve guida storico-artistica*. Naples: Tiresia, 1984.
- Cuomo, Vincenzo. "I Comandi militari a Palazzo Salerno. Dall'Unità d'Italia a oggi." In *Palazzo Salerno. Dai complessi religiosi ai comandi militari*, edited by Leonardo Di Mauro, Alba Irollo, 143-153. Sassari: Carlo Delfino editore, 2017.
- D'Ayala, Mariano. *Napoli militare*. Naples: Stamperia dell'Iride, 1847.
- De Matteo, Giovanni. *Brigantaggio e Risorgimento. Legittimisti e briganti tra i Borboni e i Savoia*. Naples: Guida Editore, 2000.
- De Seta, Cesare. *Napoli. Dalle origini all'Ottocento*. Naples: Arte'm, 2016.
- Di Mauro, Leonardo, Isabella Di Resta, Paolo Mascilli Migliorini, and Maria Perone. *La città dei militari*. Campania. Vibo Valentia: Edizioni Mapograf, 1987.
- Docci, Mario, and Diego Maestri. *Il rilevamento architettonico. Storia, metodi e disegno*. Rome Bari: Laterza, 1984.
- Docci, Mario. *Il disegno di progetto. Dalle origini al XVIII secolo*. Rome: Gangemi Editore, 1997.
- Donadono, Laura. "I restauri otto-novecenteschi della chiesa e del convento dei Girolamini a Napoli (1869-1926)." In *Falsi Restauri. Trasformazioni architettoniche e urbane nell'Ottocento in Campania*, edited by Stella Casiello, 23-32. Rome: Gangemi Editore, 1999.
- Durand, Jean-Nicolas-Louis. *Précis des leçons d'architecture*. Paris: Selbsverlag, 1813.
- Fara, Amelio, Zannella, Caterina. *La città dei militari*. Roma Capitale nell'Archivio dell'ISCAG, edited by Enrico Guidoni, Ilario Principe. Rome: Edizioni Kappa, 1984.
- Assessorato all'Ambiente, *Il Parco dei Camaldoli*. Naples: Electa, 1999.
- Mammucari, Renato. *Napoli. Il paradiso visto dall'Inferno*. Marigliano: Ler Editrice, 2006.
- Mangone, Fabio. "Antica ma moderna. Il disegno della forma urbana per Napoli dopo l'Unità, 1861-1961", *Neapolis*, no. 14 (December 2011): 15-35.
- Parco Metropolitan delle Colline di Napoli. Guida agli aspetti naturalistici, storici e artistici*, edited by Leonardo Recchia, Renato Ruotolo, *La Collina dei Camaldoli. I Casali di Soccavo e Pianura, La Vigna di San Martino*, vol. 4. Naples: Clean Edizioni, 2010.
- Perone, Maria, "Le trasformazioni nei complessi conventuali salernitani." In *Falsi Restauri. Trasformazioni architettoniche e urbane nell'Ottocento in Campania*, edited by Stella Casiello, 79-96. Rome: Gangemi Editore, 1999.
- Pessolano, Maria Raffaella. "Napoli e il regno fra antiche fortezze e nuove proposte." In *Territorio, fortificazioni, città. Difese del Regno di Napoli e della sua capitale in età borbonica*, edited by Giosi Amirante, Maria Raffaella Pessolano, 11-49.

Naples-Rome: Edizioni Scientifiche Italiane, 2008.

Picone, Renata. "Da conventi ad attrezzature per la nuova città borghese: il caso del Gesù e Maria a Napoli." In *Falsi Restauri. Trasformazioni architettoniche e urbane nell'Ottocento in Campania*, edited by Stella Casiello, 33-46. Rome: Gangemi Editore, 1999).

Picone, Renata, and Massimo Rosi, "La Commissione municipale per la conservazione dei monumenti di Napoli." In *Tutela e restauro dei monumenti in Campania, 1860-1900*, edited by Giuseppe Fiengo, 161-211. Naples: Electa Napoli, 1993.

Smink Pitloo, Antonio. *Luci e colori del paesaggio napoletano*, edited by Marina Causa Picone, Stefano Causa. Naples: Electa Napoli, 2004.

Principe, Ilario. *La città dei militari*. Calabria, Basilicata, Sicilia. Vibo Valentia: Edizioni Mapograf, 1986.

De Rosa, Agostino, Andrea Giordano, and Anna Sgrosso, eds. *La geometria nell'immagine. Storia dei metodi di rappresentazione*. Milan: UTET, 2000-2001.

Scalera, Adriana. "Profile Casa monumentale dei Girolamini." In *Scienziati-artisti. Formazione e ruolo degli ingegneri nelle fonti dell'Archivio di Stato e della Facoltà d'Ingegneria di Napoli*, edited by Alfredo Buccaro, Fausto De Mattia, 263. Naples: Electa Napoli, 2003.

Scolari, Massimo. *Il disegno obliquo*. Venice: Marsilio, 2005.

Ugo, Vittorio. *Fondamenti della rappresentazione architettonica*, Bologna: Società Editrice Esculapio, 1994.

Veropalumbo, Alessandra. "Progetti inediti tardo-ottocenteschi per l'analisi del tessuto urbano dell'area orientale di Napoli." In *La città globale. La condizione urbana come fenomeno pervasivo/The Global City. The urban condition as a pervasive phenomenon*, edited by Marco Pretelli, Rosa Tamborrino, Ines Tolic. Turin: AISU International, 2020, 96-105.

Zannella, Caterina. *La città dei militari*. Abruzzo Molise. Vibo Valentia: Edizioni Mapograf, 1986.