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Inhabit according to nature. Two paradigms of Southern Italy rural architecture for biocompatible design

The contribute aims to verify whether and how two “self-sufficient” settlements models, characteristic of the rural architecture of Southern Italy, and long obsolete, can offer cause for reflection and stimulation for a return to settlement forms more integrated with natural habitats.

The first of the two models is the *stazzo*, a temporary settlement, typical of transhumance, equipped with all the necessary components for permanence in an isolated place and closely connected to the presence of natural elements (woods, pastures, watercourses).

The second model is the *masseria*, in which there is the presence of spaces intended for different functions typical of urban settlements but circumscribed in a delimited, isolated space, completely immersed in a natural context.

Both models are, as already mentioned, “self-sufficient” as they provide for the possibility of individuals staying within them for a relatively long

period and do not need ancillary settlement structures; at the same time, however, they are completely dependent on the natural elements that surround them and guarantee their survival. The analysis we propose proceeds from the survey of many *stazzi* and *masserie*; starting from the surveys, we proceeded with the study and graphic analysis of the ways in which the space is used.

The latter make it possible to relate the natural elements with the built ones and define settlement paradigms that can offer ideas for an eco-sustainable design in which nature and its elements can return to being key elements of the project.

INTRODUCTION

Among the housing structures characteristic of rural settlements in southern Italy, the *stazzo* and the *masseria* represent two extreme and opposite configurations in terms of size, typological and settlement complexity, and characteristics of the morphological and structural elements. Despite the evident differences, these two housing models share an inexorable and widespread condition of abandonment - regardless of the productive use of the surrounding territory - in favor of settlement forms that increasingly tend to conform to urban models. The crisis that is affecting high-density settlements, and the greater tendency towards lifestyles closer to natural rhythms and environments, allows us to consider many ideas offered by *inhabit according to nature* that was fully realized until a few decades ago in purely rural environments. Far from wanting to propose a return to forms of life and work organization linked to the past and certainly unfeasible, this article [1] aims to identify, in the extremely simple settlement model constituted by the *stazzo*, and in the more complex and articulated one represented by the *masseria*, ideas and references for a design that considers the continuous relationship with the natural elements and social interaction as two objectives for the construction of the environment of the future. The *stazzo* is a space intended for resting, a settlement linked to the practice of pastoralism, inside which the flocks are stationed and protected during the night. The internal organization provides for the presence of structures delegated to different functions such as the shepherd's shelter, production activities, agricultural processing, animal shelter, etc., located in one or more enclosures.

Localized according to simple but precise rules, which consider climatic conditions, needs related to animal and human welfare, such as the presence of water sources and areas favourable to grazing, the *stazzo* is frequented seasonally. The structures inside are of minimal size, built with materials found on site, such as stone, wood, earth and branches, elements always placed starting

from considerations on the natural conformation of the chosen site and relating to the morphology of the soil, the presence of large boulders and any existing structures.

The *masseria* consists of a system of several rustic buildings, closely related, intended for the management of the land annexed to them, the processing of agricultural products, the storage of foodstuffs, the shelter of livestock and the residence of those who work there. The term *masseria* has a plurality of meanings and indicates different types of aggregations.

Both types of settlements described - the *stazzo* and the *masseria* - are integrated into nature and characterize, respectively, the mountain landscape and the hill and plain landscape. In the case of the *stazzo* we focused on the complex system of settlements located on the eastern side of the Aspromonte, in a high-altitude territory between the municipalities of Samo and Africo. As regards the *masseria*, we have taken into consideration the larger ones located in the upper Ionian Cosenza area, isolated within the landscape of the large estate and almost always equipped with complex fortification and defense systems.

The case studies were investigated, following preliminary inspections, through the execution of surveys, designed and carried out according to the peculiar characteristics of the sites. The surveys were executed by use of laser scanner, terrestrial and aerial photogrammetry with UAVs. The graphic works produced allowed the realization of morphological-functional analyses, useful for identifying the settlement paradigms present for a possible use in design experiences.

The socio-economic changes that took place during the second half of the twentieth century brought with them a series of transformations that affected the relationship between man, home and the environment. The transition to increasingly complex lifestyles has marked the abandonment of this type of architecture which can represent new paradigms for sustainable design (especially the *masseria*); the *stazzo*, positioned along paths once frequented exclusively by shepherds and today increasingly used by hikers, environmentalists

and nature lovers, are suitable to be key elements for integrated nature trails.

