

From the Thirties to post-war reconstruction. The Land Reclamation Consortia and rural architecture in Italy.

Luca Monica^{1,1}, and Luca Bergamaschi²

¹Politecnico di Milano, ABC dpt. of Architecture, Built Environment and Construction Engineering, Milan, Italy

²Università IUAV di Venezia, Venice, Italy

Abstract. This investigation highlights a new conception of design space in architecture, in the relationship between settlement and land, rooted in architectural historical studies and research on rural and agrarian economy and unlocks a potential regeneration and restoration of the rural villages of Italy's cultural heritage. In Italy, the theme of rural architecture has gained momentum ever since the spread of the Modern Movement, reviving settlement and spatial principles as a moral lesson for the general development of new aesthetics and a new society. Innovative concepts inspired by Arrigo Serpieri such as "Integral Land Reclamation", and long-standing institutions such as the Land Reclamation Consortia, became official law in 1933, and played a crucial role in this process, particularly in consolidating new architectural thinking that was to endure up to post-war reconstruction and beyond, until our own times. Paradoxically, ideologically opposing phenomena, settlements related to the extensive land reclamation of the Fascist period and the rural redevelopment of the Fifties, were somehow based on comparable theoretical and operational aspects. We can recognize these ideas by looking at the most interesting experiments developed in these two periods: the city of Sabaudia designed by Piccinato, and the village of *La Martella* at Matera designed by Quaroni (and sponsored by Adriano Olivetti). The quest for a new "moral aesthetic" of architecture undertaken by leading representatives of Italian Rationalism was to re-emerge in the neorealism of post-war reconstruction.

***Bonifica integrale* (Integral Land Reclamation) and the *Consorti di bonifica* (Land Reclamation Consortia)**

The economic background that defined the context for the "integral" land reclamation interventions in Italy, gather into a new and different story the more exemplary architectural projects of the interwar period than those after WWII (notwithstanding the changed historical and ideological contexts). If indeed the case of the Sabaudia project by Luigi Piccinato's group was the most clear-cut experiment among the *Bonifica*

¹ Corresponding author: luca.monica@polimi.it

integrale initiatives, we again find Piccinato at Matera, in one of the most significant interventions of the *ricostruzione* period, namely the district of *La Martella* by Ludovico Quaroni's group, once again inconceivable outside the actions of the same land reclamation consortia desired by the Serpieri laws which states:²

Integral Land Reclamation is carried out for purposes of public interest, through works of reclamation and land improvement [*miglioramento fondiario*]. Reclamation is carried out on the basis of a general scheme of works and coordinated activities, with relevant sanitation, demographic, economic or social advantages, in areas containing lakes, ponds, swamps and marshes, or constituted by mountain land spoiled in hydrogeological and forestry terms, i.e. land extensively subjected to serious physical and social disorder which, with the removal of these causes, is receptive to a radical transformation of the productive sort. Land improvement measures are those made to the benefit of one or more plots, independently of any general reclamation plan.

This is the first article of the law still in force on the *Bonifica integrale* (Integral Land Reclamation, Royal Decree no. 215 of 13 February 1933), largely inspired by the theoretical thinking of Arrigo Serpieri, the founder of the modern discipline of Rural Economics in Italy and Undersecretary for Integral Land Reclamation at the Ministry of Agriculture and Forestry. This decree also defines the roles and functions of the *ConSORZI di bonifica* (reclamation consortia), long-standing administrative institutes responding to the characteristics of the Italian territory, from governing the waters to the consolidation of productive agrarian fabric and civil infrastructures.

The economic-social theory behind the *Bonifica integrale* was defined for the first time by Serpieri in 1922, and first operatively entered Italian law with the "Serpieri Law" of 1923, and then with the "Mussolini Law" of 1928. In its original conception, it:

...is seen as an instrument of public intervention no longer aimed solely at the hygienic-hydraulic improvement of the territory, but the implementation of a set of public and private works to raise the value of degraded and/or poorly productive land to make it suitable for a stable human settlement (colonization). This conception embodies the idea that the private ownership of land does not constitute an absolute right but a right associated with a given "social function". Which is why an inappropriate use – such as not pursuing the highest possible production level – may result in expropriation by the State. For the time, given that the great land ownership played a major political role, this was a concept that was not only innovative but also contained certain subversive connotations! [1: 11-12].

The problem of "agrarian reform" in Italy tended to become more clear-cut in the late nineteenth century [2], with the approach of Unification and recognition of the marked discrepancy between northern and southern Italy. Even the hypotheses of agrarian

² About the "cases" of Sabaudia and Matera, there is a wide range of theoretical and critical literature, also interesting to read again, starting from original sources, to investigate the role of the architectural project between city and countryside, between politics, economics and technocratic issues. In this sense, we can recognize some specific cultural and institutional facts, as the *ConSORZI di Bonifica*, actives in the interwar and postwar periods (and now), common ground for the work of a circle of important figures of architects.

The literature to the base of this study is that of the tradition of the Italian critical history of the architecture, and the first-hand literature, coming from the original leading actors, that we intend to read again, and rediscover, to understand a future for these "critical practice".

Recent studies, interesting in general, following different point of views, with a suspended interest about the architecture, that sometime hides second hand readings.

structures were different: in the north, Cattaneo anticipated the “construction” of a rural system in Lombardy, also through the idea of complex settlements that would define a new type of “agrarian institute” [3]. Instead, in the south, what prevailed was the conflict regarding the economic structure of the organization of land, between backward-looking *latifundia* and resources for new entrepreneurial development.

The land reclamation consortia, in this extended idea of “integral” action, would play a key role in the great hydraulic initiatives across the country, along with land reorganization, infrastructure development and the creation of new settlements that would characterize the new Fascist towns and villages of the Pontine Marshes, the Capitanata in Puglia, the marshes around Ferrara, the Sulcis mining basin in Sardinia, but also mountain territories, as Biella in Piedmont [4].

The action of the land reclamation consortia would continue even after WWII with new incentives and would be a key part of the *ricostruzione*, the post-war “reconstruction” process in Italy, with a renewal of its approach to policy and agrarian economics.

Today this long-standing institution appears to us to be rich in potential, smoothly integrated as it is with EU directives on “river basin districts” and coordinated through the ANBI (Italian National Association of Reclamation, Irrigation and Land Improvement), with a strategic vision of the Italian landscape that cuts across many disciplines, inter-sectoral, functionally multi-purpose, a fulcrum between the public and private sectors, and effective nationwide with a system currently divided into 127 consortia for about 50% of the national territory.

