

Angiolo Mazzoni: Geometry, Materiality and Motion in the Fascist City

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Fig. 1. Florence Railway Powerhouse and Switch Tower, 1932-34.

INTRODUCTION

After Benito Mussolini consolidated his authority in 1925-26, he sought to extend the power and presence of the fascist state with major public infrastructure construction throughout the nation. Richard Etlin has noted the importance of railway and postal architecture in this endeavor:

Post Offices and railroad stations in Fascist Italy were more than utilitarian buildings. They belonged to the category of "representative architecture," in the dual sense of this term, as monumental architecture invested with importance that reflected the legitimacy of the state and as buildings that incarnated the most characteristic features of modern life. Since the mid-nineteenth century, the railroad station had been the building type representative of the new industrial age. In the early twentieth century, the same status was beginning to be accorded to the Post Office as well [Etlin 1987].

One architect who gave substance to these themes was Angiolo Mazzoni. Mazzoni (1894-1979), who trained in architecture and engineering, had a long and distinguished career as a public architect. In 1920, he entered in the service of the national railway, the Ferroviaria Statale (FS) as an intern engineer and rose through the ranks to become the chief architect of the consolidated state railroad and postal service in 1938.

From 1924 to 1943 he designed over two hundred projects and constructed over one hundred buildings throughout the Italian pen-

insula, Sicily and Sardinia. Among his built works, the most notable are the railroad powerhouse and switch tower in Florence, and railroad stations in Siena, Trent, Littoria, Messina and Montecatini. He was also commissioned to design many of the largest urban railroad stations in Italy. Unbuilt or partially realized station projects included Florence, Trieste Centrale, Venice Santa Lucia, Milan Porta Volta, Rome Tiburtina, and Rome Termini, the most important station in the Italy. Models and drawings of the final design for the Roma Termini complex were displayed at the New York World's Fair in 1939 (Matteucci, A. et al., 1985). Other important works include the Children's Colony at Calambrone, and Post Offices for Ostia Lido, Agrigento, Grosseto, Sabaudia, and Palermo.

This paper examines the formal language of Mazzoni's modernist opera, first, in an overview of influences followed by a comparative compositional and formal analysis of twelve rationalist and two mixed rationalist/neo-historicist buildings. The key formal elements addressed are: plan order, volumetric order, elongation, horizontality, geometry, site connection and color and material palettes.

INFLUENCES

Education

As a student Mazzoni was schooled by Gustavo Giovanoni and others in *ambientismo*, a form of contextual design based upon vernacular architecture, building craft and sensitivity to urban and regional contexts, and *diradimento* or "thinning out" of forms and surfaces. His interest in formal and surface reduction is seen in student work that draws from Olbrich's Darmstadt Pavilion (1901), (Forti 1978, Etlin 1991).

Beyond the Alps

Mazzoni also looked beyond the Alps and Dolomites and across the Atlantic for inspiration. Early work shows the influence of Joseph Hoffman in smooth wall skins stretched over simply composed forms. The Florence powerhouse project suggests an interest in Russian Constructivism, while the expressionistic plasticism of Oud, Dudok and Mendelsohn resonates in many postal buildings and railway stations in the juxtaposition of discrete rectangular masses with curving planes, corners and cylindrical forms. Garnier's Cite' Industrielle certainly was an inspiration in the design of Mazzoni's railway platforms with their graceful canopies of thin cantilevers, while Wright's preference for horizontal elements is reflected in Mazzoni's elongated plans, thin flat roofs, wall striping and numerous details which reinforce the dominant horizontal rhythm of the whole. Other Wrightian precepts are seen in the joining of interior and exterior spaces and the use of extreme cantilevers like those found in the Robie house.

Neo-futurism

Mazzoni is distinguished from other early Italian rationalist architects in his alignment with Futurism. As a student Mazzoni studied Futurism and Sant'Elia's powerful drawings of the La Citta Nuova. As Richard Etlin notes in his seminal work *Modernism in Italian Architecture 1890-1940*, during the 1930s Mazzoni wrote several articles on Futurism and, in 1934, he coauthored "Manifesto Futurista Della Architettura Aerea," or the "Futurist Manifesto of Air Architecture" with Filippo Marinetti and Mario Somenzi (Doorden, 1988, Etlin, 1991). The manifesto is reinterpretation of Sant'Elia's 1913-14 original creation, which emphasized verticality and total detachment from history and tradition leading to new building types, forms and materials. Important precepts such as the expression of motion and the use of vibrant colors are drawn from the original, while the dominant verticality expressed in Sant'Elia's evocative drawings is translated to elongated horizontal linear structures suitable for trains and airplanes, constructed with modern and ancient materials. Perhaps Matteo Trucco's daring Fiat plant and test track in Turin (1923-26) was also an influence. Three of Mazzoni's buildings, the Post Office and train station in Littoria and the Post Office in Sabaudia were proclaimed by Marinetti as "the first public buildings of Futurism" (Matteucci, A. et al., 1985).

