

De_Sign Environment Landscape City

a cura di Giulia Pellegrini

2019

Giulia Pellegrini, è professore associato di Disegno presso il Dipartimento Architettura e Design dAD e Vice Preside della Scuola Politecnica di Ingegneria e Architettura dell'Università degli Studi di Genova.

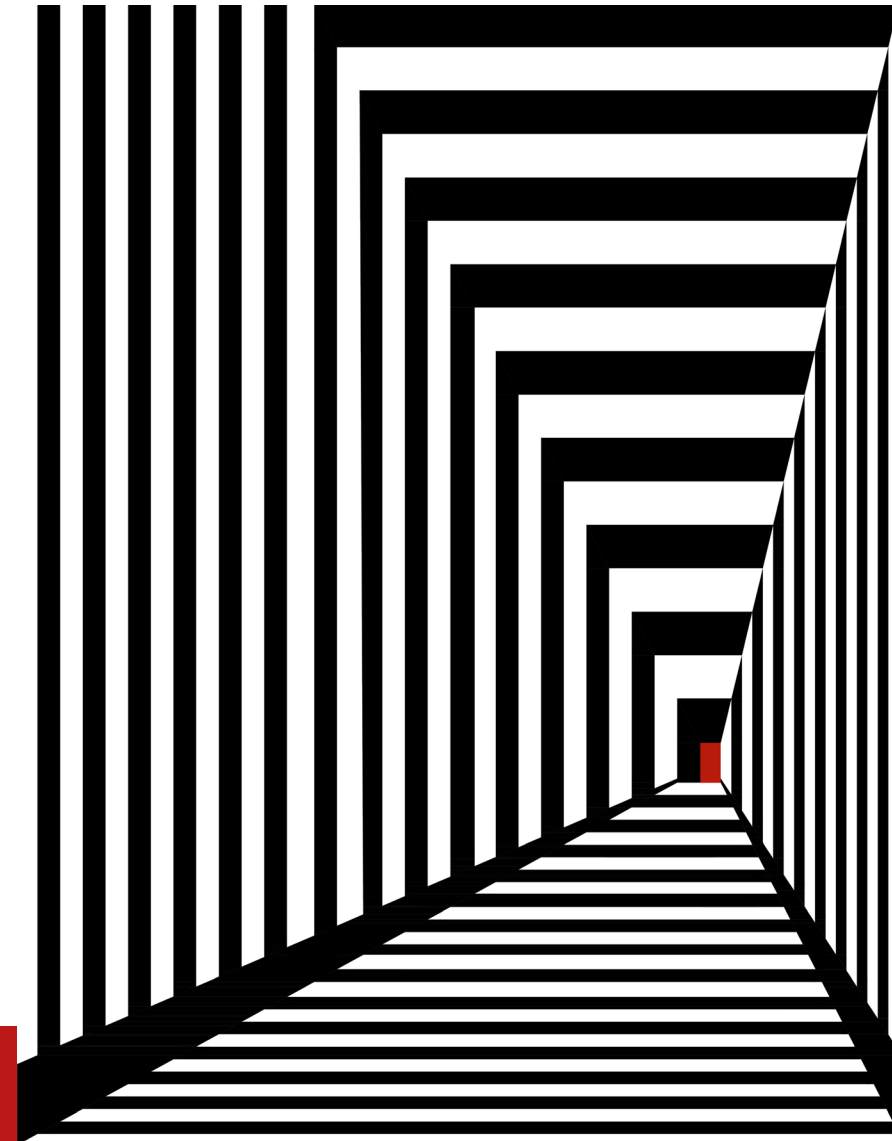
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Nell'ambito della V Giornata di Studi, interviene Chris Bangle, designer statunitense di fama mondiale con la Lectio Magistralis "Designer Notebook".

a cura di Giulia Pellegrini

De-Sign Environment Landscape City 2019
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a cura di

Giulia Pellegrini

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**Presents signs of a lost past.
Medieval bridges in the territory of Garfagnana, Lucca.
Memory of a heritage to be recovered.**

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Abstract

The project stems from the desire to promote and safeguard the medieval heritage of Tuscany, starting from the ancient itineraries and bridges that characterize a large part of the Luccan landscape. In order to do so, it is necessary to analyze and study these paths, something which is essential for their valorization and consequent recovery.

