Dwelling on space

representation and safeguarding of its tangible and intangible heritage

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20th
Anniversary 2003-2023
Intangible Cultural Heritage

In occasion of the twentieth anniversary of UNESCO Convention for the Safeguarding of Intangible Cultural Heritage

The international Conference is part of the activities of the project "*The state as an Artwork, the State and the artworks*" funded by Università Telematica Pegaso

Carmine Gambardella
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Rosaria Parente

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Topics:

Safeguarding intangible cultural heritage in education
Safeguarding intangible cultural heritage through education

Priority Africa
Priority to safeguarding the intangible cultural heritage of Africa, one of the most active regions for the implementation of the Convention

Living Heritage in Emergencies
Living heritage throughout the world is increasingly affected by emergencies, including conflicts and disasters caused by natural and human-induced hazards

Living Heritage and Indigenous
People Indigenous peoples hold a rich diversity of living heritage, the practice and transmission of which contributes to the ongoing vitality, strength, and well-being of communities

Sustainable Development and living heritage
The notion of "sustainability" in the 2030 Agenda for Sustainable Development echoes the concept of "living heritage" in the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage

Dwelling on Space

International Conference

Naples
17 October 2023

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Peer review

Scholars has been invited to submit researches on theoretical and methodological aspects related to Smart Design, Planning and Technologies, and show real applications and experiences carried out on this themes. Based on blind peer review, abstracts has been accepted, conditionally accepted, or rejected. Authors of accepted and conditionally accepted papers has been invited to submit full papers. These has been again peerreviewed and selected for the oral session and publication, or only for the publication in the conference proceedings.

International Conference
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representation and safeguarding of tangible and intangible Heritage

Questo libro, pensato e realizzato in formato digitale per consentirne una più ampia diffusione, nasce dalla collaborazione proficua tra il Consorzio Universitario Benecon, la Cattedra UNESCO per il paesaggio e il patrimonio culturale presieduta dal Professor Carmine Gambardella e l'Università digitale Pegaso, finanziatrice del progetto "Lo Stato opera d'arte, lo Stato e le opere d'arte", coordinato dalla Principal Investigator Professoressa Maria Natale.

In occasione del ventesimo anniversario della Convenzione per la salvaguardia del patrimonio culturale immateriale siglata a Parigi il 17 Ottobre 2003, si è voluto ospitare un confronto sulle tematiche connesse alla tangibilità e intangibilità del patrimonio culturale e sulle problematiche relative alla salvaguardia del patrimonio stesso nella sua dimensione materiale ed immateriale.

Il 17 Ottobre 2023 il Convegno Dwelling on space: representation and safeguarding of its tangible and intangible heritage si è svolto a Napoli, nella meravigliosa cornice del Palazzo Zapata.

Al fine di ampliare il dibattito a livello internazionale e garantire un'ottica multidisciplinare ed interdisciplinare, una call for paper ha preceduto il convegno offendo la possibilità a studiosi inseriti in diversi contesti internazionali di ricerca.

Nell'articolazione del volume si è, pertanto, deciso di rispettare l'ordine degli interventi susseguitisi durante il convegno e di collocare nella seconda parte i contributi pervenuti grazie alla call for papers.

I testi raccolti hanno l'ambizione, grazie alla convergenza di prospettive di indagini che attengono a svariate discipline, di arricchire il già vasto campo degli studi in materia di patrimonio culturale, rappresentazione e salvaguardia, che qui è declinato in numerosi peculiari percorsi di ricerca che offrono al lettore suggestioni, spunti, orientamenti per il futuro sviluppo della ricerca.

International Conference
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This book, conceived and created in digital format to allow for wider dissemination, was born from the fruitful collaboration between the Benecon University Consortium, the UNESCO Chair for landscape and cultural heritage chaired by Professor Carmine Gambardella and the digital Pegaso University, financier of the project "The State as a work of art, the State and the works of art", coordinated by the Principal Investigator Professor Maria Natale.

On the occasion of the twentieth anniversary of the Convention for the protection of intangible cultural heritage signed in Paris on 17 October 2003, we wanted to host a discussion on the issues related to the tangibility and intangibility of cultural heritage and on the problems relating to the protection of the heritage itself in its dimension material and immaterial. On 17 October 2023 the international conference *Dwelling on space: representation and safeguarding of its tangible and intangible heritage* took place in Naples, in the wonderful setting of Palazzo Zapata.