The historical judgement on the effects on the economic development of actions linked to the principles of the *Bonifica integrale* has been complex and many-sided. On the one hand the reclamation produced an increase in agricultural production but on the other it was unable to carry through its promise, i.e. a genuine “renewal of production structures and the formation of small-scale active and enterprising holdings backed by public land credit system” [2: 281]. These effects, it was recognized, did however form the instrumental promise for a revival which occurred starting from the 1950s, especially in the south of Italy, as mentioned by Manlio Rossi Doria, recalling Serpieri’s manoeuvre:

Immediately after the war, the situation of southern reclamation was extremely confused and uncertain. [...] Those years saw the formulation of principles that later found their realization with the institution of the *Cassa per il Mezzogiorno* [Fund for the South] and its programme: the need for adequate consolidated multiannual appropriations, a long-term plan, an extraordinary body to realize it, a discrimination between districts, a concentration of efforts on the most ready and promising among them, a systematic study and investigation of the countless reclamation issues, and ultimately, a close connection from the outset between public works and land transformation, to finally render Arrigo Serpieri’s luminous conception concrete in its entirety also in the south. [5: 82-83]

Why Sabaudia?

The new Local Strategic Plan project for the foundation city of Sabaudia, announced through a national competition of the charitable organisation, *Opera Nazionale Combattenti* (ONC) in 1933 as part of a policy of new settlements within the *bonifica integrale* of the Pontine Marshes, was won by a group of architects consisting of Gino Cancellotti, Eugenio Montuori, Luigi Piccinato and Alfredo Scalpelli.

To understand the nature of Sabaudia it is necessary to conceive its role within the rural territory it depends on: in the diagram that Piccinato published together with the

project [6], it emerged as a political and administrative centre, which led to it being a key nerve centre, the fulcrum of a series of radial relations between functions: farmstead – village – town of Sabaudia – ONC Rome.

Long straight access roads link it to the Appian Way and the neighbouring towns and villages, crossing the complex and evocative morphology that ensues in the surrounding territory, between wooded hinterland, coastal line and lakes, reliefs, canals and reclamation roads. Around the intersection of these axes developed an orthogonal system of squares, skilfully disengaged within the perimeter, in which to represent the new town's main political and civic institutions: the Town Hall, the *Casa del Fascio*, some army barracks, the seats of various associations, a cinema, a hotel, and public offices.

The *Casa del Fascio* and the Town Hall are volumes which are isolated with respect to the surrounding urban fabric: the former, positioned at the symbolic crossing of the four main roads, arises as an ideal link between the civic centre and the adjacent religious centre (church, baptistery, convent and nursery); the latter, featuring a tower with a balcony to address the public, equally symbolically centred with respect to the axis towards the Appian Way. The shifting sight lines of the central nucleus are what strongly characterize the town, metaphysically suspended in an urban layout that has very little to do with the picturesque glimpses typical of medieval Italian villages – that was one of the supposed references³ – but rather a homage to the ground plans of Ancient Roman tradition with their orthogonal grid and central square featuring porticoed buildings.

During the Fourth CIAM Congress in 1933, the urban scheme of Sabaudia, deeply against the grain with respect to the European urban planning of those years, was presented as an example of a functionalist city and garnered international admiration. However, Le Corbusier was somewhat sceptical when in reference to Sabaudia he spoke of this “great architectural project – a lesson of love” describing it as *un joli village, un peu romantique* [a lovely village, a bit romantic], in opposition to the idea that *la grande industrie s'empare du bâtiment* [the big industry takes up building of houses], speaking of his proposal for the future city of Pontinia [11: 470, 12].

The architecture of Sabaudia therefore seems to encompass that conflict already expressed by Tafuri:

...the one which would then be recognized as the only positive example of a “rationalist” city made in Italy, ultimately did not differ that much in its *cardo-decumanus* backdrop, in the rhetoric of its central or quasi-central perspective, in its categorization of the buildings, in its academic compositional canons grafted onto an organism, on the contrary, that was new and intelligent in the organization of its various parts and in its relations with the territory. [13: 35-36]

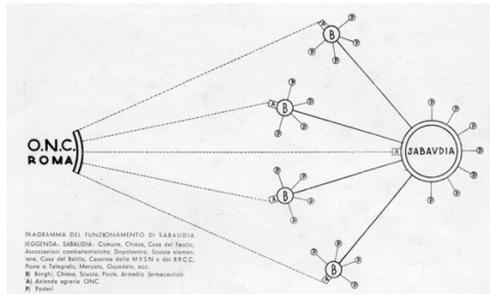
How then should we regard the volumes and spaces of the Sabaudia project?

On the one hand, we must look to the metaphysical perspectives sketched by Piccinato for the stereo-metric volumes that make up the civic core, whose buildings are represented cinematically in a succession of fluctuating spatial frames, following a futurist-suprematist aesthetic. On the other hand, the debate of those years invites us to transfer our gaze to the spatial composition that characterizes the settlement of

³ After Sabaudia, Piccinato published studies that can be referred to the early experiences, between the tradition of the Italic constructed landscape and villages and rationalist volumetric spatialism [7, 8, 9]. Other studies connected the tradition of the medieval village and *piazza* in central Italy to the architecture of the Fascist new towns, as the important [10].

Sabaudia with respect to its surroundings, borrowing the viewpoint from the famous aerial photographs published in *Sabaudia dall'aeroplano*, in 1935 [10], or from the representations of the Futurist painters who would establish its most significant iconic images.

Analysing the hierarchical addition of the volumes of the civic centre brings out the compositional intentions of the architect, whose desire was to underscore the central elements with respect to the rest of the fabric of the city nevermore realized in those terms and detectable in the ground plan of the street network, whose lots are in a continuum with the countryside⁴.



Figs. 1 and 2. G. Cancellotti, E. Montuori, L. Piccinato, A. Scalpelli, *Town of Sabaudia*, 1933-1934. Functional diagram of the city and project plan. Source: [6]

⁴ Piccinato himself wrote an acute analysis on the interrupted destiny of the city of Sabaudia, still a problem when he was reinstated to revise the Plan in the Seventies [15].