INHABITING MOUNTAIN ENVIRONMENTS: THE SHEPHERDS' SETTLEMENTS

Walking in Aspromonte, immersing yourself in landscapes characterized by geosites and rivers, it is possible to come across natural shelters, large boulders, spontaneous 'huts' created by the branching of vegetation and other elements attributable to primitive forms of living (Fig. 1). The presence of human in these highland areas is demonstrated by the persistence of signs of a culture still alive in the territory: pastoralism. The traces of frequentation in the Aspromonte hinterland are testified by material evidence that extends without interruption from prehistory to the present day. These places were shaped by shepherds who frequented them for a long time, almost ending in the seventies of the twentieth century.

The settlements are chronologically datable, due to their proven use, between the end of the nineteenth and twentieth centuries, they were probably built on previously frequented sites. These *stazzi* gave rise to a network of connections made up of paths due to transhumance, grazing obligations, and exchanges between shepherds during daily life. "Architecture, in the broadest sense of the term, is both a product and an instrument of social cohesion" [2].

The shepherds' places can be described as natural environments in the woods, in which there are signs of anthropization in dialogue with the surrounding environment - always connected, even when the presence of larger stable dwellings is reported - to the reference center, also object of these studies, Africo (RC). As part of a doctoral research, the structures and the paths connected to them were first documented. The identified sites are different, but due to abandonment and therefore the advance of vegetation, of hydrogeological instability phenomena, they are often inaccessible or camouflaged. Graphic documentation



Fig. 1 - Elements of the Aspromonte landscape. From left: pastoral settlement, dry stone shelter, a path in the rock, watering hole, detail of dry stone wall, dry stone enclosure, shepherd's shelter, dry stone hut, water source. Photographs by Lorella Pizzonia.

regarding the structures is non-existent, therefore at a methodological level two phases have been planned for their survey. The first concerns the exploratory survey operations with Unmanned Aerial Vehicle (UAV) for the identification of the structures or of the traces, in large portions of territory (Fig. 2). The second concerns the detailed survey operations from terrestrial photogrammetry or integrated with the aerial one, with respect to the individual structures.

The preserved elevated structures have allowed us to understand the most widespread configurations and to identify the existing settlements.

Starting from the presence of large boulders, the various components of the settlements have been identified. The most used shapes are the circle, the square and the rectangle (Fig.3). These geometric shapes refer to the *pagghiaru* and to the shepherd's shelter. The dialect denomination *pagghiaru* indicate a hut made of branches, straw, or dry stone, it was very widespread in the Calabrian building culture.

The spatial organization includes a single circular space in which there is only one opening to the outside, a niche for storing objects, the fireplace in the centre and the sleeping space at the back.



Fig. 2 - Site plan. Pastoral settlement of *Cannuli*, frequented by the shepherds of Africo in the territorial extension of the municipality of Samo (RC). Textured mesh. Elab. by Lorella Pizzonia.

Regarding the shepherd's shelter, compared to those identified, those with a square or rectangular plan with one or maximum two rooms are indicated. All the structures are organized on one floor, except for a two-level dwelling, in the case of a richer and larger settlement. The structures are of minimal dimensions and therefore even the external spaces acted as an extension with the internal ones. It is this dimension of contact with nature that we want to bring out in consideration of the beneficial effects produced by forest bathing (FB), to understand these places as meditative spaces, "FB walks encourage participants to pay close attention to their surroundings using all their senses" (Subirana-Malaret et alii 2023, p. 2). The *stazzo* (Fig. 4) is also made up of enclosures of different sizes and materials, built according to the shepherd's needs, and a *terrata* (the dialect term refers to the use of earth) dedicated to sheltering the flocks, made up of a wooden structure and a grassy covering.

The documentation of these architectures to be considered biocompatible is fundamental if we also consider the changes that have occurred and the use of materials that are increasingly harmful to our environment.

