

city as organism

new visions for urban life

22nd **ISUF** International Conference | 22-26 september 2015 Rome Italy

edited by
Giuseppe Strappa
Anna Rita Donatella Amato
Antonio Camporeale

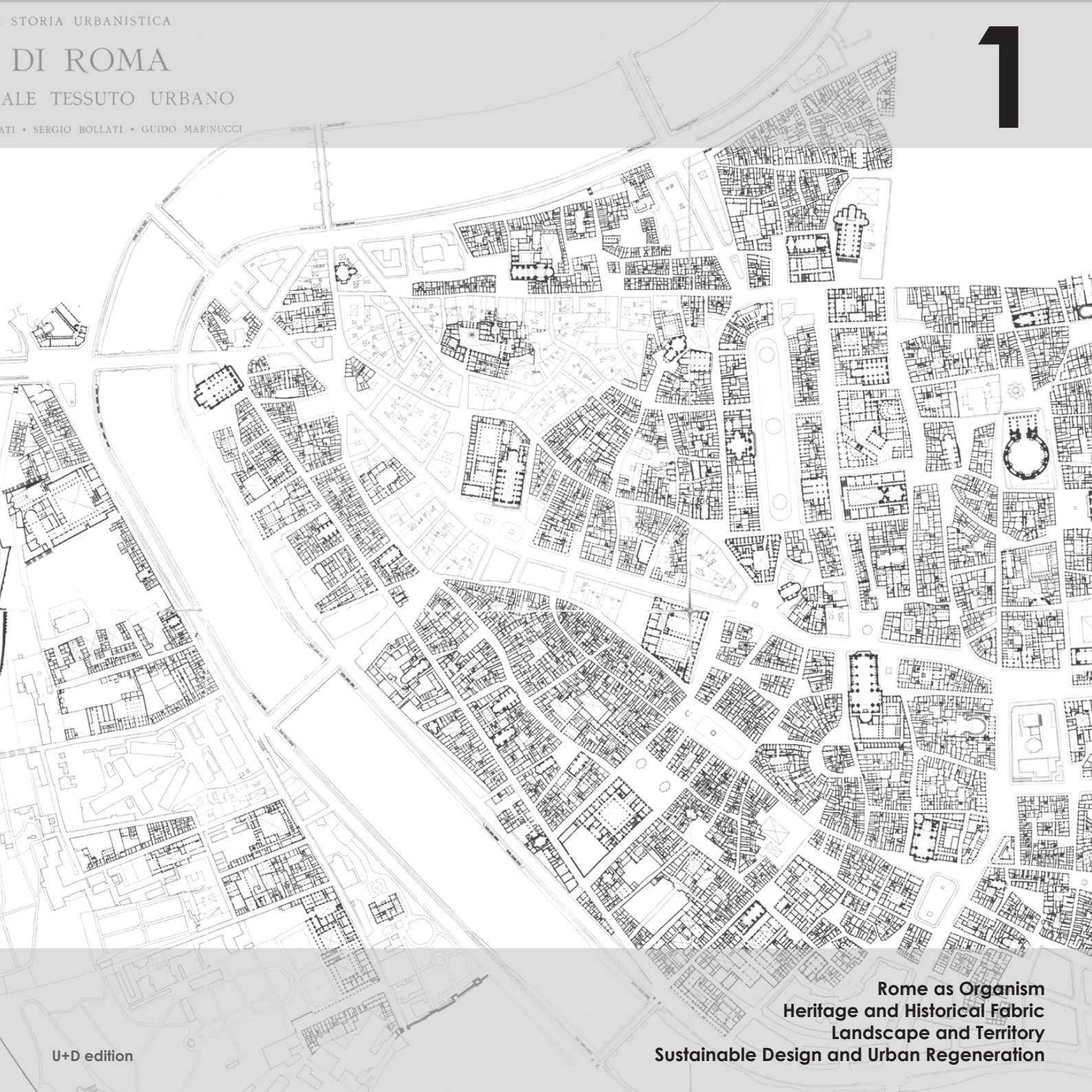
STORIA URBANISTICA

DI ROMA

LALE TESSUTO URBANO

ATI • SERGIO BOLLATI • GUIDO MARINUCCI

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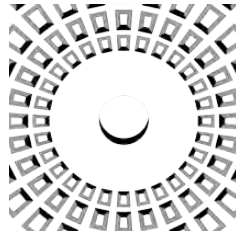
U+D edition