In order to broaden the debate at an international level and guarantee a multidisciplinary and interdisciplinary perspective, a call for papers preceded the conference, offering the opportunity to scholars inserted in different international research contexts. Therefore, it was decided to respect, in the structure of the volume, the order of the interventions that followed one another during the conference and to place the contributions received thanks to the call for papers in the second part.

The contributions collected in the book have the ambition, thanks to the convergence of research perspectives that pertain to various disciplines, to enrich the already vast field of studies on cultural heritage, representation and protection, which is expressed here in numerous peculiar research paths which offer the reader suggestions, ideas and orientations for the future development of research.

Indice

Celebrating the XX Anniversary 2003-2023 – An Overview

Francesco FIMMANÒ **Distance learning for African students as a response to the issue of immigration and the creation of on-site experts for the protection and valorisation of cultural heritage.**

Francesco FIMMANÒ[1]

(1) Ordinario di Diritto Commerciale e Direttore scientifico Università telematica Pegaso e Universitas Mercatorum

The most recurring bipartisan recipe in Italian politics regarding ongoing migration from Africa, especially in this moment of acute criticality, is “let’s help them at home”.
First of all, it is necessary to clear away false myths by reading the analyzes of the most accredited scholars of phenomenology.
In fact, the majority of migrants are not fleeing from situations of absolute and extreme poverty, they come from urban centers and belong to the middle class. These are young people, certainly not rich, but not even very poor, capable of paying handsomely for the so-called. “traffickers”. In essence, it is not the population that “has nothing” that leaves, but the one that wants to improve their condition.
Despite propaganda slogans, development cooperation is certainly the right direction. Bear in mind, however, that the increase in investments and the level of well-being in Africa does not automatically lead to a reduction in migration.
In fact, many scholars have demonstrated how the mechanism only works in the long term. Indeed, in the short term, development, level of education and access to information even act as an incentive to move.
But this is not a bad thing, especially for the demographic and economic needs of the old continent.
The central theme then becomes how to help this process with diversified short and long-term effects, as happened at the beginning of the last century when many migrants to the Americas were Europeans and in particular Italians.
The first response is to avoid (and fight) forms of “neo-colonialism” which represent the main cause of Africa’s lack of development.
Even after decolonization, completed only in the 1970s, African states have suffered the strong interests of Western powers, sometimes through large multinationals, which have often achieved turnover higher than the gross domestic product of the same countries in question, negotiating access to raw materials with a clearly unbalanced balance of power.
The modern champion of this phenomenon has become China, which has seized natural resources in exchange for infrastructures: not only roads, dams, railways, ports but even football stadiums (so much so that there has been talk of "Stadium diplomacy", which has become one of the cornerstones of the so-called Chinese soft power) 1..

[1] In recent years, Chinese strategy has followed two main directions which intersect, in the overall grand design, the maritime and land trajectories of the new Silk Roads: the first is that of investments in the major European football clubs; the second is the so-called Stadium Diplomacy, carried out especially in the poorest areas such as Africa and Latin America. Investments that have the main objective of strengthening the Chinese presence in individual states, to forge agreements that go far beyond the football business. Between 2014 and 2017, China brought more than 2.5 billion euros to European football clubs. But for about three and a half years Beijing has stopped investments, deciding to include investments considered unprofitable. The idea is to exploit the attractive capacity of football to broaden the sphere of political and economic influence. The diffusion in the European social fabric, the popular nature and the enormous income that this sport generates make it a perfect vector for conveying any message or brand. Stadium Diplomacy is always current. Chinese soft power in football affects dozens of countries in Latin America, Africa and Asia. Simon Chadwick, an expert on the geopolitics of sport in Asia and