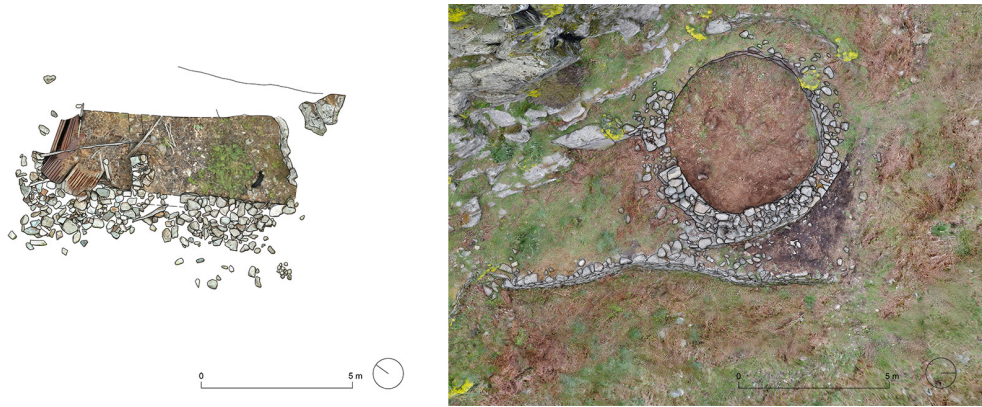


Fig. 3 - Site plan. Pastoral settlement of Cannuli, On the left the shepherd's shelter and on the right the dry-stone hut. Textured mesh. Elab. by Lorella Pizzonia.



Fig. 4 - Site plan. Pastoral settlement of Cannuli: the shepherd's shelter (1), traces of the dry-stone enclosure (2), traces of terrata (3). Textured mesh. Elab. by Lorella Pizzonia.

RETHINKING PASTORAL PATHS

The route indicates the movement from one place to another. If we think about the drawing of the paths, the mind sends us back to a map, a geographical chart, something traced, allowing us to understand how long the route is, how long it takes to travel, which places to stop, whether or not there is the possibility of stopping or getting refreshments. All this information can be studied before or during based on the support on which it is viewed.

Walking along a path it will seem natural to follow the path itself imprinted in the ground as in the artwork, *A Line Made by Walking* from 1967 by Richard Long. "In Long [...] walking is an action that engraves the place. It is an act that draws a figure on the ground and can therefore be reported on the cartographic representation. But the procedure can be used in reverse, the paper can function as a support on which to draw figures to be walked later" [3].

The aim is to retrace a story, experience the environment that surrounds us and create a sensorial connection with archetypal architectures, carrying out an experiment that concerns both the natural environment and human's interaction with it. We proceeded to track the GPS routes to record the steps, so that others could retrace them. In this way, the paths that connect one or more pastoral settlements were recorded.

These are hiking routes, which can be covered on average in about two hours.

Visual elements such as peaks constitute certain reference points for mountain visitors, visible even from a long distance. Among these, Monte Pioca, also known as Monte Iofri, and further upstream Punta Perre and Puntone Galera stand out in particular and they are naturalistic points of impact. The routes were systematized in a geographic information system (GIS) software (Fig. 5) with the aim of having a comprehensive map, relating to the structures surveyed and the paths traced.