Rome as Organism
Heritage and Historical Fabric
Landscape and Territory
Sustainable Design and Urban Regeneration

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Heritage and Historical Fabric

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Chair_Pisana Posocco
DiAP Department of Architecture and design, "Sapienza" University of Rome,
53A, via Gramsci, 00197, Rome, Italy
Co-Chair_Antonio Camporeale
Draco PhD School, "Sapienza" University of Rome, via A. Gramsci, 53, 00197,
Rome, Italy

Historical Urban Fabric

Modern and Contemporary Design in Historical Cities
Architectural Heritage
Modern Architectural Legacy

Abandoned villages, from conservation to revitalization

Rossella de Cadilhac

Dipartimento di Scienze dell'Ingegneria Civile e dell'Architettura, Politecnico di Bari, Via Edoardo Orabona, 4, 70125 Bari, Italy

Keywords: Abandoned villages, conservation, revitalization

Abstract

The abandonment suffered by many minor historical centres, whether they are the result of a spontaneous transfer or of a forced evacuation following a calamitous event, is an opportunity to reflect on the meaning and the reasons for the restoration of the neglected villages. Their slow and progressive disappearance requires urgent conservation and proposals to assign a new role and meaning, without excluding "a priori" a possible conversion into places of contemplation and sedimentation of the collective memory.

Studying ancient villages means increasing interest and promoting the operational competences related to the preservation of historic buildings, the typological, formal and constructive values, which are the signs of identity of an urban organism to which is recognized the value of unrepeatable individuality, an organism, therefore, to be protected in view of its transmission to future generations.

The study of the abandoned village of Craco (MT), beginning from the most representative buildings, is the first step along the road of developing a research project for the conservation and enhancement of the urban organism that, in accordance with the character of places, cannot ignore the critical geological conditions and the making safe problem.

The partially collapsed buildings facilitate the anatomical study of building sections and materials, promoting constructive understanding of architectural organisms at risk of slow, but sure disappearance.

Only the intimate knowledge of the buildings in their constructive anatomy, the awareness of their real state of preservation, the identification of their functional vocations can direct (through protective measures, instructions, regulations, constraints) the restoration project based, hopefully, on the criteria of minimum intervention, compatibility, recognizability.

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Introduction

The state of abandon which affects a lot of minor old town centers is a chance to think about the meaning and the reasons of restoration of abandoned villages. Their slow and gradual disappearance calls for urgent action for conservation and proposals aimed at assigning a new role and meaning, not excluding a priori a possible conversion into places of contemplation and sedimentation of collective memory. The act of studying ancient villages means to increase the interest and to encourage operational skills related to the protection of historical buildings, typological characters, formal and structural values, which are the marks of identity of an urban organism to which a character of unique value has to be recognized, and if possible to revitalize, with a view to its transmission to future generations.

The fate of abandoned minor old town centers, is widely discussed by the restoration field and is the framework within two educational experiences took place gained around the case study of the abandoned village of Craco in Matera region (S. Belmondo et alii, Research Thesis, 2015; S. Belmondo et alii, Final Workshop, 2015; C. Bisceglia et alii, Research Thesis, 2014; C. Bisceglia et alii, Final Workshop, 2014).

Craco is only one of many abandoned centers in Italy for landslides movements, likely to be physically deleted due to progressive degradation, inevitable consequence of disuse and of a not constant maintenance action.