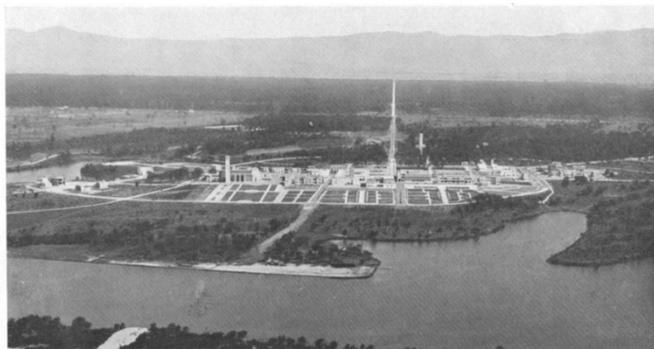
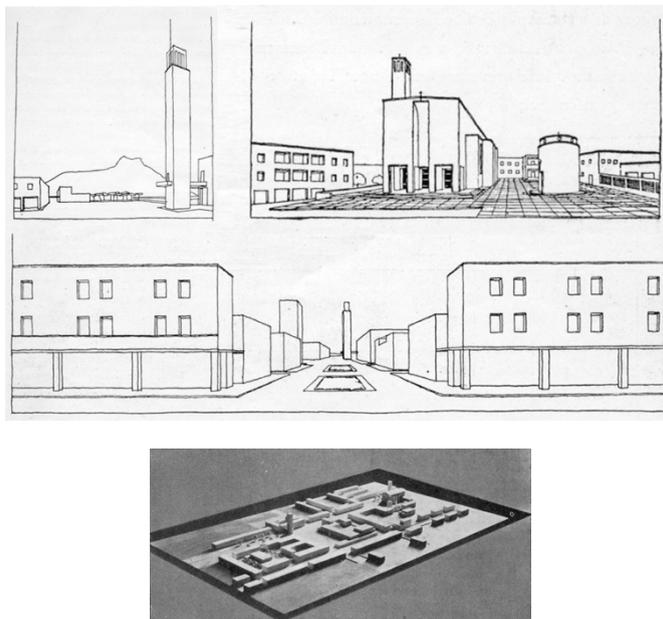


Fig. 3. Aerial view of Sabaudia. Source: [14].



Figures 4 and 5. G. Cancellotti, E. Montuori, L. Piccinato, A. Scalpelli, *City of Sabaudia*, 1933-1934. Perspective drawings of the centre and model. Source: [6].

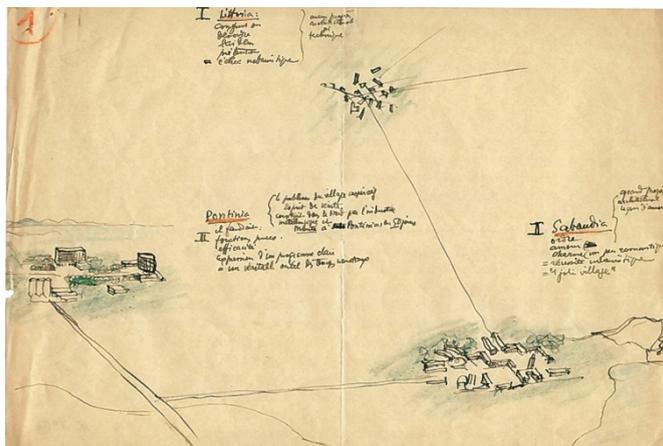
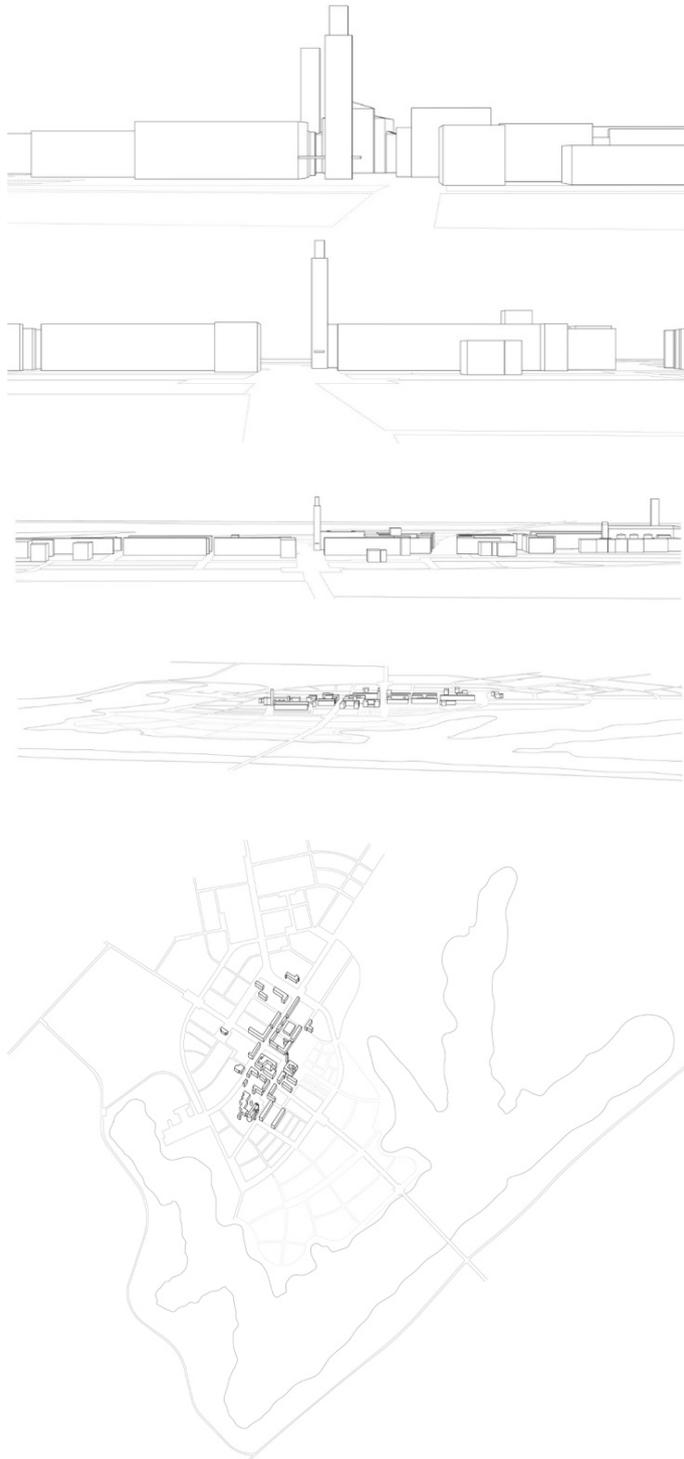


Figure 6. Le Corbusier, Study drawing of the Pontinia proposal, 1934. Source: [12]



Figs. 7, 8, and 9. Reconstructive drawings of the centre of Sabaudia as of the original design.
Drawings L. Bergamaschi.