The routes have made it possible to connect the

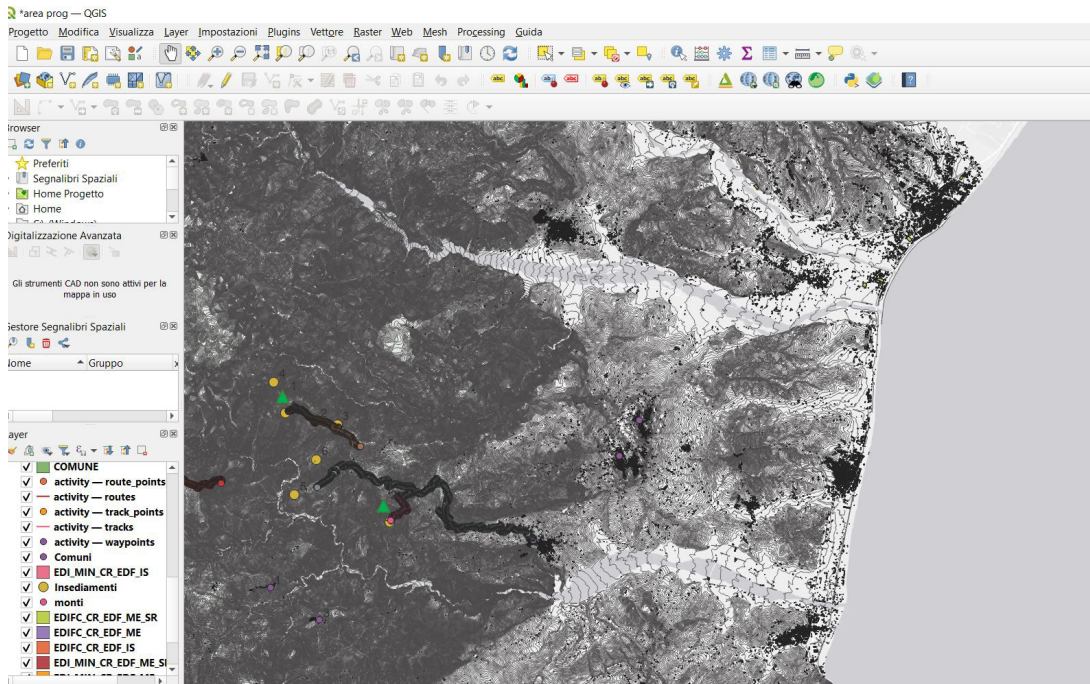


Fig. 5 - Research area, GIS path development phase, in QGIS software. Elab. by Lorella Pizzonia.

settlements to the reference centre, today, together with other, abandoned neighbouring ones, to the current road system, to establish connections between two or more stazzi. Distances are perceived differently in a slow way, not considering means of transport and stress. The aim is to recover the dimension of time.

Not to return to a distant lifestyle but to immerse ourselves in paths capable of taking us to a primordial dimension, such as that of the natural environment.

This type of activity produces beneficial effects on health and at the same time leads us to have a greater awareness of the places, a knowledge and to build a story linked to the Aspromonte National Park that hosts them.

THE MASSERIA IN CALABRIA. CHARACTERISTICS, ELEMENTS, TYPOLOGY.

In southern Italy, the masseria represents a rural settlement characteristic of large farms, often associated with the latifundium, which fulfills various functions, the main ones of which are: housing, transformation and conservation of agricultural products, administration of the property, protection and administration of the territory. As Benito Spano points out in an essay that represents one of the main references on the subject, the term "masseria" has a great semantic breadth; in any case, it derives from the organization of the rural production structures of the early Middle Ages, which can therefore be traced back to a corporate structure based on feudalism.

(Spano 1970, p. 271).

A masseria, therefore, can assume very different dimensions and spatial organizations. Scattered or centralized dwellings, temporary or permanent, complex or elementary, arable land and pastures, agricultural enterprises and contracts can therefore be designated as "masseria", with a varied and significant confusion of terms even within the confines of the same dialectal domain (Spano 1970, p. 276).

Over time, and with an ever-greater organization of production activities, this diversity has attenuated, and the recurring models have become four (Spano 1970, p. 278) (Fig. 6):

- the elementary masseria, consisting of a linear or enclosed aggregation of minimal rooms for the shelter of flocks and shepherds;
- the unitary masseria, consisting of a large central building and a series of smaller buildings, attached to it;
- the courtyard masseria, with one or more large internal spaces enclosed by buildings with different functions and dimensions;
- the village-style masseria, in which a series of buildings are arranged around or next to a larger building, often with a closed courtyard and with all the attributes of a castle.

Here we refer to one of the many declinations of the term, the one that identifies a particular settlement system present in north-eastern Calabria, the area in which all the examples taken into consideration are located (Fig. 7).

The masseria, in Calabria, is the emblem of the latifundium and the cereal-breeding company, which established itself between the 16th and 18th centuries and became the center of management and coordination of agricultural production (Ruggiero 1987, p. 175). Unlike what happens with the same rural structures in Puglia and Sicily, which arise isolated and scattered in the countryside, in Calabria it is often located near inhabited centers and farmhouses (Milella 1992, p. 60). It consists of an organic system of several rural buildings, closely related even if not contiguous, intended for the management of the land annexed to them, for the storage and transformation of agricultural



Fig. 6 - Recurring models of masseria. Elementary: masseria Gonzales in Girifalco (CZ). Unitary: masseria Monisciano in Borgia (CZ). Courtyard: masseria S. Irene in Rossano (CS). Village: masseria Gallo in Castrovillari (CS). Photographs by Daniela Sidari (left), Ida Hauner (top right), Daniele Colistra (bottom right).