The territory involved in the research project is located between the Serchio river and its tributaries, precisely in the Municipalities of Fabbriche di Vergemoli, Galliciano, Molazzana and Castelnuovo di Garfagnana. It is a homogeneous system of internal areas characterized by a weak rural economy, located in a landscape, an environmental and archaeological-historical context, of considerable value. The first stage of the research that we carried out consisted of a surveying project, using 3D laser scanner digital technologies, for the realization of digital models in architectural scale and detail, tools which are necessary for subsequent critical analysis. The study has highlighted a widespread precariousness of the conditions of the medieval and sixteenth-century bridges and has allowed us to deepen our knowledge regarding those of San Michele, Castel Nuovo in Garfagnana, Pontecosì and several others.

The aim of the research is to set valid premises so that the territory, with its monumental heritage, can obtain a renewed visibility, and to start a recovery of the numerous bridges along the route, allowing residents and tourists to use the ancient roads of communication once again.

Abstract

Il progetto nasce dalla volontà di promuovere e salvaguardare il patrimonio medievale presente in Toscana, a partire dagli antichi itinerari e dai ponti che caratterizzano ampia parte del paesaggio lucchese. Per far questo si rende primariamente necessaria l'analisi e lo studio di tali percorsi, basi imprescindibili per la loro valorizzazione e il conseguente recupero.

Il territorio interessato è quello compreso tra il letto del fiume Serchio e dei suoi affluenti, precisamente nei Comuni di Fabbriche di Vergemoli, Galliciano, Molazzana e Castelnuovo di Garfagnana. Si tratta di un sistema omogeneo di aree interne ad economia debole di carattere rurale, che insistono però su un contesto ambientale, paesaggistico e storico-archeologico di rilevante pregio.

La prima fase lavorativa del progetto di rilievo ha visto l'impiego della tecnologia laser scanner 3D, per la realizzazione di modelli digitali in scala architettonica e di dettaglio, strumenti necessari alla successiva analisi critica. Lo studio ha evidenziato una diffusa precarietà delle condizioni dei ponti medioevali e cinquecenteschi e ha permesso di approfondire la conoscenza su quelli di San Michele, Castel Nuovo in Garfagnana, Pontecosi e diversi altri.

Obiettivo della ricerca è porre valide premesse perché il territorio con il suo patrimonio monumentale possa ottenere rinnovata visibilità e che sia altresì avviato il recupero dei numerosi ponti presenti lungo l'itinerario, permettendo agli abitanti e ai turisti di tornare ad usufruire delle antiche vie di comunicazione.

Introduction

Tuscany is a veritable open-air museum: art cities alternate with ancient villages and mountains to a harmonious landscape, shaped by man, among plowed hills and rows of cypress trees. These are the reasons why UNESCO recognized seven wonders in the region as World Heritage Sites. Among the places listed, the most famous are certainly the historical center of Florence, that of Siena and Piazza dei Miracoli in Pisa, on which stands the famous Leaning Tower. And yet, with its gentle hills, even the Val d'Orcia is a World Heritage Site, along with two of the richest villages in the Terre di Siena: Pienza, built according to Renaissance principles and San Gimignano, the city of towers. A total of 12 Villas and 2 Medicean Gardens¹ complete the list. Among spectacular panoramas, buildings and architectures of great harmony, in the territory there are also smaller villages, perched on mountains and for this reason gradually abandoned with the passing of time. The marvel of Tuscany seems to reveal itself little by little, through testimonies of history, art and literature spread over the territory and largely preserved and maintained, enhancing the cultural heritage, the products of the land and more generally the landscape. But beyond the Terre di Siena, Val d'Orcia and Valdichiana the paths of the Garfagnana must also be remembered, home to less famous villages, set in splendid mountain vegetation. Starting from this macro-analysis, it is interesting to promote and protect the medieval heritage present in the region, also paying attention to the ancient routes and bridges that largely characterize the landscape. Studying and analyzing these paths is therefore necessary for their promotion and subsequent recovery.

¹The data were obtained from the Tuscany Region. Consult the website www.regionetoscana.it for further information.