Understanding the current state of ruin requires to retrace the historical events of the urban fabric and individual buildings, study the morphology, understand typological structure, recognize materials, analyze construction techniques of historical buildings, study character of built environment, assess the state of conservation; This does not mean to accept fatalistically the *status quo*, but to evaluate the possibility to develop a preservation and promotion project of built heritage, differentiating the degree and impact of individual interventions.

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The village, Medieval style, for obvious reasons of defense, perched atop a ridge path elongated in northwest-southeast direction, bounded by the river Bruscata southwest and by the river Salandrella northeast. The urban fabric is physically bounded northeast by the side of the cliff and stretches up the steep slope southwest up to the State Road 103, parallel to the contour lines.

The Norman tower, which stands on the highest and most stable part of the hill is the tangible evidence of the first settlement that has developed, at first, along the ridge path, the current Via Alfieri, to the Carbone-Rigirone Palace, before falling down, on the southwest side, rapidly on the steep slope favoring the contour lines.

The sources to document the life of the community crachese are fragmentary and insufficient at the present time. The settlement is mentioned for the first time in a seal dated 1060, where *Cracum* appears among the possessions of the Bishop Arnaldo Tricarico whose diocese counted, between the eleventh and twelfth century, thirty *Universitas* (municipalities). The first feudal lord, Eriberto di Craco, is mentioned in a document drawn up between 1154 and 1168 (B. Capasso, 1870; T. Pedio, 1967; D. D'Angella, 1986). While Roberto di Pietrapertosa is the name of a royal executioner who holds Cracow between 1176 and 1179 (A. Russo, 2011). Another information documents that in the twelfth century Craco, along with Cagnano, was among the feuds of the principality of Taranto. A century later, precisely in 1239, Goffredo, lord of Craco, was in the list of the barons to which from Federico II was given the job to guard some Lombard prisoners (G. de Francesco, 1996). It is likely, therefore, that the first nucleus of what local historians call the "castle", presumably encompassing or coincident with the tower, perhaps with a jail cell, was the seat of the feudal lord.

The tower is the first defensive work carried out in Craco oriented on strategic control of the territory. The documents so far traced are silent about the exact date of foundation, based on the above, is due to the first half of the twelfth century. Nor is it known if the tower was originally isolated, or if it was equipped with secondary service rooms, not communicating with the tower, placed in adherence to the portion of the first level, and if could answer, at least initially, for purely military needs or, again, if took place the dual

Figure 1. Craco (MT), view from east. Urban tissue. Urban fabric around Largo Machiavelli (Credits S. Belmondo, M. A. Catella, M. Infini, M. Madio, G. S. Orofino, P. Vitucci, 2015).



function of residence and administrative center of the feudal lord, as well as a fortress, from which to impose to the city the payment necessary to guarantee the safety of cultivated small plots of land.

The old village of Craco, hit by a severe hydrogeological risk, triggered by slow but progressive landslides, was evacuated in the sixties of the twentieth when an eviction order moved the majority of inhabitants few kilometers away from the ancient settlement in Peschiera (A. Balboni, 1964; E. Beneo, 1967; W. Brugner, 1964; M. Corrado et alii, s.d.; A. Cucari, 1980; A. Moretti, 1968). Nowadays the ancient settlement is in a state of advanced decay, accelerated by a lack of maintenance that, even more than the landslide, albeit slow but unstoppable, undermines the survival of the village. However it is the decadent aspect that, paradoxically, is the added value of Craco inextricably linked to a great beauty natural landscape. The fascination of a city in a state of ruin, suspended in a timeless dimension, addressed Craco towards an unexpected artistic vocation, becoming an attraction for artists, the filmmakers and later, a cultural tourism seduced by the high and evocative power of the place.