Why Matera?

Within a decade, between 1950 and 1959, one of the noblest experiences of post-war Italian architecture took place in Matera, which immediately gave rise to a wide range of historical-critical literature that revealed the key role and premise for a new commitment to the reconstruction and development of civic life. From its inception, this episode had in fact transformed the very concept of *ricostruzione*, seen as post-war repair, and by extension, a more “integral” commitment, delivering the physical form and substance of the landscape to the city and the territory in Italy’s economic and social development.

The *Sassi*, the ancient rock town that forms the original nucleus of the city of Matera, an ancestral context in a beautiful city and an emblematic case of a vital rural civilization marked by a level of exasperated, almost primitive underdevelopment, began to represent a sociological study case to reflect upon, also abroad.

The first definition of an operational strategy was born on the inspiration of the US ECA mission (Economic Cooperation Administration) entrusting the task to the *Consorzio di Bonifica della valle del Bradano*, directed by Nallo Mazzocchi Alemanni, who compiled a report published in 1950 that established the bases for the three kinds of construction for the population of the *Sassi* in Matera to be carried out at the same time:

- a) construction of residential villages in rural areas;
- b) construction of peripheral residential districts;
- c) direct action for the renewal of the *Sassi*.

In the case of rural villages outside the centre, new settlements were identified: *La Martella*, *Borgo Venusio*, *Torre Spagnola*, *Salati* and the service centres of *Picciano* and *Timmari*.

On this initial hypothesis, initiatives coordinated by Adriano Olivetti immediately converged as a part of the *Commissione di Studio della città e dell’agro di Matera*, formed by INU and UNRRA-Casas. This interdisciplinary working group would define the hypothesis of the rural village, *La Martella*, which was directly inspired by social concepts of “community” long theorized by Olivetti in studies, publications, and cultural and political actions.

The context of this agrarian landscape consisted of large *latifundia* and unquestionably represented a backward and absolutely static production structure, but on the other hand it could constitute the starting point for transformation towards a modern agro-business industry. It was therefore important in this context that the territorial unit of large agrarian resources and new rural settlements be preserved, all immersed in a landscape of rare beauty with rolling horizons and surprising small compact towns and villages.

This sensibility for an “aesthetics of the landscape” of the agricultural economy, did not escape Manlio Rossi Doria’s notice:

When – leaving the villages crammed with the poverty of the farmworkers – he went on to consider the vast tracts of land without roads, without investments or technical means, it seems to me he was not wrong in evaluating those resources as susceptible to allowing, if not a prosperous life, at least a civil agricultural life for those populations for whom he saw no other alternative at the time [5: 81].

Among the actions of the two reclamation consortia involved at the time – the Bradano Valley Consortium directed by Mazzocchi Alemanni and that of Metaponto

directed by Rossi Doria – continuing the role undertaken pre-war, there were hydraulic works intended for irrigation of the large estates for agriculture, with the realization of dams for the large artificial irrigation reservoirs, such as the one just south of Matera in the Bradano Valley, opened in 1952.

At the same time and with a strategy that was the opposite of the land reclamation consortia, the institute of agrarian reform (*Ente di Riforma Agraria*) was entrusted a portion, albeit minimal, of the inhabitants displaced from the *Sassi*. For the institute, the pursuit of a land allocation of minimum subsistence for a family would tend to a social and physical breakup of the territory and the crofts, with small lots featuring a single dwelling for the family of farmworkers, without the possibility of transformation towards a modern conception of agricultural company, proposing a scheme already in use in certain pre-war experiences.

The generation of this landscape therefore proposed a settlement that was dispersed, fragmented and aligned along the roads in a series as far as the eye could see of minimal houses and sustained by a hypothesis of an economic structure then in profound transformation and which Rossi Doria, for example, would retrace with a great capacity for self-criticism.

The 1953 *Piano Regolatore Generale* for Matera by Luigi Piccinato [16] was born as a coordinative action of the various interventions under one single design, to provide rehabilitation (of the *Sassi* and the *Agro di Matera*) in the form of an urban planning and therefore architectural design. Carlo Aymonino, in his interesting essay published in *Casabella-continuità* in 1959, clarified Luigi Piccinato's idea for a city integrated with its countryside:

“The problem of providing a proper home to fifteen thousand inhabitants of the caverns is not a construction problem to be solved within the urban framework”, commented Piccinato in presenting the Plan to the Fifth Urban Planning Conference, following up the statement of Mazzocchi Alemanni: “Here is the reason I insist on giving priority to the settlement problem. Here, quite clearly, is the connection I make between human settlement, land reclamation and land reform: ... the continuous presence of humans, the stable settlement on the site, or at the place of work”. [17: 10]

In this elaborate system of poles outside the city, also the internal structure of Matera came apart, maintaining compact only the fabric of the administrative city that arose between the nineteenth and twentieth centuries on the edge that winds and overlooks the steep slope of the *Gravina* [ravine] with the city in the rocks, and behind it, on the plateau, other hills surround it, and beyond the neighbourhoods that would be realized in this second phase: *Spine Bianche*, *Serra Venerdì* (L. Piccinato, L. Anversa, 1955-1957), and *Lanera* (M. Coppa, M. Fabbri).

Piccinato's design for the *Piano regolatore* for Matera incorporated a scheme developed with UNRRA-Casas and the Bradano Valley Consortium, almost as if to use the same diagram already designed in 1934 for the Agro of Sabaudia, but in a quite different context. On the one hand, a branched system in the countryside, formed by four rural villages and the two service centres. On the other hand, inside the city, the system of the new residential districts, as *parti di città formalmente compiute* (using Aymonino's words; lit. “urban fragments formally accomplished”), in addition to an urban centre innovated by an ancient road system with a long territorial extension. The two emblematic examples of this architectural work, offering real case studies, would therefore be *La Martella* (L. Quaroni, L. Agati, F. Gorio, P.M. Lugli, and M. Valori, 1949-1954) and the *Spine Bianche* district (C. Aymonino, C. Chiarini, G. De Carlo, M. Fiorentino, M. Girelli, F. Gorio, S. Lenci, M. Ottolenghi, V. Sangirardi, H. Selem, and M.

Valori, 1955-1959).