Squeezed between the Apuane Alps and the Tuscan Emilian Apennines, the Garfagnana is an interesting historical and geographical area with numerous itineraries articulated between ancient villages and medieval castles. The valley of the Serchio river which runs through it is rich in parks and caves, and is also the only flat area in the context of the Apennines and the Apuane that surround it. The variety of environments and natural sites ensure that the Garfagnana represents an area of rare scenic beauty, and of particular importance for the variety of flora and fauna of the Apennines.

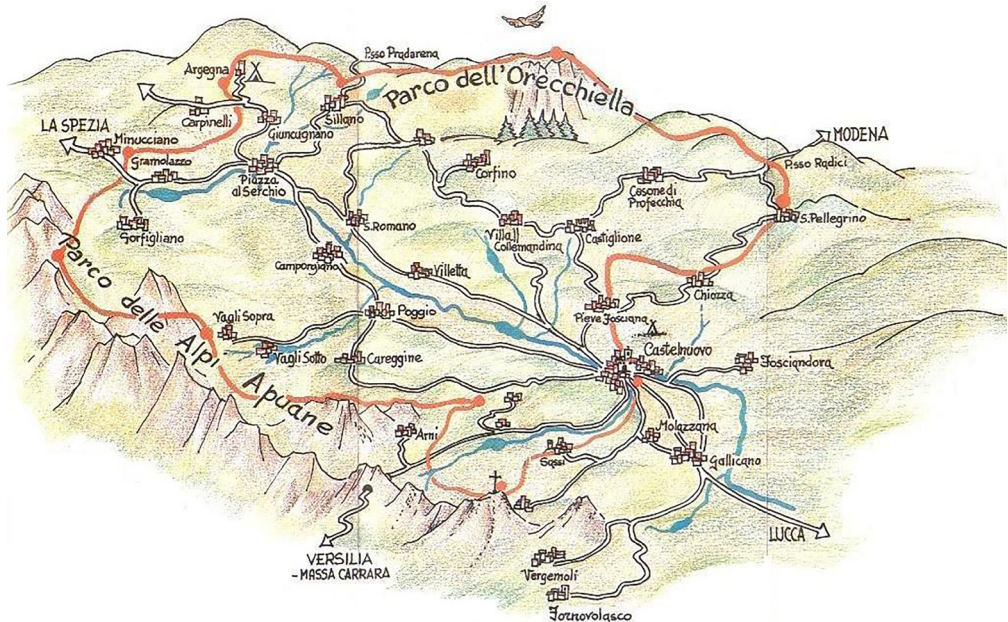


Fig.1 Representation of the territory of Garfagnana (image take from the website. <http://www.mulinoisola.it/garfagnana.html?lg=it>)

Among these mountains there is an ancient variant of the famous Via Francigena², the Via del Volto Santo, which from Pontremoli through the internal Lunigiana and then through the Garfagnana, touching villages and places of undeniable beauty allows you to reach Lucca in nine stages, on ancient muletracks. Il Volto Santo is the wooden reliquary statue which has been venerated in Lucca since 742: according to legend it was carved by Nicodemus who, with the help of Giuseppe D'Arimatea, deposited Christ in the sepulcher. Nicodemus sculpted just the body and fell asleep, but when he woke up he found that also the face had been carved. The story of how the Volto Santo reached its final location³, the cathedral of Lucca, allows us to understand why it has become an object of worship and above all the reason for the splitting of the Via Francigena in the Lunigiana Garfagnana stretch.

² The Via Francigena, also known as Franchigena, Francisca or Romea, is part of a set of roads, called Romee routes, which from France led pilgrims, crusaders and men of faith in general towards, Rome. From here they continued onwards to Puglia and embarked for the Holy Land, their final destination.

³ The Volto Santo is a wooden crucifix, which has been the object, of widespread veneration throughout Europe since the Middle Ages. It is currently preserved in San Martino's cathedral in Lucca; the great veneration for this relic has in fact eclipsed the patron saints of the city, San Martino and San Paolino and even given its name to the pilgrimage route that leads from Pontremoli to Lucca. Legend has it that the wooden face of the Messiah, carved in a miraculous way, had been embarked on a ship without a crew, free to sail at all winds, which finally arrived in the Tyrrhenian Sea, in front of the port of Luni. Here, the bishop of Lucca, Giovanni I, arrived after being warned by a dream of the presence of the Volto Santo on the ship, contended it against the people of Luni, and finally obtained it thanks to the appearance of some divine signs. (Guidi Nino, Verrini Oreste, La Via del Volto Santo. A piedi in Lunigiana e Garfagnana, Firenze, Le Lettere, 2015).