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Methodology

Craco is a paradigmatic case sending a challenge against a still open Italian problem: the hydrogeological risk. The question is: is there a real chance not only to secure but also to recover to life settlements in landslide risk areas, severely proven by natural disasters and now in state of deterioration?

Today, two antithetical visions are opposed: one that considers a recovery option possible, at least in part - that here we want to test - and one that considers any initiative to readmit the urban fabric to the normal life unfeasible.

The instability, sparked by landslides, has worsened over time due to the state of deterioration that - due to the absence of maintenance - has challenged settlement survival premises. Added to this is the old village isolation, which certainly suffers a marginal condition in the regional context, marked by a lack of infrastructure network of which, however, suffers from the entire Basilicata. In order to draw up the Guidelines for the conservation and enhancement old village and - in the later in-depth analysis - the project for the restoration of buildings chosen as sample, it is necessary to have to deal with the specific difficulties of Craco, summarized in:

Figure 2. Craco (MT), view from southeast. In foreground Church of Saint Nicholas the Bishop, in the background Grossi Palace, on background the Norman Tower (Credits S. Belmondo, M. A. Catella, M. Intini, M. Madio, G. S. Orofino, P. Vitucci, 2015).



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- geological nature of the soil, highly irregular due to clays (with interbedded sandstone and sandy banks), especially clays deep and clay/sand conglomerates on the surface;
- upward tectonic movements with perforation of the upper layers and leakage, from the deeper layers, of boulder conglomerate;
- rain water flowing, on the surface, outcrop clay soils creating deep furrows and triggering erosion.

Therefore, it is necessary to face a very critical condition, the Craco one, and at the same time highly suggestive descending from its ruin condition. This is the charm of ruin exercised by decadent town inextricably tied to a landscape of high naturalistic component, with native vegetation species, of mountains, plateaus, hills and landslides that alternate in a succession of gorges, ravines and streams that, for a karst phenomenon, eclipse in soil depth reemerging unexpectedly, to reach the two seas that bathe the Basilicata, the Tyrrhenian and Ionian sea.

The state of deterioration experienced by the old town and its condition of ruin, as mentioned, have become, over time, reason for seduction from which drew heavily cinematic arts ("Il Vangelo secondo Matteo" by Pier Paolo Pasolini, 1964; "Cristo di è fermato ad Eboli" by Francesco Rosi, 1979 and "The Passion" by Mel Gibson in 2004) until Craco became attraction place for cultural tourism.

Moving from the premises and conviction that criticalities of the village may become elements of strength and opportunity to redeem the settlement from the state of neglect, in any case not changing the overall image of the old village, a determination was reached that possible strategies to rehabilitate an abandoned and in a progressive degradation urban fabric, as Craco is, need synergistic relationship between complementary disciplines as Architectural restoration, Architectural Survey, Typological and morphological architecture, Structural Engineering, Architectural Design and Estimate are. This has become a very favorable circumstance that allowed an open debate between the studying fields, which, thanks to the level of their services, have helped to achieve a high quality work, from the preliminary studies to the project itself.

The Architectural restoration had the task of developing a critical exegesis which allowed to interpret all the data emerging at various stages, in a continuous stream of information, without, at the time of design synthesis, that one could definitely affect the other. At the same time allowed to orient design choices respecting local identity characters, preserving the historical stratifications without sacrificing the contemporary expressive

language, whereas required a difficult creative synthesis (such as the reintegration of wide gaps).

The contribution offered by Architectural Survey was crucial for acquiring all relevant knowledge data of each architecture and to analyze their general condition, focusing on the exact geometrical shape, construction features as well as anomalies that helped the students to the formulation of hypotheses around the main construction phases, from time to time corroborating or disproving what was assumed in theoretical.

Typological and morphological architecture has allowed a study on all scales, from the territorial, studied in its historical and processual evolution, to the urban and building one analyzed, also by comparing the aggregation and building systems in the same geographical and cultural area.