products, for the shelter of livestock and for the residence of those who work there. In the Calabrian masseria, there is an aggregation of archetypal elements common to the most typical settlement models of the Mediterranean area: the Roman domus, the Islamic dar, the castle, the monastery. From these models emerges the declination of two recurring elements: the enclosure and the courtyard. At least one of these two elements is always present. Often there are both. It must be reiterated, however, that the settlement model of the masseria, in Calabria as in the rest of Southern Italy, went into crisis well before the

abolition of feudalism and the consequent disintegration of the large estates [Alleruzzo di Maggio & al. 1973, p. 262]. Some have become modern companies and, therefore, radically transformed and adapted; others have been split up and disintegrated; some (a few) maintain traditional functions; many have been abandoned [Valussi 1978, p. 188]. With reference to the specific context of Calabria, a masseria is:

- located in a rural context;
- aimed at managing an agricultural land annexed to it;

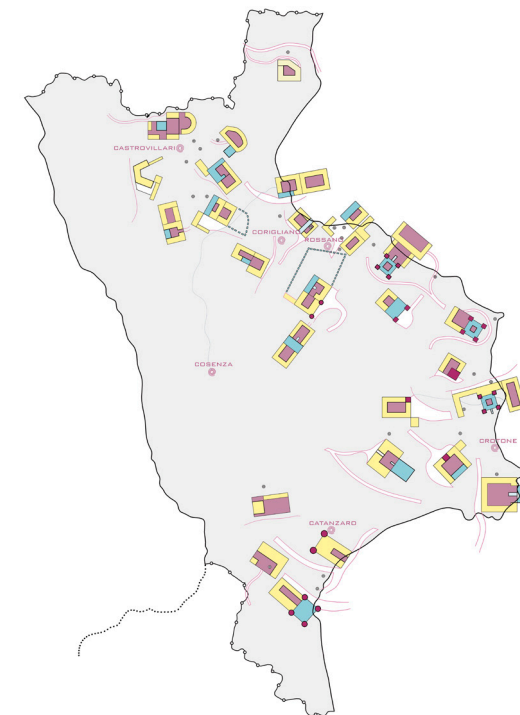


Fig. 7 - Graphic scheme of the masseria examined on the Ionian side of northern Calabria. Drawing by Daniela Chilà.

- characterized by a mixed intended use (residence, storage, animal shelter, socialization, processing and storage of agri-food products, worship, etc.). In particular, there must also be a clear differentiation between the homes of the individuals who reside there more or less permanently, according to a distribution linked to hierarchy and wealth (owner, farmer, permanent workers, seasonal workers, etc.);
- equipped with an internal closed space in which, in cases of emergency, it is possible to carry out activities commonly performed outside. For this reason, the enclosure or courtyard are always

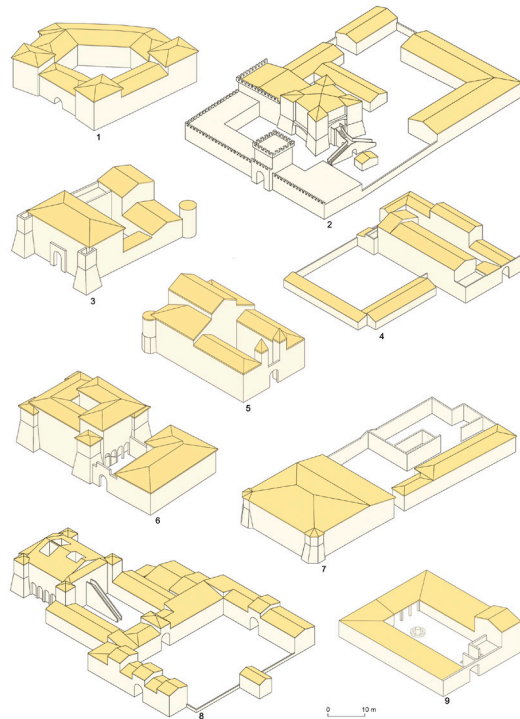


Fig. 8 - Volumetric models of the fortress-masseria: Solano (1), Torre di Fasana (2), Venneri (3), Torre Pinta (4), Monisciano (5), Sabatini (6), Pepe (7), Messanelli (8), Massara (9). Drawing by Antonella Riotto.

present.