Following this new itinerary, in fact, the pilgrims departed from the usual seafront route, where the marshes abounded with the consequent risk of contracting diseases and moreover protected themselves from the brigands, who did not go as far as the Apennine trails. Studying the history of this pilgrimage makes it possible to know, step by step, the places that travelers used to visit and also it allows to identify the shelters, or more often the remains of these, where the devotees rested.



Fig.2 Map identifying the path of the Via Francigena and the way of the Volto Santo. At the top right the relic of the Volto Santo placed inside the Duomo of Lucca. (image taken from the website. <http://blog.zingarate.com/luccadascoprire/cosa-vedere-a-lucca/>)

The digital survey project

The territory involved in the project lies between the Serchio river and its tributaries, precisely in the Municipalities of Fabbriche di Vergemoli, Galliciano, Molazzana and Castelnuovo di Garfagnana. It is a homogeneous system of internal areas with a weak economy of a rural nature, which is however located in an environmental, landscape and archaeological-historical context of considerable value.



Fig.3 To the left a view of Fabbriche di Vergemoli. Water plays a leading role in the territory of Fabbriche di Vergemoli. It feeds the flow of rivers and since the beginning of the 20th century it produces the necessary energy for ironworks, mills and paper mills. Here some crafts survive, elsewhere forgotten, like the blacksmith of Gragliana, who uses an ancient hammer powered by the water or the cooper of Focchia, who continues skilfully building chestnut vats and barrels. Of considerable archaeological importance are also the caves present in the territory: the Grotta del Vento, a system of tunnels that owes its name to the currents that blow through its limestone corridors, or the Grotta di Castelvenere. To the right a view of Gallicano. It is said that Gallicano, a small village on the Volto Santo road, was named after the legionnaire Cornelio Gallicano, who received this land by the Romans as a reward for his feats. A rivalry started between Lucca and the dukes of Modena, the Este, to obtain control over Gallicano. for commercial reasons: the importance of hemp crops and weaving, as well as the fishing activities along the river "Turrite".

Applications and scientific results, perfected over years of experience by the LandscapeSurvey & Design Joint Laboratory of the University of Florence and the LRA Laboratory of Survey of the Department of Architecture of the same university, have refined a system of advanced technologies in the survey field for the digital documentation of the architectural and archaeological heritage. The project, concerning the digital survey of the medieval bridges of: Fabbriche di Vergemoli, Molazzana, Fiattono, Pontecosì, Castelnuovo, Castiglioni, Verrucole, Poggi and San Michele, as well as of the church of Rocca Soraggio and the ruins of the ancient hospice of San Nicolao di Tea, was conducted by the research group of the Department of Architecture of the University of Florence and has been ongoing since 2018. The digital survey campaigns, held from June to September, have been developed through on site workshops carried out for teaching and research purposes. During the campaign's students were able to experiment, together with professors and researchers, the digital survey technologies applied to archaeological surveying, in particular working with 3D laser scanner tools and with photogrammetric survey techniques.

The data of point clouds, with high metric reliability, coming from the processing of laser scans, together with the photographic shots, have allowed the start of a second phase of computerized post-production, still to be completed. In this phase, through two-dimensional representation (elevations, plans and sections in architectural scale and detail), a critical analysis of the studied elements was made possible and a widespread precariousness of the conditions of the evaluated medieval and sixteenth-century bridges was highlighted.

The data produced so far will constitute the documentary basis for the conservation and preservation of these architectures, as well as for their future enhancement: the digital documentation of the heritage allows the acquisition of further and more precise knowledge of the structures and materials used in their construction, as well as allowing a better understanding through the creation of three-dimensional models. At the end of the work it will also be possible to use information to enhance the routes from the point of view of tourism, thus achieving one of the objectives set at the beginning of the project, in other words to establish valid premises so that the territory with its monumental heritage can obtain renewed visibility. The documentary corpus that will be available will include digital, photographic, photogrammetric and direct graphical material (live sketches) useful for the start of a possible recovery of the numerous bridges present along the itinerary. In consideration of what has been said in the introduction, this recovery would be interesting not only from the point of view of the monuments, but also from that of the routes, in the perspective of a renewed use of the old communication routes, for the benefit of the inhabitants and the tourism economy of these places.