Politics

Collectively, these influences led to Mazzoni's stylistic evolution from an early neo-classicism and eclecticism, as seen in his Florence railroad station proposals, to a rationalist architecture, which incorporated horizontal and vertical modularity, structural frames and dramatic cantilevered roof planes. Mazzoni's working methods and stylistic preferences were circumscribed by his position as a public functionary subject to multiple layers of approval and the tastes of many: local government officials, senior fascist party officials, legislators and, in certain cases, Mussolini himself (Etlin 1991). Some rationalist projects such as the Venice Station were cancelled or partially realized and others, such as Roma Termini, were first approved and then supplanted by neoclassical schemes to honor the empire. The two "long buildings" of Roma Termini, which were constructed between 1941-43, represent the last and largest of the architect's built works in Italy which, unfortunately, were realized in a monumental neohistoricist manner.

ANALYSIS OF ARCHITECTURAL COMPOSITION AND FORM

Plan Order

The dynamic quality of Mazzoni's rationalist buildings stems, in part, from the dominance of asymmetry in generating plans, sections and volumes. In some early projects, however, Mazzoni, like Terragni, Libera and others, sought to blend symmetrical plans with rationalist principles in section, skin and formal development. Prime examples are the Children's Colony in Calambrone (1926-32), a 1200 ft long seaside facility for 800 children, and the regional postal center in Palermo (1928-34) with its Novecento facade and its rationalist posterior.

Most later projects utilize one of three strategies to generate asymmetrical compositions: 1. additions to centralized forms, 2. "L" shaped plans and 3. a linear datum with an "unbalanced" arrangement of major elements, either by placement or by varied massing. The first strategy utilizes centralized elements or masses which are deformed into asymmetrical compositions by the addition of ancillary masses or steps and stairs which make the project specific to its site. In the Lido di Ostia Post Office, the cylindrical gallery is gracefully wrapped with office functions and juxtaposed with the stair tower. In the Agrigento and Abetone Post Offices, the central mass is joined to the site with exterior stairways which are shaped differently on each flank.

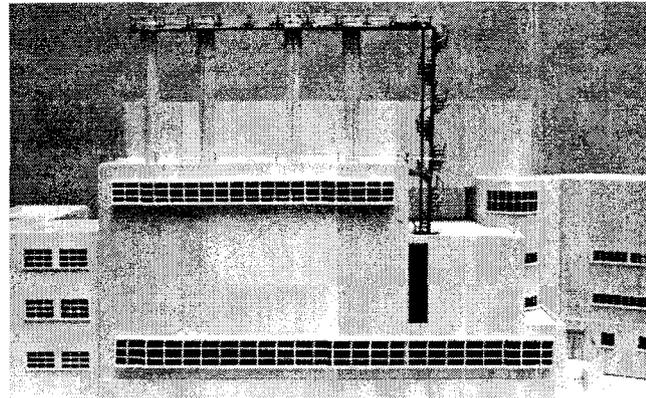


Fig. 2. Florence Railway Powerhouse, Model.

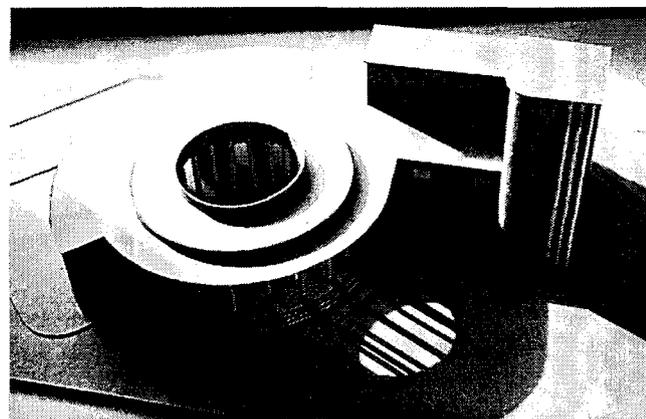


Fig. 3. Lido di Ostia Post Office, 1934-35, model.