Two works of architecture to be looked at again today, beyond the more or less agonized transformations, still for a potential role (and a possible restoration in the built forms) to be found among the functions of today's agrarian economics. From the point of view of the architectural design, the relationship with the past experiences would appear to be less clear, and a comparison with the works of architecture at Sabaudia by Piccinato, for example, seem too stereometrically defined, too balanced and proportionate.

The turning point between the experiences before and after the WWII, inside the Italian Rationalism architectural debate is represented by the research of Pagano about rural architecture, presented at the *Triennale* in 1936. A sophisticated balance between rural tradition and morality, along essential lines of pure geometry and into the materiality of the construction, which stand out in new dimensions of the landscape. A white architecture, broken down in a light with strong contrasts and seemingly colourless [18]⁵.

The experiences of the post-war period, indeed, proceeded by fragments and were even inspired by ideas of construction technique, also starting from Mario Ridolfi's 1946 *Manuale dell'architetto*, which was recognized as the expressive starting point of new Italian architecture [20, 21]. Other important fragments were the diagrams of the aggregation of rural houses which Ridolfi began to study for the CNR and UNRRA-Casas in 1949, and which had an important antecedent in a 1940 project for a rural settlement type in the Pontine Marshes.

In this case, the stereometric integrity of Piccinato's solid volumes begins to break up and dissolve in search of minimal, formal and functional units, corresponding to the fragmentation of the crofts that the agrarian economy still supported pre-war. In fact, *La Martella* would be the first of this aggregated type of settlement, and its architecture would continue to re-compose the fragments that little by little were being studied and analysed in a combinatory way and provided its premises.

The figuration of the masonry textures, the layers of roofing and the shadows of the volumes, the exposed frameworks in concrete, the nodes of the window and door frames would hereinafter become the language of craftsmanship which on the compositional plan regenerated the aesthetic relationship on the plane of an abstract-concrete dialectic, as the overcoming of pure rationalism. A new language that suddenly affected the whole of Italian architecture arose in those years, almost simultaneously in many architects.

Morphologically, in addition to the long heritage of studies and experiences, *La Martella* was laid out starting from typological knowledge of the settlement tradition of the old villages of Lucania, like Grassano, formed by volumes under the light, a white city, brimming with life, just as the black and white photography of the most refined Italian cinematography was able to represent. The images published in *Casabella-Continuità* in 1959 [22] remained imprinted in our memories as a splendid and moving possibility, line by line, surface by surface, an image that today no longer exists, almost as if they were on the brink of a lost ruin. In the project, we can still decipher the autonomy of the slowly curved lines that form the plan and determine a cohesion in the forms, open and directly facing the slopes of the cultivated countryside.

Ultimately, what is significant is the episode recounted by Zevi on the opening day of *La Martella*, the first of November 1953, in the presence of the Italian Prime Minister

⁵ See in general the very seminal study on the critical-theoretical debate in architecture related to the political and technocratic relationship with the land reclamations season in Italy, [19].

De Gasperi, during the assignments to the first fifty families displaced from the *Sassi*, in an exalted tale with a description of the white facets of the constructions being compared to the architecture of the “neoplastic city of Piet Mondrian” [23: 55], expressly mentioning the title of the final chapter of Zevi’s *Poetica dell’architettura Neoplastica* of that same year:

The neoplastic city is dated, both in the schemes of Van Doesburg and in the evocations of Mondrian. But in that it proclaimed the end of the schism between architecture and urban planning and, by decomposing, reintegrates the internal and external spaces, it lives in the contemporary *urbatettonico* commitment and constitutes an essential operating time of it [24: 207].

Might this vision not represent the real substance of the secret of *La Martella*? A sophisticated balance between rural tradition – mindful of the research of Pagano into rural architecture in 1936 – and morally traceable to its essential lines of pure geometry, which stand out in new dimensions of the landscape, which is waiting for a new agriculture.