The analysis of San Michele's bridge

San Michele is a small district in the municipality of Piazza al Serchio, in Garfagnana (Lucca), perched on a knoll between Piazza al Serchio and Nicciano. The Acqua Bianca creek divides the village into two parts, which communicate through the fourteenth-century stone pedestrian single-arch bridge, whose dating is not certain, even if oral sources attribute the construction to the nobles of the Spinetta family, the castle's feudal lords. The castle imposes itself with its walls, anchored to volcanic rocks, on the medieval village of which ancient palaces, remains today, as well as ruined fortifications, paved paths and the ancient bridge of considerable importance and architectural beauty. During the survey campaign, students and researchers took part in the analysis of the bridge, one of the few still well preserved, working with non-invasive instruments (3D laser scanner and photogrammetric technique) to obtain a precise reconstruction.

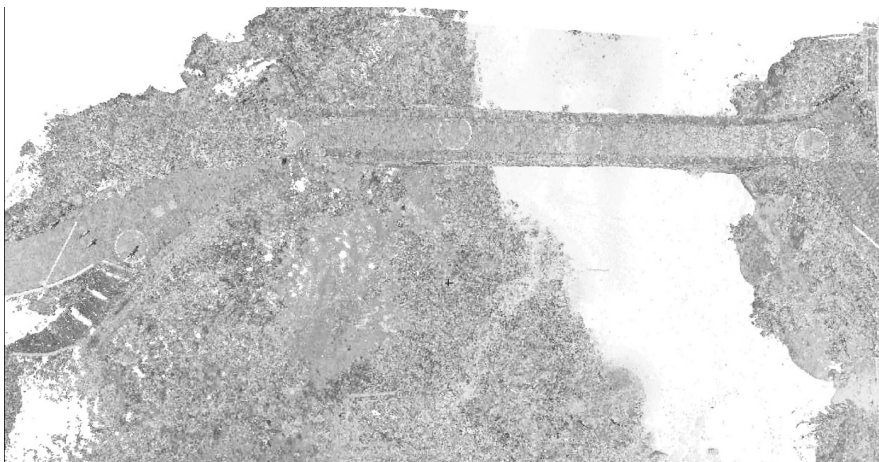


Fig.4 Map representation of the Bridge of San Michele obtained from the Union of the point cloud

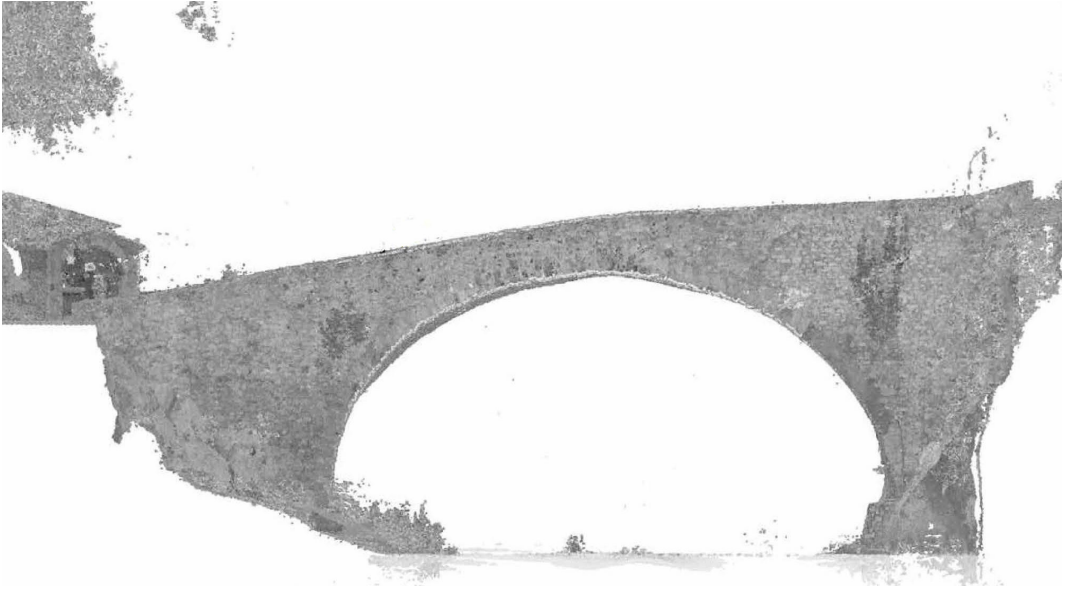


Fig.5 Prospectus of the Bridge of San Michele obtained from the Union of the point cloud