The second strategy employs asymmetry in "L" shaped plan compositions which emphasize a corner articulation. Postal buildings in Sabaudia, Pola and Lido di Ostia exemplify this morphology.

Railway stations and related buildings follow the linear discipline of the railway tracks. Adherence to the linearity of the rail lines allowed asymmetrical compositions based on the datum of the tracks and the parallel platforms, where a number of discrete elemental volumes are fused to the datum in varied locations to generate an irregular profile. The railway stations in Trento and Montecatini illustrate this asymmetrical tendency where the centralization of the passenger hall is diminished by the flowing horizontal canopies and the discretely shaped support masses.

Volumetric Order

Beyond a preference for asymmetrical planning, a related compositional tendency was to emphasize elemental expression of discrete volumes in an ensemble of simplified forms in a manner reminiscent of the architecture of Joseph Hoffman. The smaller discrete volumes reduced the scale of the project while allowing certain elements sculptural expression. In some projects, such as the Florence powerhouse and the Lido di Ostia Post Office, the presence of "L" shaped volumes animates the play of forms while restating and reinforcing the theme of asymmetry.

Smooth exterior surfaces and simple openings reinforce the sculptural formal quality of the composition. The enclosing envelope is seen as a simplified continuous membrane tautly stretched over clear elemental forms. These continuous skins, stuccos, ceramic tiles, marble, and bricks often wrap the corner so that the continuity and "seamlessness" is given precedence over the change of planes at these joints.

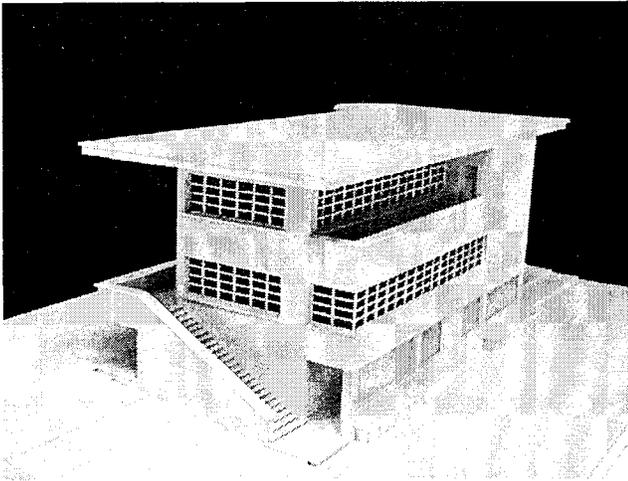


Fig. 4. Messina Maritime and Railroad Station, 1937-38.

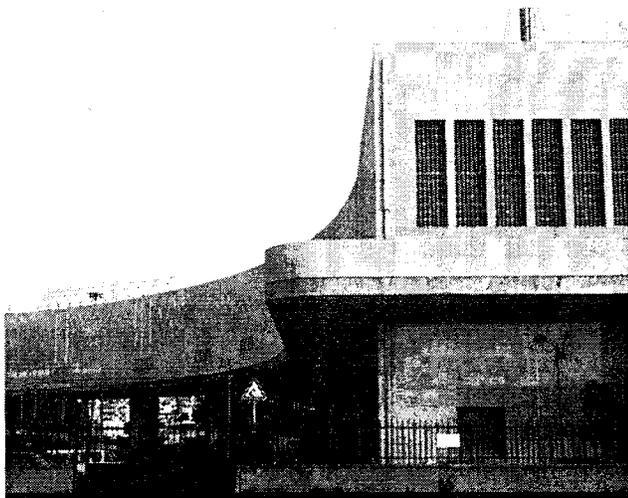


Fig. 5 : Abetone Post Office, 1933-34, model.

Elongation

Mazzoni's railway stations exaggerate their "order of movement" in an expression of extreme horizontality. Stations are elongated by the use of elemental pieces (passenger halls, power plants, dormitories) separated by open areas and simultaneously connected by extremely long, thin canopies which weave the parts together. The typical station parti is an elongated plan with a central passenger hall flanked by two and three story elements at the ends of the building. Parallel canopies run along the platforms and extend from the main mass along the tracks. In the Siena railway station, some 200 meters long, roofed open air zones on each side of the passenger hall mediate the elongation and express the semi-independence of the parts. These perforations in the building mass create a sense of permeability and reduce the apparent scale of the structure.