Based on this definition, in Calabria it is possible to identify three recurring typological systems: the fortress-masseria, the courtyard-masseria and the blocks-masseria.

The fortress-masseria is made up of a building that responds to a purely defensive typological model, or that develops by incorporating within it a pre-existing building created with specific defensive purposes: a castle, a tower, a fortified lodge. In most cases, a fortified building volume is flanked (or arranged around) by other buildings,

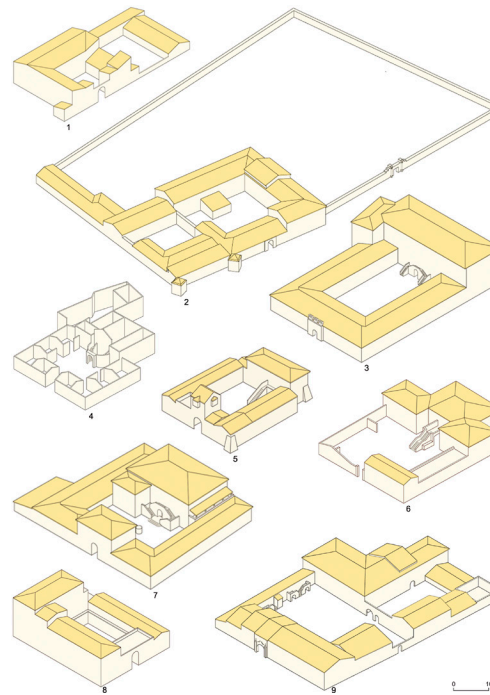


Fig. 9 - Volumetric models of the courtyard-masseria: Petruzzelli (1), Pantaleo (2), Malvitano (3), Caresi (4), Trocino (5), Forgiano (6), Giamigliano (7), Casello Romano (8), S. Irene (9). Drawing by Antonella Riotto.

more or less equipped with defensive structures (Fig. 8).

The courtyard-masseria responds to the classic typological model in which a continuous volume circumscribes one or more internal spaces of predominantly regular shape. In some cases these are structures built according to a unitary and formally completed design; other times, the whole is generated by the sum of several elements (often built in different eras) but which, as a whole, generate a homogeneous architectural space, or the farmhouse is made up of a double courtyard

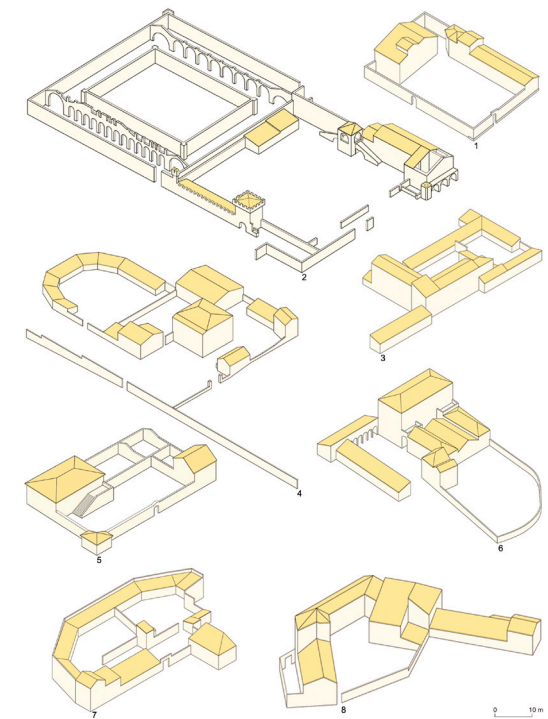


Fig. 10 - Volumetric models of the blocks-masseria: Migliuso (1), S. Mauro (2), Camporota (3), Varcasia (4), Gonzales (5), Gallo (6), Parapugna (7), Tamburi (8). Drawing by Antonella Riotto.

building from which a boundary wall branches off, enclosing a large portion of land (Fig. 9).