Fig.6 View of the San Michele Bridge

The analysis of the church of Rocca Soraggio

The medieval town of Soraggio was originally composed of six small towns, Rocca, Brica, Villa, Metello, Camporanda and Vicaglia, located along the two banks of the river Serchio and often disputed by armed clashes between Lucca and the Dukes D'Este. The first church whose presence is attested to is the Ecclesia de Soragio, dedicated to San Rocco and documented over the years 1296 - 1299⁴. A decree of the Bishop of Sarzana moved the place of worship from Rocca to Villa Soraggio, joining the two religious communities and taking away the title at the church in 1758; this provision did not find favor with the faithful, so much so that in 1768 the two parishes had to be separated again through the intervention of the Vatican. Only recently has the church of Soraggio been known as Natività di Maria: it is perfectly integrated in the context being made of stone and natural materials and, it dominates, from the modest open space that surrounds it, over several valleys. Given its position in recent years it is rarely visited and there is little historical information concerning it, but despite this, maintenance work is currently under way. Students and researchers of the Department of Architecture carried out the survey using the technique of photogrammetry and laser scanner instrumentation, allowing an accurate metric reconstruction, to be rendered in two-dimensional and three-dimensional documents.

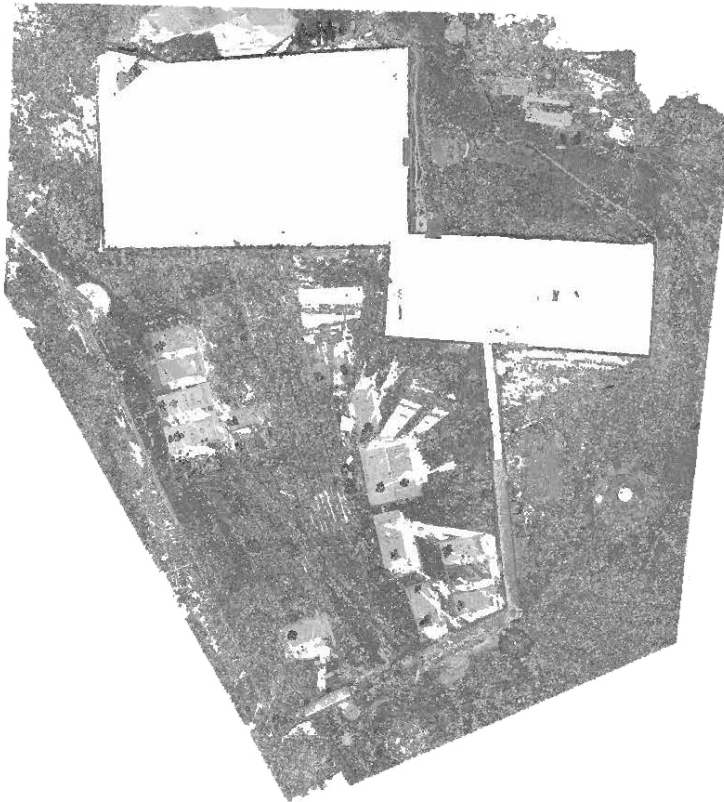


Fig.7 Plan of the Rocca di Soraggio

⁴ The reference documents are kept in the Diocesan Decima of Luni-Sarzana.