The Structural Engineering, recognizing the methodological and conceptual unity of the restoration, allowed to combine demands of conservation with structural safety, respecting '*firmitas*', '*utilitas*', '*venustas*', inextricably linked qualities combined to define individual architectural organisms and to avoid a favor of only one of physical, architectural, historical, aesthetic value.

A special thanks goes to Structural Engineering for its contribution in the study of representative buildings such as the Church of Saint Nicholas the Bishop, the "so called" Saint Barbara chapel, Grossi Palace, Carbone-Rigirone Palaces and, particularly, the Norman Tower, the oldest building of Craco with a strong symbolic identity, the conservation of which is of fundamental importance in the presence of phenomena and dynamic forces.

For the Norman tower was taken the opportunity to use a non-destructive methodology, important to perform a correct evaluation of these forces in order to propose an accurate design through rehabilitation techniques and risk mitigation actions. Has started a campaign of experimental tests, resorting to the use of piezometric accelerometers, with the aim of a direct monitoring of environmental vibrations. Results achieved after this first survey campaign, if compared with those that may be obtained from acquisitions made at a later date, will provide information on the health of the tower, to evaluate the actual risk of collapse and to avoid the structure can suffer damage as a result of dynamic forces caused by landslides.

The combination both of new and old, where there are large gaps, using punctual interventions, was the outcome of critical revisions that have found helps and guides in design process, always careful to the historical data and to the expressive originality of the work, to which was left a high symbolic value.

All the various disciplines have taken into account the outcome of a SWOT analysis, needed to verify the real resources and opportunities offered by the area, not forgetting the fragility and vulnerability of the environment, in addition to the population needs and expectations. The data obtained from the *on field* survey was acquired to focus, at the same time, on possible solutions aimed at recovering some buildings with respect of functional vocations and at satisfying the plurality of requests expressed by residents, tourists and *opinion leaders*.

Forming process

The state of deterioration into which the medieval village lie can offer a starting point for an overall project, unitary and coherent, putting the urban organism in the fruition circuit, in line with municipal strategies aimed to the recovery of their ancient building heritage, which respects the enhancing character and the functional vocations. The idea moves from the conviction that it is possible for one side to exploit the criticality of Craco, turning them into strengths, and on the other hand to value the local resources. The aim is twofold:

- promoting Craco as a place to carry out research on the topics of soil conservation and buildings restoration in landslide areas;
- combining the environmental and landscape values with the world of art and culture, attributing Craco the film set feature, widely experienced in time, but also as studios and workshops for young artists and craftsmen.

Figure 3. Craco (MT), view from southwest. In foreground Carbone Rigirone Palaces at the end of via Alfieri (Credits S. Belmondo, M. A. Catella, M. Intini, M. Madio, G. S. Orofino, P. Vitucci, 2015).



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The data obtained from the SWOT analysis arise in perfect harmony with the objective that Municipality of Craco (with which dlCAR of Polytechnic of Bari started a scientific collaboration relationship) says it will pursue combining landscape and environmental values (which are a sure attraction for tourism), already widely appreciated by cinematic arts, with the world of art, craft and culture. A shared objective that can be achieved:

- promoting Craco as scientific research field on the topics of soil conservation and building recovery in landslide risk areas [by establishing a Center of Excellence for the study of landslides and to test safety and consolidation demo actions];
- making Craco a place where to make artistic and cultural productions (with the possibility to set up a movie set in the context of the so called "Parco Scenografico dei Ruleri", to realize workshops for young artists and artisan shops, by rehabilitating some rooms on the ground floor of old residential units), offering also a place where to stay for tourists.