The blocks-masseria is formed by the aggregation of different elements, not always responding to a complete design but able to generate, thanks to their arrangement, a unitary closed space attributable to the notion of a courtyard. The courtyard arises from the presence of a linear element, the fence, or from the aggregation of different building volumes aligned to the perimeter wall (Fig. 10). It is worth noting that in Calabria the oldest masseria are always fortified. However, starting from

the 19th century, these structures have adapted to the new systems of control and defense of the property and, consequently, many of them have transformed some morpho-typological elements: for example, demolishing the fence or opening large openings on the facade (Colistra & Mediatì 2011, p. 16).

Some of the many characteristics of the Calabrian masseria are particularly significant in relation to the theme of this study. These building complexes, in fact:

- are substantially unitary systems from a typological point of view, despite the complexity of the constituent elements - even autonomous ones - that constitute them (Fig. 11a);
- represent elements of formal and constructive quality with respect to the context in which they are inserted, configuring themselves as architectural "emergencies" (Fig. 11b);
- are in symbiosis with the surrounding productive territory (fief, barony, large estate) not only from a functional and landscape point of view (Fig. 11c);
- allow us to hierarchically distinguish the constituent parts and, therefore, to identify a system of formal, typological and constructive values (Fig. 11d);
- are functionally self-sufficient and, therefore, respond to the concept of a minimal organism, regardless of the size and complexity of the settlement (Fig. 11e);
- have spaces and structures made available to the surrounding rural population, such as the farmyard or private churches open to external worship (De Mattia & Zaccaria 1999, p. 25) (Fig. 11f).

These characteristics, as we will see in the next paragraph, are particularly relevant as a reference for a desirable process of regeneration of settlement habitats (not only those located in a rural context but also those that fall within more intensely urbanized contexts) according to principles that put the natural environment at the center in the broadest sense of the term, enhance interpersonal relationships and stimulate social interaction.



Fig. 11 - Top: masseria Sabatini in Cirò (KR), masseria Torre di Fasana in Strongoli (KR). Center: masseria Giamiglione in Crotona, masseria S. Mauro in Corigliano (CS). Bottom: masseria Solano in Montegiordano (CS), masseria Messanelli in Crosia (CS). Photographs by Alessandra Chemollo.



Fig. 12 -The hierarchical succession of the courts in masseria Messanelli in Crosia (CS). The internal court is reserved for the barons of Mandatoriccio; the intermediate one for the permanent workers; the outer one, with the large threshing floor and the chapel, for the community. Drawing by Domenico Mediatì.

BUILDING ACCORDING TO NATURE. THE MASSERIA AS A REFERENCE FOR DESIGN

Living in a natural environment has always been associated with individual well-being. In Roman times, the wealthier classes moved to rustic villas as soon as possible; since the first industrialization, the suburbs of European cities have been surrounded by suburban villas, equipped with large private parks. In more recent times, the benefits brought by green spaces around and inside the living spaces have been scientifically analyzed, together with those deriving from physical activity and socialization actions with other individuals (Dadvand & al., 2016). The greenery surrounding the residences, the presence of green spaces near the home and all the activities related to Forest Therapy have proven to be particularly effective

in the prevention and treatment of pathologies linked to the characteristics of the lifestyle of the contemporary city: stress, depression, anxiety, relational problems, immune deficiencies, obesity, heart, lung and liver diseases. (foresttherapyhub.com/forest-therapy-benefits/). Furthermore, the typological and constructive characteristics of the Calabrian masseria seem to respond to all the cardinal principles of bioclimatic architecture. These buildings, in fact:

- are based on almost complete energy self-sufficiency;
- use exclusively materials found on site and, therefore, fully comply with the short supply chain principle;
- are characterized by a rationalist approach in the choice of shape, layout and size of the spaces (Fig. 12);

- use passive (albeit rudimentary) thermal mitigation strategies (stables under the houses, granaries in the attics, amphorae in the vaulted structures, etc.) (Fig. 13);
- arrange the rooms of the building and the windows in a way that perfectly adheres to the principles of correct sunlight exposure of the rooms, air circulation and protection from prevailing winds;
- often have trees and deciduous plant screening at the façades most exposed to the sun's rays;
- optimize the use of larger external and internal spaces, providing for the performance of different functions within them;
- promote, thanks to the presence of spaces for common activities, the interaction between individuals belonging to different social classes, ages and, more generally, the integration of experiences and knowledge, guaranteeing the strengthening of the idea of community and common good, of cultural identity and of belonging to the place (Fig. 14);
- characterise the hilly, plain and mountainous landscape, offering a visual reference and, in the past, protection, the possibility of stopping and refreshment, and opportunities for trade and exchange.