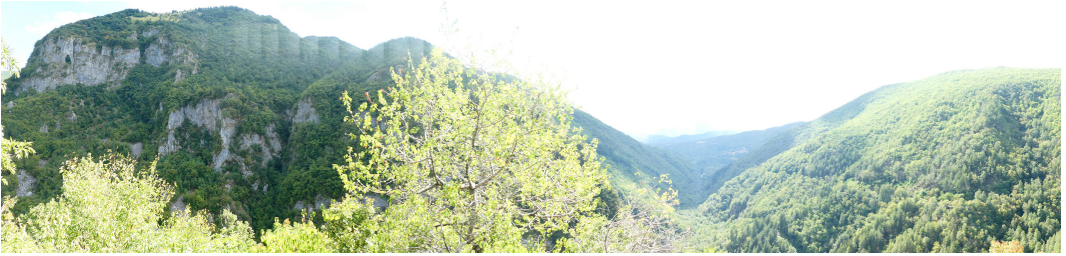


Fig.8 Panoramic view from the Rocca di Soraggio

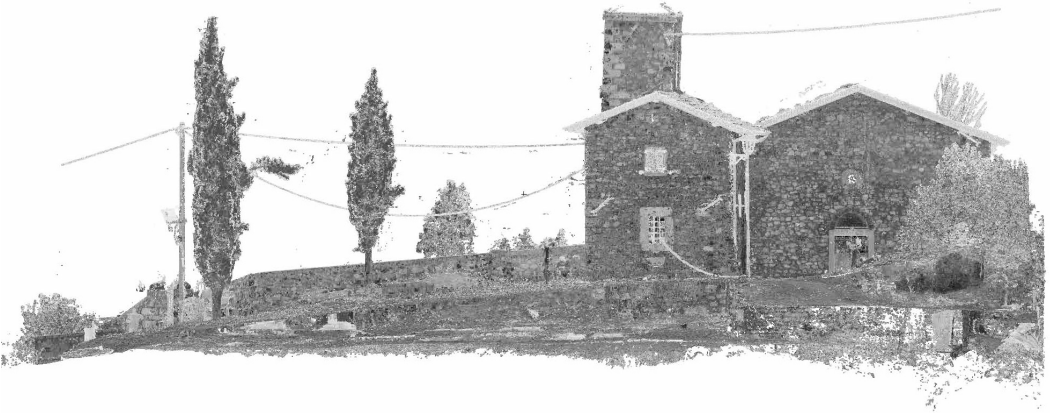


Fig. 9 Environmental section of the Rocca di Soraggio



Fig. 10 View of the Rocca di Soraggio

The analysis of the ruins of Hostel of San Nicolao di Tea

“Se, d’inverno, un pellegrino diretto a Roma o a Santiago de Compostela od un mercante lucchese diretto al porto di Genova o alle città padane avessero voluto valicare il passo di Tea avrebbero avuto poche possibilità di riuscirci se non vi fosse stato l’Ospitale di San Nicolao – che la leggenda vuole fondato da Matilde di Canossa – ove poter trovare riparo nella notte o nella bufera. E, di notte, non lo avrebbero raggiunto se non avessero sentito la campana che suonava per richiamare i viandanti smarriti. Tuttavia, in origine, fu solo una piccola chiesa ad un’abside con una stanza annessa. Era un altro mondo: il tempo di Matilde, quando si costruiscono, dall’XI° secolo ponti, ospedali, strade lungo le quali nacquero culti e tante storie leggendarie destinate ad animare lo spirito degli europei. Lungo quelle vie – ebbe, infatti, a dire Goethe – si formò l’Europa.”⁵ (Fabio Baroni)

Of the Hospital of San Nicolao di Tea, located on the Apennine watershed between the Serchio valley and the upper Aulella valley, in the municipality of Minucciano (Lucca), only a few ruins remain today, but the building once included even a small church. The small complex stood in fact along an important Roman and medieval road, the Via del Volto Santo, which crossed the Lunigiana and the Garfagnana, representing a variation to the more famous Via Francigena. The hostel was located on a plateau above the village of Regnano, on a pass that for centuries was the only viable crossing place to make the journey from Lucca to Parma. Only a few signs are visible of the building, which is surrounded today by a wooden walkway, yet they are sufficient for the understanding of the area’s visitability in the early medieval period. Over the years, excavations and studies of archaeological finds have been carried out, in order to identify the hostel’s spaces and, the functions and activities that took place within it. In the same perspective of in-depth knowledge of the site, the Department of Architecture has carried out the detection of the area with the aid of 3D laser scanner equipment and appropriate cameras.