Elongation is carried to extremes in the monumental stations for Roma Termini and the Maritime and Railway station for the Sicilian port city of Messina. The Roma Termini station (1940-1943) forms a gigantic "U" shape around the vast iron plain of tracks, where the long Viale Principe di Piemonte wing is over 1/2 mile long, beginning with the head house and terminating in the futurist inspired powerhouse.

The Messina Station joins a railway and a maritime station in an immense bi-nuclear plan that extends over 1/2 mile in length in a composition of long thin two and four story buildings stretched in a

straight line which bows in a sumptuous curve to receive the ferryboats from the mainland, in a collective form resembling the letter "J". The railway elements, which occupy the straight leg of the J, are composed as simple rectangular masses arranged and grouped around a series of open courtyards. The maritime station, which forms the tail of the "J" is, by contrast, a solid continuous two story mass given prominence by its location at the boundary of the harbor and by its graceful curving form which arcs in a gesture of reception for the ships and trains.

Horizontality

Mazzoni's buildings draw upon the language of Frank Lloyd Wright to celebrate horizontality, where, often, the dominant horizontal cadence is punctuated with a single strategic vertical: a water tower, a clock tower or a stairway. The building masses are typically long low structures where the horizontal theme resonates in floor patterns, walls and roofs, openings, window treatments, furniture and light fixtures and numerous other details. Horizontal details and materials include Roman brick, with its long low profile, thin marble wall striping and window profiles with exaggerated sills, sometimes connected in long lines.

Three types of roof planes echo the horizontal theme. Type 1 is a thin light plane that modestly cantilevers over a simple volume. Examples include water towers at Calabrone and Roma Termini and the multi-story blocks in Montecatini, Messina and Sabaudia. Type 2 is a platform canopy, a simple yet elegant independent structure supported on a single row of concrete columns often terminating in a semicircular form and type 3 is seen in selective planes of announcement, cantilevered roofs projecting 5 - 7 meters from building walls to dramatically mark a public entry or some other important feature.

Curving Geometries

The use of curving geometries based on the circle and cylinder is the most distinctive feature of Mazzoni's rationalist opera. This feature appears as a constant in both railway and postal building projects. The juxtaposition of these curvilinear geometries with simplified rectangular volumes, walls and planes results in an architecture expressing the energy of continuous horizontal motion. The animation of forms and elements occurs at every level of scale within the project. Among the curvilinear elements are: full cylinders, semi circular volumes and roof planes, columns, building corners, curved window profiles, stair and step profiles.

Full cylinders are used, sometimes freestanding, sometimes interlocked in the corner of a rectangular mass. Tall cylindrical water towers crowned with thin flat roofs are found in a number of projects, including the Children's Colony (Calabrone), Florence powerhouse, and railway stations in Siena, Messina, and Roma Termini. Full cylinders are also used in the postal buildings in Agrigento as the building form, in Pola as the joint between two rectangular masses and in Lido di Ostia as an ultra thin disk-like roof plane.

Engaged cylinders are often employed to express vertical circulation or honorific spaces as in Calabrone and the Siena railway station. Semi cylindrical forms and planes are the most commonly used curved geometry in Mazzoni's buildings. Examples include the numerous forms at the Children's Colony, Florence Control Tower, Sabaudia Post Office.

Thin semi-cylindrical planes are typically used to terminate railroad platform canopies and are frequently employed to mark the passenger hall entries. Examples include station platforms and entries at Trento, Montecatini, and Littoria and the Siena railway station freight entry where the dramatic cantilever extends seven meters from the wall.

Beyond the major building elements, curving geometries are woven through the fabric of the entire project to unite the general to

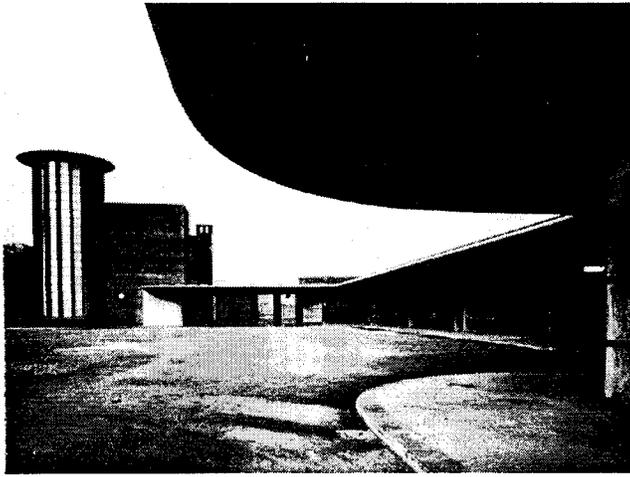


Fig. 6. Siena Railroad Station 1932-34.