Fig. 13 - . Vaulted structure lightened and insulated with hollow bricks in a building of masseria Forgiano in Isola Capo Rizzuto (KR). Photograph by Alessandra Chemollo.



Fig. 14 - . The large collective space of the outer courtyard of masseria Messanelli in Crosia (CS). On the left the chapel, on the right the fortified wall of the building that overlooks the intermediate courtyard. Photograph by Alessandra Chemollo.

CONCLUSIONS

The two settlement models presented, are characterised by a symbiotic interaction with the natural environment. Both were for many years the fulcrum of the economy and sociality of the territory; then, for similar reasons, they entered into crisis. Nature always remains in the background, indeed in many cases it has acquired even more strength thanks to the regeneration processes resulting from the abandonment of rural areas. The principles of Forest Therapy need a corpus of theoretical references that are as structured and defined as possible. The stazzo and the masseria

can suggest some, in particular with regard to the adaptation of the human being to the environment and to natural living spaces and the revaluation of interpersonal relationships and social cohesion. Studying these settlements in their peculiarities, identifying their quality elements for the needs of a new living according to nature, inserting them into visiting itineraries and adapting them to the new needs of living can represent a good practice to reconsider the countless models of rural housing that the great variety of the Italian landscape offers us and to enrich the corpus of references of a discipline - Forest Therapy - that will acquire ever greater importance in the near future.

NOTE

[1] The contribution is the result of the joint research work of the authors. In particular, Daniele Colistra is the author of paragraphs "The Masseria in Calabria. Characteristics, elements, typology." and "Building according to nature. The masseria as a reference for design". Lorella Pizzonia is the author of the paragraphs "Inhabiting mountain environments: the shepherds' settlements" and "Rethinking pastoral paths".

[2] "L'architettura, nella più ampia accezione del termine, si colloca insieme come prodotto e come strumento della coesione sociale" (Guidoni 1975, p. 23).

[3] "In Long [...] il camminare è un'azione che si incide sul luogo. È un atto che disegna una figura sul terreno e che quindi può essere riportato sulla rappresentazione cartografica. Ma il procedimento può essere utilizzato all'inverso, la carta può funzionare da supporto su cui disegnare figure da percorrere successivamente" (Careri, 2006, pag.112-114).

REFERENCES

Alleruzzo di Maggio, M.T. & Ilii (1973). *La casa rurale nella Sicilia orientale*. Firenze: Leo S. Olschki.

Careri, F. (2006). *Walkscapes*. Torino: Einaudi.

Colistra, D. & Mediati, D. (2011). *Masserie fortificate in Calabria*. Reggio Calabria: Iiriti editore.

Dadvand, P. & al. (2016). Green Spaces and General Health: Roles of Mental Health Status, Social Support, and Physical Activity. *Environment International*, 91, 161-167.

De Mattia, F. & Zaccaria, C. (1999). *La catalogazione del patrimonio edilizio pugliese. Le masserie del territorio campione di Conversano e Polignano*. Bari: Adriatica Editrice.

foresttherapyhub.com (accessed 5 September 2024)

Guidoni, E. (1975). *Architettura primitiva*. Milano: Electa.

Milella, O. (1992). *Torri e masserie nel "giardino mediterraneo"*. Roma: Gangemi.

Ruggiero, V. (1987). La Calabria silano-ionica. In Manzi, E., & Ruggiero, V. (Eds.), *La casa rurale nella Calabria*. Firenze: Leo S. Olschki.

Spano, B. (1970). La masseria meridionale. In Barbieri, G., & Gambi, L. (Eds.), *La casa rurale in Italia*. Firenze: Leo S. Olschki.

Subirana-Malaret, M., Miró, A., Camacho, A., Gesse, A. & McEwan, K. (2023). A Multi-Country Study Assessing the Mechanisms of Natural Elements and Sociodemographics behind the Impact of Forest Bathing on Well-Being. *Forests*, 14(904), 1-20. <https://doi.org/10.3390/f14050904>

Tommaselli, M. (1986). *Masserie fortificate del Materano*. Roma: De Luca.

Valussi, G. (1968). *La casa rurale nella Sicilia occidentale*. Firenze: Leo S. Olschki.