These neocolonialist dynamics represent the most serious limit to the effective growth of those countries.
Conversely, the path must be that of training in general and university training in particular, provided both on site, through mobility and electronically "at a distance".
Our country was the historical forerunner in this field.
In the Middle Ages, in fact, student and academic mobility (peregrinatio academica) was embodied by the figure of teachers and above all students (clerici scholares vagantes) who moved to Italian universities.
The risks and inconveniences suffered as a consequence of these choices gave rise to solidarity initiatives among "off-site" students and to the birth of student corporations, which were formed in most medieval universities, structured locally on an ethnic basis, as they were made up of people who attended a particular university all coming from the same linguistic-geographical entity, to designate whom, starting from the 13th century, the term “nationes” became established. 2
The whole system born spontaneously was fundamentally aimed at offering the best energies a natural expansion of capabilities and abilities. And this, mind you, originally happened first and foremost for poor students who had no resources. In 1555 it was precisely an action of solidarity between students and masters of the Bolognese Studium that induced Federico Barbarossa to promulgate the Authentica «Habita», a true statute of protection, of wide geographical scope, against the frequent abuses suffered by the scholares.
This first phase was characterized by a strong democracy of education, more modern than ever. The whole system born spontaneously was functional to improving living conditions. And this happened first and foremost for those who did not have adequate financial capabilities. 3
It is evidently not possible to slavishly superimpose the ancient with the current for various social, economic and political reasons, but the general lines are the same.
Well, the partnership projects between many universities and African countries in recent years have given excellent results: many young people, after graduating in Italy, have returned to their homeland to rewrite the future of their country.
A type of immigration that produces engineers, laboratory technicians, doctors, nurses, economists, pharmacists, architects, agronomists, veterinarians. These young people often choose strategic sectors

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professor of "Sport Enterprise" at Salford University, has explained in his essays the significance of Chinese investments in the rest of the world. Beijing's economic commitment to the African continent has been known for some time now: China is its largest trading partner, with the construction of structures and infrastructure. Since the beginning of the new millennium, a good portion of investments in Africa have concerned stadiums and sports facilities, which in some cases are actual donations aimed at indirectly obtaining the supply of raw materials. As in the case of Angola which established an infrastructure-for-oil relationship about 20 years ago which today brings 27 billion dollars from oil exports into the coffers of the former Portuguese colony. Chinese investments in sports facilities also affect Latin America, the Caribbean and the islands of the South Pacific, where however Beijing's interest is strategic rather than economic. This is explained by recent developments in relations with Costa Rica which until 2007 had diplomatic relations with Taipei, but the situation has changed since China invested 300 million dollars with the creation of a Confucius Institute and the Estadio Nacional de Costa Rica (a 35,000-seat facility built by the Chinese company Anhui Foreign Economic Construction). Since that moment, the Chinese community in the Central American country has grown to become the most important foreign community in the state.

[2] The use of the term nationes must not cause the meaning underlying the common belonging to brotherhoods to be confused with the concept of nation as developed in the Western world in the modern era and as it is understood in the contemporary age: with it, in fact, there is no a complete coincidence, given that, for example, students from Bologna, such as Nicolaus Copernicus, natives of Prussia or Silesia, were automatically considered as belonging to the Natio Germanorum from a university point of view. Note how much university dynamics have influenced the morphology of international social relations.

[3] Only subsequently did the social composition of the student body change due to the massive presence of the privileged classes in school classrooms - a choice common to the new educational strategies of the European nobility - and the progressive marginalization of those poor students who had constituted, for centuries, the substantial part of the student population. Thus, the possibilities for free doctorates and university colleges, which had represented the ideal solution for students without financial means, were reduced. The colleges changed their purposes, gradually transforming themselves into places of aggregation for an elite of the future ruling classes, with the progressive aristocratization of the student body and the change in needs that guided the choices of the wandering students. In the university cities, chivalric academies, educational colleges as well as seminaries directed by the new religious orders - Jesuits, Somasks, Barnabites - were established - an organizational expression of the pedagogical one of internment, founded on a pessimistic vision of human nature.