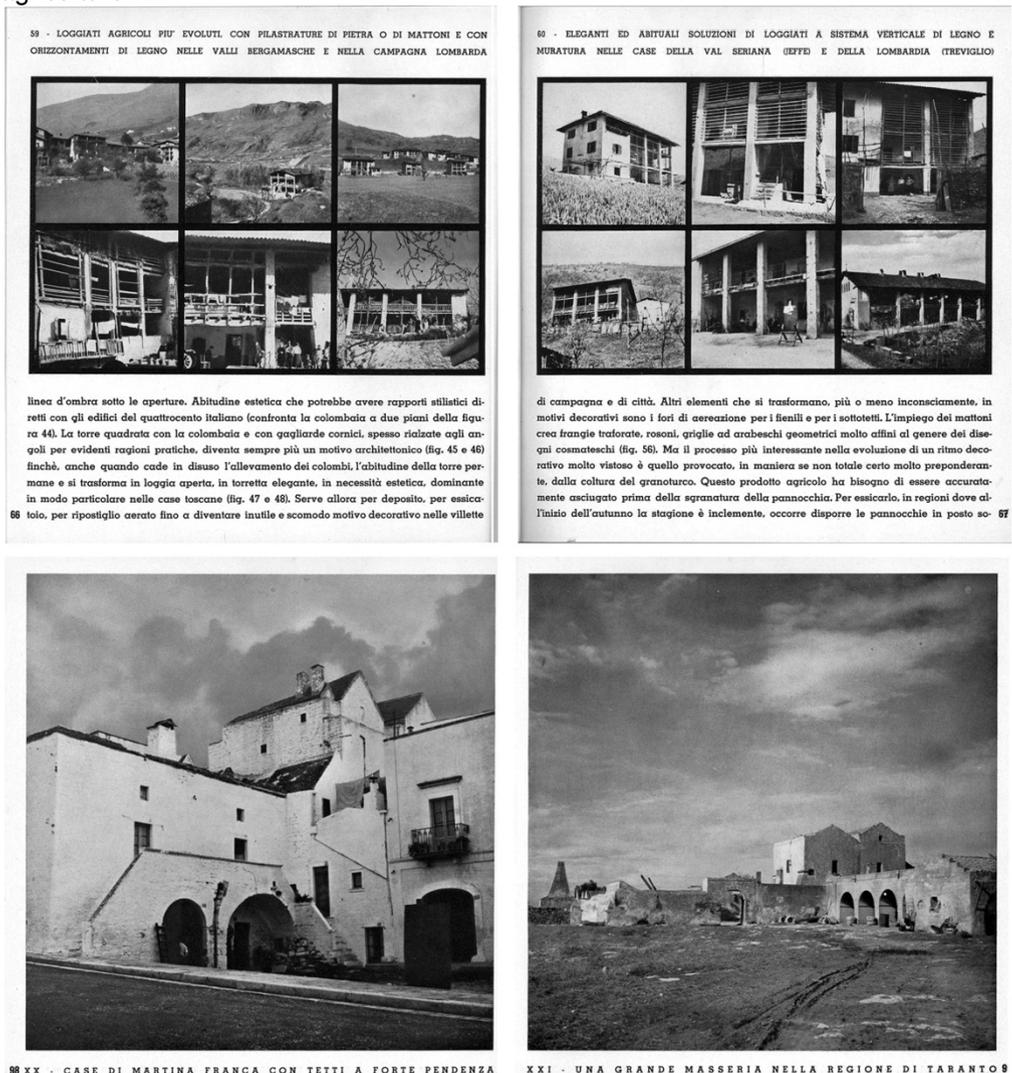


Fig. 10. Double pages of *Architettura rurale italiana*, 1936. Source: [18].

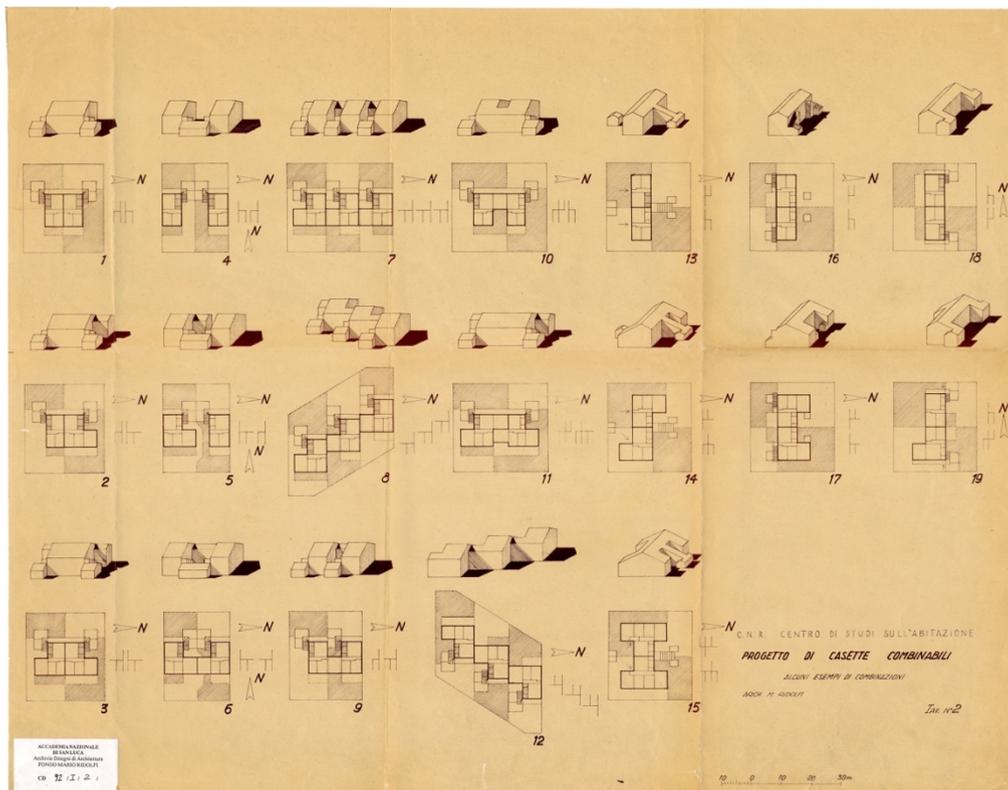


Fig. 11. M. Ridolfi, CNR, UNRRA-Casas. Project for modular rural houses, 1949.
Source: Archivio Accademia Nazionale di San Luca, Roma.

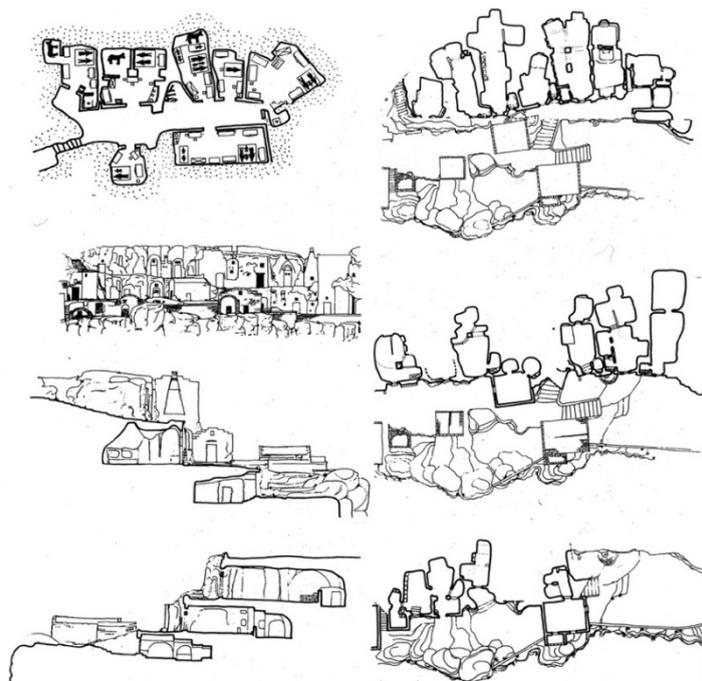


Figure 12. Architectural survey of the Sassi of Matera. Source: [16].



Figure 13. L. Piccinato, UNRRA-Casas, Bradano Valley Reclamation Consortium. *Plan of the Matera area, 1953-1954.* Source: Archivio Luigi Piccinato, Rome.