The planned monitoring system has provide data on the landslide in order to formulate Guidelines to implement measures for the safety and restoration of building in the village, summarized as follow:

- slopes hydrogeological solutions and landscaping with experimental and demo measures (i.e. by planting native vegetation);
- works for rainwater retention (drainage):
- securing visit paths center
- ruins consolidation and conservation for the sole scenic purpose;
- restoration, after targeted consolidation actions, of a small number of buildings which can offer security and stability guarantees, for the purpose of their re-use for cultural activities (such as for Church of Saint Nicholas the Bishop, Grossi Palace, the Norman Tower, Carbone-Rigirone Palaces, Saint Barbara's Chapel), for scientific and teaching activities (such as Grossi Palace partly used as Center of Excellence for the study of landslides and partly as educational and recreational activities space, including those dedicated to working with clay) and artistic activities (workshops) and artisanal (shops) expected in some spaces on the ground floor along Via Alfieri.

Therefore two areas as case studies have been identified: the first along the first part of visit path, goes from the south-west tip of the village, passing through Largo Machiavelli and Grossi Square, to the point marked by the Norman Tower (C. Bisceglia et alii, Research Thesis, 2014; C. Bisceglia et alii, Final Workshop, 2014); the second, called after Via Alfieri, going through Corso Umberto, Via Mauro Pagano, via Onorati, following the ridge path,

passing near Saint Barbara Chapel, reaches Carbone-Rigirone Palaces, in the vicinity of which is planned the northwest exit, just over an ancient city gate, nowadays no longer existing (S. Belmondo et alii, Research Thesis, 2015; S. Belmondo et alii, Final Workshop, 2015).

Some specific choices, compared to an initial operational forecast, have been changed under the new data obtained during the complex, albeit risky, survey operations of the second case study area.

Unlike an earlier operational forecast prefiguring the possible allocation of temporary residential activities in houses along the described path, subsoil instability conditions led to exclude this possibility, guiding the project in favor of a more realistic conservation and enhancement of the ruins with the exception of three residential units, at the base of the Norman tower, which by their physical form, conservation status and stability conditions of foundation soil offered a basis for full return to the type of traditional Craco building. The project, while respecting the ancient volumes, shapes, rhythm of openings, materials and traditional building techniques, would not constitute a slavish imitation of the antique, but an openly contemporary intervention for the sober character obtained by the simplification of forms and decorations.

The overall project, which therefore sees a resized housing function, entrusts its distinctive trait to the tour of the village.

The task to guide the visitor is given to the path, solving accessibility problems, connecting physically and visually episodes of formal completeness, no longer recognizable fragments of ancient presences and architectural gaps. The visit itinerary, thus conceived, is the result of a project that makes own the antinomy between the ruins transience along Via Alfieri, of which the conservation is thought, and the substantial integrity of buildings, such as the Church of Saint Nicholas the Bishop, Grossi Palace, the Norman Tower, the houses at the base of the Tower, the Saint Barbara Chapel and Carbone-Rigirone Palaces, for which a recovery intervention has been prefigured. In the first case the consolidation is expected, by securing, doing maintenance and, at the same time, enhancing the ruins within the museum arrangement; in the second one, by restoring using the minimum intervention criteria, distinctness, compatibility and reversibility to make again those important buildings enjoyable, offering nowadays a sufficient guarantees of stability, giving compatible uses, selected with the support of a multicriteria analysis.

Anyhow, the planned action, shall be conducted with the utmost caution and should be preceded by careful analysis that, starting from a scrupulous survey (defined as one of the tools of historical consciousness and then of restoration), will be able to know the geometry, materials, bonds, construction techniques, recording anomalies and irregularities useful to the overall understanding of the building. The study will use the survey, understood also as a means equally effective, for the analysis and evaluation of the crack, which can be extended over time in the form of monitoring, that is, of constant monitoring of the evolution of the phenomenon of degradation, such as to facilitate the reading and interpretation of failures. Knowledge, therefore, is an essential precondition both for the purpose of reliable assessment of the current safety, both for the choice of an effective and at the same time respectful restoration, based thereby on criteria of minimal intervention, compatibility and recognition.