for the development of their homeland and in any case become useful excellences also on the European continent. And given the centrality of cultural and environmental assets in the economy of these countries, we need to work on training in these sectors, starting with the creation of indigenous cultural managers.
Case studies demonstrate that the young people involved in the projects are certainly not privileged, given that among those who, for example, come to Italy to study, only one in ten comes from wealthy families. 4
All of this, given the large numbers we are talking about, can today take place through telematic training, provided "remotely" by the best Italian and European professors, with absolutely sustainable costs and enormous know-how to transfer.
In short, the new technologies, perfected during the pandemic, can allow universities to recover the ancient mission, born spontaneously, of the democratic "dissemination" of training, knowledge, research and knowledge aimed at a concrete declination of the slogan "let's help them to their home" even when it is aimed at a subsequent migration.
On the other hand, virtual mobility exchanges also became an integral part of the Erasmus Plus program in 2017, when the isolation into which the Covid pandemic would have forced us was in no way imaginable.
Erasmus Virtual Exchanges were implemented in the period 2018 – 2020 following the signing of the Paris Declaration in 2015 by European education ministers. During the three-year period of activity they have intercepted more than 35,000 students and facilitators, becoming, in fact, for many young people, an integral part of their curriculum. But while in 2018 these were experiences that did not exclude geographical mobility, indeed, often, they represented a first phase of it, the case of the last academic years is different, in which students did not have the possibility of choosing and now find themselves having to cope with a change in approach to mobility dictated by numbers 5. The initiative concerned the 33 countries that are already part of the Erasmus+ programme, to which are added Algeria, Egypt, Israel, Palestine, Jordan, Lebanon, Libya, Morocco, Syria and Tunisia.
During the 2022 NAFSA, the most important international education fair in the world and which also took place remotely using modern technologies on different levels, Kate Lister, president of Global Workplace Analytics, stated that in 2025, approximately 70 percent of the workforce will work remotely at least 5 days a week, which somehow justifies the preparation of young people to get used to a new way of learning and which therefore led many speakers to constructively address a new approach to online mobility. In history, emergencies also give rise to some fundamental rights, such as that produced by the pandemic for smart working for employees in certain conditions and circumstances.
Digital literacy and digital access are among the most important critical factors in the discriminating processes between people in this new century: that is, between those who know how to use and do not know how to use technologies to socialize; between those who understand and do not understand the digital processes for producing or working in new economies; between those who can acquire and those who cannot acquire new knowledge and information by exploiting new media and digital information technologies during their professional life; therefore between those who can participate and those who cannot participate in those fundamental rights that manifest themselves in the new forms of digital

[4] Today, mobile students can be classified into two typologies: those who move on the basis of their own free individual initiative and those who move within a mobility and student exchange program promoted on a local scale (at the department, faculty , institute) or on a national and international scale (Socrates Program, Erasmus Project, Nordplus, Fulbright Program). On 15 June 1987, the then European Community promoted for the first time the Erasmus program - EuRopean Community Action Scheme for the Mobility of University Students - (now Erasmus+) with the aim of promoting university learning through student mobility. A project, born with mainly educational purposes, becomes over time a real cultural project. Thanks to studying in the host university it is possible to learn the habits and peculiarities of a new culture, but also to develop a sense of community that includes all students of nationalities other than the host one. Erasmus is an opportunity to learn to live with different cultures, as well as a moment in which the student begins to take on his own responsibilities and take a position on transnational issues.

[5] The growing availability of information and telematic technologies for distance learning allows for the creation of virtual mobility initiatives: for example, the traditional Erasmus exchange (which consists of traveling in the physical sense) has been integrated with virtual Erasmus, in which students coming from different countries can study together without leaving home. The Erasmus+ project becomes "virtual" to facilitate exchanges between young people from the EU and those from Mediterranean countries. In launching the aforementioned virtual exchange project, the European Commission aims to promote dialogue and improve skills through digital learning tools.