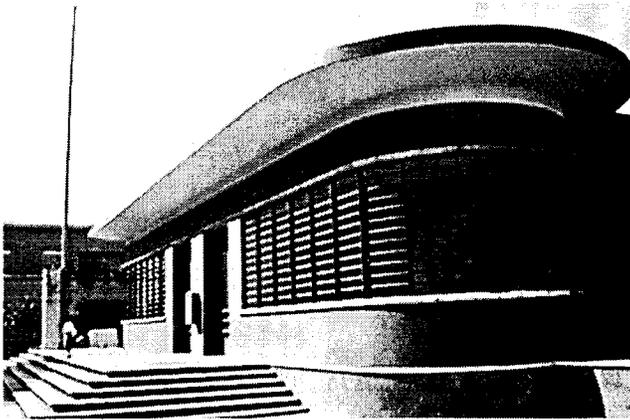


Fig. 7. Sabaudia Post Office, 1932-34.

the specific and to reinforce the modernist ideal of physiognomic congruence. Porthole windows, rounded window profiles and curved glass can be found in a number of projects. Interior and exterior corners are curved to mark public pathways, while interior and exterior furniture, lighting, water elements and steps echo the theme of flowing space, flowing surfaces and flowing planes.

Site Specificity: Stairs, Steps and Plinths.

The architect saw "earthwork" as an important element in fusing the project to its site. Mazzoni orchestrated low plinths, exterior terraces, banks of low steps and exterior stairs to make each project specific to its site, while also reinforcing the dominant formal themes of asymmetry and continuous horizontal motion. The prominence of these connective elements contributes to the character of these buildings as open, accessible public places.

In his postal architecture Mazzoni employs the plinth in an ancient gesture of civic architecture where, in the upward projection of the plinth, the building is drawn up and away from the site edges to suggest a "body growing directly from the earth" [Thiis Evensen, 1987] while, simultaneously, the rising floor denotes a special status while setting the building apart from its neighbors.

The modesty and lowness of the plinth contrasts with the generosity of the exterior terraces which often ring the building. Expansive thresholds are often created by a series of broad exterior terraces and steps disposed around the low, solid base in an asymmetrical pattern. The terraces and steps, often wrapping around building corners, convey a sense of motion and weight. The asymmetrical

pattern reinforces the overall theme of horizontal motion while the terraces extend the interior floor to the exterior in its breadth and width.

Exterior steps reinforce the themes of continuous horizontal motion and asymmetrical order while conveying an openness and a specific fusion of the project to its site. Broad low steps cascade from the building, forming "L" shaped or fan shaped stairs continuously wrapping around terraces to reinforce the joining of the building to the ground plane. The "L" shaped and fan stair motifs imply a motion outward and downward from above and, by extension, from inside toward the ground in a flowing motion. In Agrigento and Lido di Ostia the broad terraces and steps are curved to echo the horizontal cadence of the whole. Shallow risers and broad treads (5": 16") create a gentle slope which suggests calm ascension, accessibility, and independence of movement (McNamara 1997). The subdued upward motion of the broad shallow steps transforms the "climbing impulse" to a gliding impulse.

In complex sites, massive exterior stairs are also used to merge the building to its site. In the postal buildings in La Spezia and Agrigento, exterior stairs reconcile extreme site topography changes while they make the building a filament of the city's urban pathway system. The asymmetrical boldness of these stairs also counterbalances the centrality of the symmetrical interior planning. In the postal buildings in Sabaudia and Littoria, exterior stairs become central elements of the formal composition, while in the Messina Station they mediate between the scale of the maritime station and the passengers.

Gesamtkunstwerk

Like Wright and many early European modernists, Mazzoni was proponent of gesamtkunstwerk. Typically postal and railway building projects included the design of lighting fixtures and a vast of the vast array of furniture including platform and waiting room benches, tables and chairs for restaurants, bars, and office areas and restaurant coat racks and menu stands. Exterior and interior light fixtures were also designed by Mazzoni in collaboration with the Vennini glass works in Murano. In some buildings these well designed, well crafted elements remain in daily use.