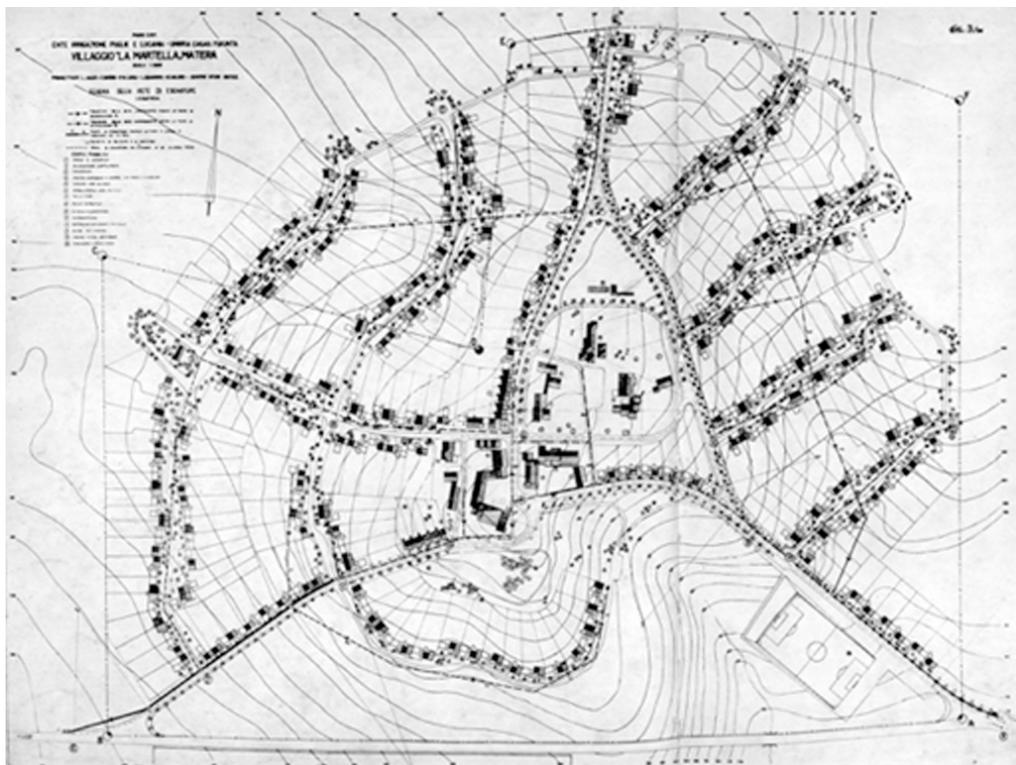


Fig. 14. L. Quaroni, L. Agati, F. Gorio, P. M. Lugli, M. Valori, *La Martella village, Matera, 1949-1954.* Project plan. Source: [25].

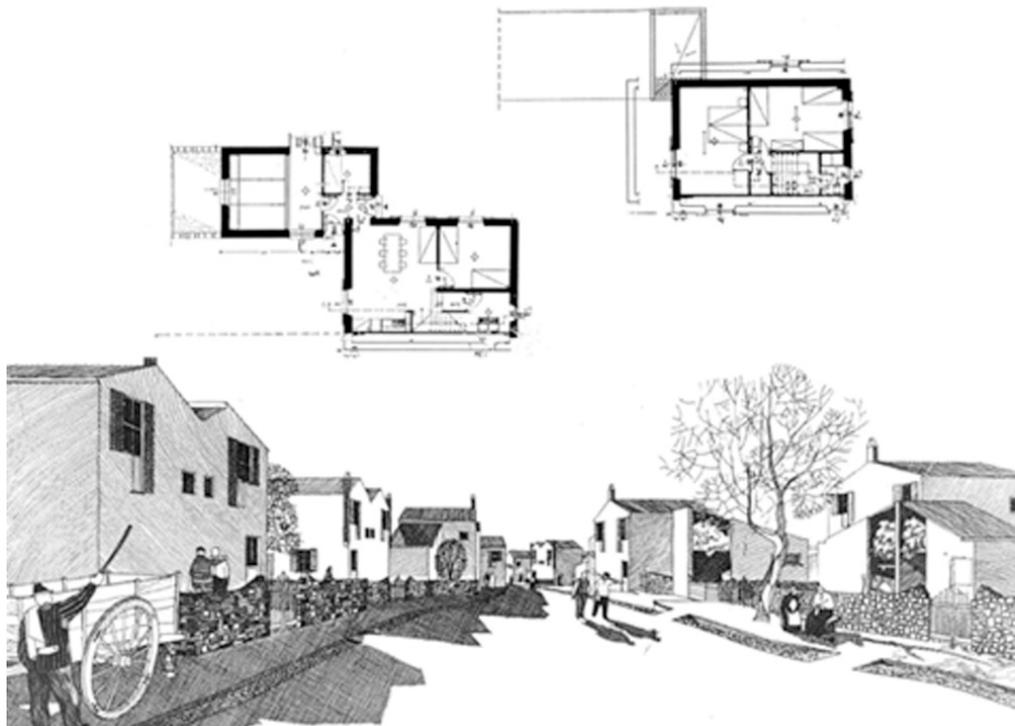
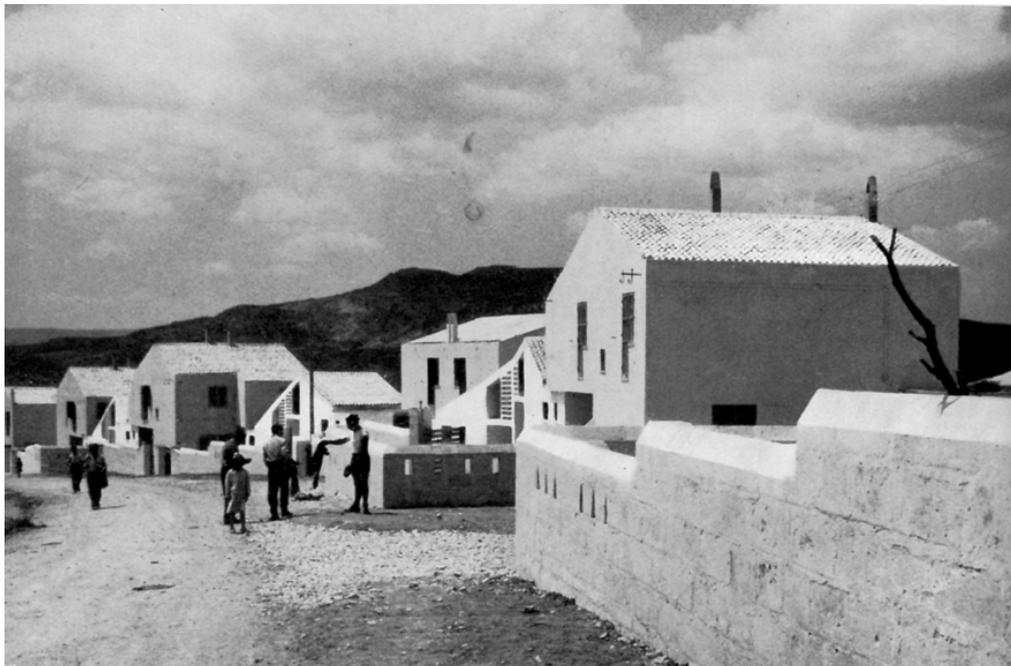


Fig. 15 and 16. Aerial view, perspective drawing and typical house plans of *La Martella*. Source: [13].