citizenship and e-democracy. In short, almost in a Vico logic of historical courses and recurrences, the new technologies have allowed the Universities to recover the ancient mission, born spontaneously, of the democratic dissemination of training, knowledge, research and knowledge.
A few years ago Firmin Edouard Matoko, of the Africa Department at UNESCO, rightly stated that "the African cultural industry, too often underestimated by governments and investors, has an important role to play, but investments and training are needed". With the adoption of the Convention on the Diversity of Cultural Expressions in 2005, UNESCO was the first international organization to encourage States to invest increasingly in the cultural industry.
In this logic, the Heritage Hubs Connect Forum was held from 27 to 31 March 2023 in Fort Jesus in Mombasa, Kenya, an event that brought together over 30 institutions from Africa and Europe operating in the field of training and research for cultural heritage, organized by ICCROM, the Italian Ministry of Foreign Affairs and International Cooperation, National Museum of Kenya (NMK) and Swahilipot to inaugurate a collaborative platform for the growth of the Herigate Hubs initiative.
The Heritage Hubs are part of the Youth Heritage Africa (YHA) programme, an ICCROM program that accompanies local institutions in creating economic value in the cultural heritage sector, investing in young human and social capital and promoting innovation and cultural and creative entrepreneurship, in line with the United Nations Sustainable Development Goals for 2030 and the aspirations of the African Union Agenda 2063 community. Heritage Hubs are knowledge-based innovation centers that promote youth engagement, foster heritage education, entrepreneurship and economic development, networks and partnerships for the protection and valorization of cultural heritage: visionary and interactive spaces which through art, culture, technology and research, connect young generations and organizations with strategies and initiatives aimed at making African heritage an effective source of economic and social opportunities to their advantage. It is precisely a matter of going in this direction by expanding the number of projects thanks to digital technologies and distance learning.

Intangible Heritage – Perspectives

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Benecon | Prof. Arch. Carmine Gambardella UNESCO Chair on Landscape Cultural Heritage and Territorial Governance

María Victoria Vivancos Ramón; Priscila Lehmann Gravier; Valeria Navarro Moreno The dissemination of Marine Intangible Heritage as a tool for education and sustainable development. OCEAN ART PROJECT

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Abstract
A research project of the UNESCO Chair Forum University and Cultural Heritage of the Universitat Politècnica de València, the Ocean Art Project uses marine cultural heritage to raise awareness and spread information among children and young people about the need to care for our oceans in line with the Sustainable Development Goals.
The lines of work and communication plan are described as a reference for educators and researchers for disseminating living cultural heritage.

Keywords: cultural dissemination, marine heritage, Mediterranean, childhood, blue economy.

1. Introduction
Experts predict that unless we take measures, there will be more plastic than fish in our oceans by 2050. It is unfortunate that no meaningful action seems to have been taken yet, despite the world being aware of this data and the United Nations having defined Goal 14-- "to conserve and sustainably use the oceans, seas and marine resources for sustainable development" –as one of the Sustainable Development Goals (hereinafter SDGs) of the 2030 Agenda.
Under the slogan "the science we need for the ocean we want", the UNESCO Intergovernmental Oceanographic Commission (IOC-UNESCO) in charge of the Oceans Decade fosters the dissemination and promotion of marine cultural heritage, in addition to boosting open access to culture in this field. To this end, the UNESCO Chair Forum University and Cultural Heritage of the Universitat Politècnica de València (hereinafter Forum UPV Chair) reaffirms the vital role that culture plays as an active agent in achieving the SDGs as an element of social cohesion.
A research project co-funded by the European Union NEXT GENERATION EU (PRTR-C17), the Ocean Art Project was started up as part of the UPV Forum Chair in 2021 and was designed to help reverse this dramatic situation by disseminating intangible Mediterranean marine cultural heritage as a tool for raising awareness among children and young people regarding the urgent need to care for our seas and oceans. Furthermore, this project aims to incentivize and promote a greater good that might be achieved by revaluing, caring for and disseminating heritage: to boost the way culture is conserved in society and make citizens understand its relevance to the social, economic, aesthetic and ethical development of society as a whole.

2. Objectives and methodology
To this end, our primary objective is twofold: firstly, to use intangible marine cultural (mainly ethnographic) heritage as a tool for transmitting and raising awareness about caring for our seas and oceans, and secondly, to promote the conservation of our seas and oceans while also helping conserve and transmit this culture to the rest of society by means of young people and children, and therefore to future generations.
To meet this challenge, a group of interdisciplinary specialists have joined forces to put their knowledge of Mediterranean culture at the service of making this a reality, spanning across specific,

multidisciplinary areas that encompass three essential disciplines: art, marine biology and living cultural heritage.
The starting point for this project was to identify the main risks currently besetting our seas: plastic waste, overfishing, maritime traffic, urban development, chemicals, invasive species and climate change. From this selection, specific activities were designed to help raise awareness and alleviate them, using the richness of Mediterranean marine cultural heritage as a tool: sustainable crafts, marine cartography, Mediterranean architecture and gastronomy, marine mythology, history of maritime telecommunications and underwater archaeology.