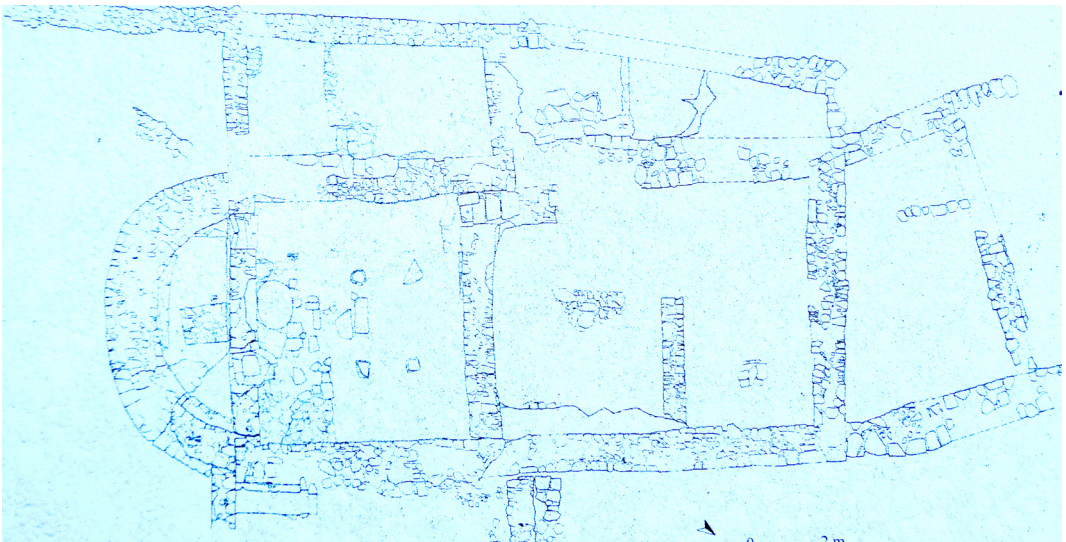


Fig. 11 Plan of the remains of the Hostel of San Nicolao di Tea.

⁵ Fabio Baroni, born in Casola in Lunigiana in 1954, is a historian and a profound connoisseur of his land, on which he has published numerous books and essays. He worked on the lands of the Apennines, Lunigiana and Garfagnana, with particular attention to popular behavior in the different historical phases. The aforementioned text can be found in the informative posters on the site of the Hostel of San Nicolao di Tea.



Fig. 12 View of the Hostel of San Nicolao di Tea.

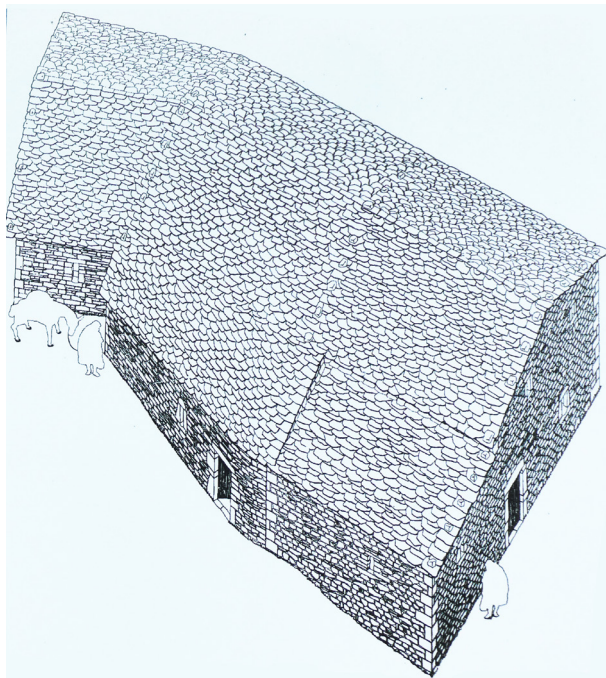


Fig. 13 Isometric view of the Hostel of San Nicolao di Tea

Conclusion

In Italy, the idea is that the short, medium or long-distance cycle paths will be able to better promote the territory, as they respond correctly to current environmental needs. This way of thinking, with mainly tourist-recreational and sportive-health purposes is undoubtedly useful for the cause of the bicycle, as well as possessing a marketing potential of great importance. The project of analysis, study and proposals for the recovery and enhancement of ancient routes and medieval and sixteenth-century bridges located in the territory, can certainly be considered essential broader perspective of the promotion of cultural tourism in the region of the Garfagnana. In fact, it is possible to bring out an impressive amount of structures of architectural importance to cross and visit along the way, these would make it historical as well as morphologically interesting, activating the conditions favorable to the sustainable development of the territory, to its economic and entrepreneurial growth and, to employment in the sectors of cultural tourism and related services.

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