Figs. 17 and 18. Views of *La Martella*. Source: [26].

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experience of protracted reconstruction, in G. Rakowitz and C. Torricelli (eds.). *Ricostruzione Inventario Progetto / Reconstruction Inventory Project*, Padova, Il Poligrafo: 74-89, 163-168.

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Short Resumes

Luca Monica PhD, is Associate Professor of Architectural and Urban Composition at Politecnico di Milano. He teaches also at the Doctorate school at Università IUAV di Venezia. Among the research and publishing activity: editor of *Zodiac* (from 1989 to 2001); *La critica operativa e l'architettura* (2003); *Gallaratese Corviale Zen* (2008); *Per l'ampliamento dell'Accademia di Brera* (2015).

Luca Bergamaschi is a freelance architect and PhD student at Università IUAV di Venezia. He graduated at Politecnico di Milano in 2014 with a thesis on the recovery of the abandoned railway area of Milano Farini. Since 2015, he has been collaborating as teaching assistant in several Architectural Design Studio at Politecnico di Milano.

References

1. DI SANDRO, G. 2015. *Arrigo Serpieri: tra scienza e praticità di risultati. Dall'economia agraria alla bonifica integrale per lo sviluppo del Paese [Arrigo Serpieri: between science and practicality of results. From agrarian economy to integral land reclamation for the development of the country]*, Milan, Franco Angeli. Transl. by authors.
2. CASTRONOVO, V. 1975. *Il problema della riforma agraria [The agrarian reform question]*. in *Storia d'Italia. La storia economica. Dall'unità a oggi. Da contadini a operai*, vol. 7, Turin, Einaudi, Torino: 30.
3. CATTANEO, C. 1847. *Su la proposta d'acquisto d'un latifondo per istituirvi un grande istituto agrario*, in C. Cattaneo. *Saggi di economia rurale [Essays on rural economy]*, Einaudi, Torino 1975: 65ff.
4. ZILIO, L. 2018. *Ermenegildo Zegna e l'imprenditoria piemontese: architettura, paesaggio, luoghi del lavoro*, Ph.D dissertation, Venice, Università IUAV.
5. ROSSI DORIA, M. 1961. *Seicentomila ettari irrigui*, in M. Rossi-Doria. *Scritti sul Mezzogiorno [Writings on Southern Italy]*, Einaudi, Torino 1985. Transl. by authors.
6. PICCINATO, L. 1934. *Il significato urbanistico di Sabaudia [The urbanistic meaning of Sabaudia]*, *Urbanistica*, vol. 3, n° 1: 10-24 [repr. in MALUSARDI, F. 1993. *Luigi Piccinato e l'urbanistica moderna*, Rome, Officina Edizioni: 355-363].
7. PICCINATO, L. (1943) 1978. *Urbanistica medievale*, Bari, Dedalo.
8. PICCINATO, L. 1941. “Origini dello schema urbano circolare nel medioevo”, *Palladio*, vol. 5, n° 3: 120-125.
9. PICCINATO, L. 1954. “Comunità della campagna romana”, *Urbanistica*, vol. 23, n° 14: 11-25.
10. GHIRARDO, D.Y.; FORSTER, K. 1985. “I modelli delle città di fondazione in epoca fascista”, in C. de Seta (ed.). *Insedimenti e territorio*, (Storia d'Italia. Annali: 8), Turin, Einaudi: 635-667.

11. MARIANI, R. 1993. *Sabaudia città del principe*, in MALUSARDI, F., *Op. cit.*: 470.
12. CIUCCI, G. 2012. *Le Corbusier e Adriano Olivetti negli anni Trenta*, in M. Talamana (ed.). *L'Italia di Le Corbusier*, Rome – Milan, MAXXI – Electa: 262-276.
13. TAFURI, M. 1964. *Ludovico Quaroni e lo sviluppo dell'architettura moderna in Italia* [*Ludovico Quaroni and the development of modern architecture in Italy*], Comunità, Milano. Transl. by authors.
14. "Sabaudia dall'aeroplano" (1935). *Architettura*, vol. 14, n° 11: 643-645.
15. PICCINATO, L. 1971. *Relazione al Piano regolatore di Sabaudia*, now in MALUSARDI, F., *Op. cit.*: 369ff.
16. PICCINATO, L. 1955. *Matera: i Sassi i nuovi borghi e il Piano regolatore*, *Urbanistica*, vol. 24, n° 15-16: 143-151 [repr. in MALUSARDI, F., *Op. cit.*, p. 401ff].
17. AYMONINO, C. 1959. "Matera: mito e realtà" [*Matera: myth and reality*], *Casabella-Continuità*, n° 231. Transl. by authors.
18. PAGANO, G., DANIEL, G. 1936. *Architettura Rurale Italiana* [*Italian rural architecture*], Quaderni della Triennale, Milan, Hoepli.
19. DE SETA, C. (1976) 2008 "Preface", in C. De Seta (ed.). *Giuseppe Pagano. Architettura e città durante il fascismo* [*Giuseppe Pagano. Architecture and city during Fascism*], Milan, Jaca Book.
20. RIDOLFI, M. 1946. "Il 'Manuale dell'architetto' " [*The "Architect's handbook"*], *Metron*, n° 8.
21. MURATORE, G. 1974. "L'esperienza del Manuale", *Controspazio* (special issue *Architettura di Mario Ridolfi*), n° 1: 82-90.
22. *Casabella-Continuità* (special issue *Inchieste sul Mezzogiorno*), n° 231, 1959: 31ff.
23. GRECO, A.; NICOLINI, R.; GHIA, M.-C.; et al. (eds.) 2008. *Le epifanie di Proteo: Marcello Fabbri per Controspazio, 1983-2005*, Rome, Gangemi.
24. ZEVI, B. (1953) 1974. *Poetica dell'architettura neoplastica: il linguaggio della scomposizione quadridimensionale*, Turin, Einaudi. Transl. by authors.
25. OLIVETTI, A. 1952. *Esperienze urbanistiche in Italia*, Rome, Istituto Nazionale di Urbanistica.
26. *Casabella-Continuità* (1954). n° 200.