The acquisition of information about the materials and construction techniques is certainly useful to discern the weak points of the structure, and this in order to achieve integration compatible with the existing and properly to consolidate what both has now become crumbling and has been heavily tampered with. The purpose of consolidation is to return to the building static-structural requirements lost over time, taking into account the ethical limitations imposed by the historical and aesthetic implications which, in the achievement of a newfound technical efficiency of the building, arise to guarantee the preservation of an undisputed symbol of collective memory.

The architectural gap topic, well expressed by some building, of which the casing wall remains almost intact, will be solved by a restoration of the image, through volumetric inserts, which will not give up the expressiveness of the contemporary language, using well distinguishable materials, such drystone light elements, therefore, easy to remove, entrusting the task to evoke the ancient spatiality, in respect of the physical and authen-

Figure 4. Craco (MT), view from northwest. In foreground Carbone-Rigirone Places (Credits S. Belmondo, M. A. Catella, M. Intini, M. Madio, G. S. Orofino, P. Vitucci, 2015).



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ticity of the consolidated existing building. Image reintegration will offer the opportunity to consider the possibility of making inside available those same buildings through the introduction of functions of a temporary nature, in line with the provisional condition dictated by unstable hydrogeological conditions.

The idea of including, thus takes consistence, within those buildings, workshops for young artists and artisanal shops with the aim of strengthening the cultural vocation of the site safeguarding the identity character: material and immaterial.

The above mentioned criteria will be extended to the reintegration of the image within the tower inner spaces has been subjected, in relatively recent times, to manipulations which compromised the overall conservation status. Dates back to 1949 the demolition of the barrel vault and of the staircase to make room for a municipal water tank, cylindrical-shaped, concrete made, which undermined the stability, the typology and functionality of the building and also the identity of the most representative monument of Craco (A.A.P.B., S.N., 1949). This is disrespectful intrusion against which are imposed a removal that is not be postponed and a necessary return to the *status quo* for which it is necessary to use materials and traditional construction techniques.

The above mentioned criteria will be extended to the reintegration of the image within the Carbone Palace, where the spaciousness of a originally turned room returns, but also outside, at the end of ridge path, with the evocation of the ancient city gate near the Rigirone Palace for which use of materials and construction techniques with characters of reversibility is well hoped.

Similar criteria are respected in the proposed restoration project of the Carbone Palace, whereas is intended to return the spaciousness of an originally tripartite and vault space, located on the first floor of the south side. The project includes the demolition of the cement mix roofing (in addition to the concrete stairs connecting the roof) built to replace the ancient vaults, readable along the entire longitudinal development of the space. The idea moves from the desire to evoke the ancient space redoing the entire

roof system with a steel supporting structure along with a light steel structure, which follows the outlines of the vault system.

The above criteria will be extended to the external in order to provide, at the end of the ridge, the re-enactment of the ancient city gate, no longer existing, near the Rigrone Palace. Sources document an arched entry gate, of which does not remain any material trace, due to ground sinking in that point. The project, in line with the principles of recognition and reversibility, replenishes the urban gap recalling the ancient city gate reachable by a ramp that connects the area where the arch is set and the area immediately next to the Rigrone Palace entrance.

Contiguity relations link the final part of the visit itinerary to an abandoned school building which, due to its small value, becomes an opportunity for a critical revision, in order to create new aggregative-recreational space, able to accommodate hospitality and refreshments functions.

Conclusion

The choices made and the criteria used, here exposed synthetically, are the result of a complex process as a rigorous methodology that has seen, as shown, the constant confrontation between disciplines, which complement each other, able to stimulate the scientific investigation of the topics addressed and the critical and creative ability of the students called to a synthesis project coherent with the whole development of analytical research.

Hoping all the proposals, with this remarkable experience, will lay the foundation for a respectful recovery of the village, able to make Craco a strategic pole not only for tourism but also for scientific research, provided that it not is put at risk the conservation and enhancement of a site of great and undeniable charm.

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