Another aspect of Mazzoni's "total design" approach was the collaboration with many important painters, sculptors, glass artists. Thematically, this work depicted the idea of progress with emblems of technology: the the radio, telegraph and the telephone and icons of transportation: the steamship, the train and the airplane. Among the collaborating artists were prominent futurists: Tato, Sironi, Benedetta Marinetti, Depero, and Prampolini, whose works can be found in postal buildings in Trento, Gorizia, La Spezia, Bergamo, and Palermo. The murals and glasswork in the Post Offices in Trento and Palermo are particularly distinctive (Forti, 1978. Matteucci, A. et al., 1985).

Materials and Colors

Mazzoni's material and color palettes draw from two seemingly opposing sources: ambientismo and the use of indigenous materials and the futurist emphasis on the use of vivid, intense colors. Material palettes reflect a keen sensitivity to rich materials and interesting juxtapositions. Exterior skins are reveted in marble, roman brick, small ceramic tiles and stucco. Copper and bronze hardware is found on wooden doors, countertops, clocks and other details.

Bold colors, often juxtaposed in unexpected ways, were frequently an important aspect of a building's atmosphere and character. The smooth stucco walls of Children's Colony at Calambrone, a project over 1200 feet long, were tinted in a dark orange; the Florence powerhouse, affectionally known as the "red hangar" was painted newfoundland red and the Sabaudia Post Office was reveted in glossy ultramarine blue ceramic tiles joined to pink sienese marble window profiles. Station waiting rooms and postal halls have been



Fig. 8: Agrigento Post Office, 1927-32.

sumptuously reveted with rich wood panelling and intensely colored ceramic tiles, with the selective use of local marbles and porphyry. Examples of bold ceramic tile use include the Siena Station with different waiting rooms reveted in red, green, and gray tiles, the Lido di Ostia Post Office, with public rooms in light and dark blue and green, and the Palermo postal center where the Director's conference room has cadmium yellow ceiling tiles and dark blue floor tiles juxtaposed with local pink and black marbles.

CONCLUSION

Mazzoni's opera evolved from early neo-classical and novecento beginnings to an Italian rationalist position which blends Mediterranean sensibilities with modern tectonics in an architecture which finds expression in volumes, surfaces and edges rather than in the structural frame as seen in the work of Northern Italian contemporaries like Terragni and Figini and Pollni. Mazzoni's postal and railway buildings contributed to the struggle to bring twentieth century architecture ideas to the public architecture of Italy, and these works add to the typological evolution of the open canopied railway station and the small postal center found throughout the nation.

The distinguishing feature of Mazzoni's rationalist work is a quality of movement and motion which creates an open, engaging civic architecture which expresses the *zeitgeist* while it projects an image of the future. This formal and compositional analysis suggests a body of rationalist civic architecture animated by asymmetry, simple volumes and curving geometries orchestrated to create a dynamic architecture of horizontal motion which represents a sensual gift to the public realm. An orientation to *gesamtkunstwerke* in the design of furniture and lighting and in the collaboration with

many important artists combined with the use bold material and color palettes results in an exemplary, durable civic architecture of mellifluous detail and craft.

As "representative architecture" Mazzoni's work reinforces the idea that the Fascist state employed rationalist as well as neo-historicist architects in "regime building" and a projection of fascist power into daily public life (Ghirardo, 1980, Ciucci, 1988). Mazzoni may have designed and constructed more rationalist buildings than any other Italian architect during Mussolini's twenty-one year rule, yet he is nearly absent from the history of Italian rationalism. With a blend of rationalist, expressionist and neo-futurist tendencies, his best work remains a modest, thoughtful civic architecture which deserves critical scrutiny. Carlo Severati documented Mazzoni's work in *Cronache e Storia* in the 1970's and the occasional brief article appears in *Domus* and *Abitare*. But Bruno Zevi has never forgiven Angiolo Mazzoni for the endless arches and the ubiquitous, lifeless travertine coating of the two elongated arms of the Roma Termini station, which stand today in mute silence behind Montouri's transparent modern head building of the 1950's (Zevi, 1998). Perhaps, for Zevi and other Italian critics, Roma Termini has become the icon for all of Mazzoni's work, so that they are unable to appreciate the animated, energized civic architecture that constitutes his rationalist opera. Perhaps it is time to look beyond Rome.

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Contemporaneous photos of Mazzoni's opera are from the Mazzoni Archive, Museum of Modern Art, Rovereto and Trento, Rovereto, Italy. Carlo Prosser, Architect, Curator.

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