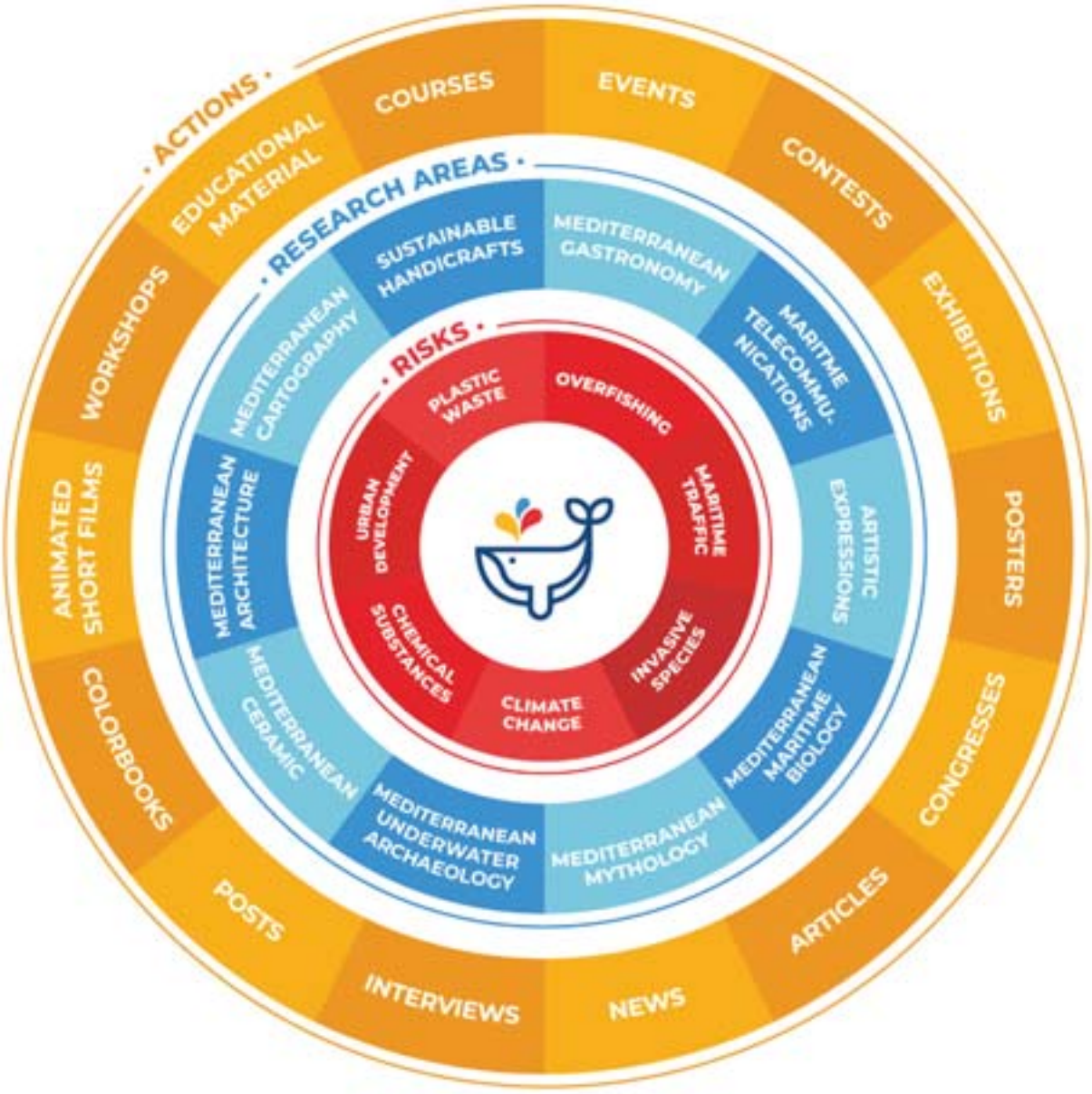

Figure 1 Explanatory diagram of risks, research areas and actions of the project.

In parallel, a communication plan was devised with a clear, attractive message that would allow our target audience to connect with our objectives: positive information regarding our capacity for acting on the risks threatening our oceans and raising awareness of the richness of our marine cultural heritage. Through the plan, the following lines and strategies of communication are established:

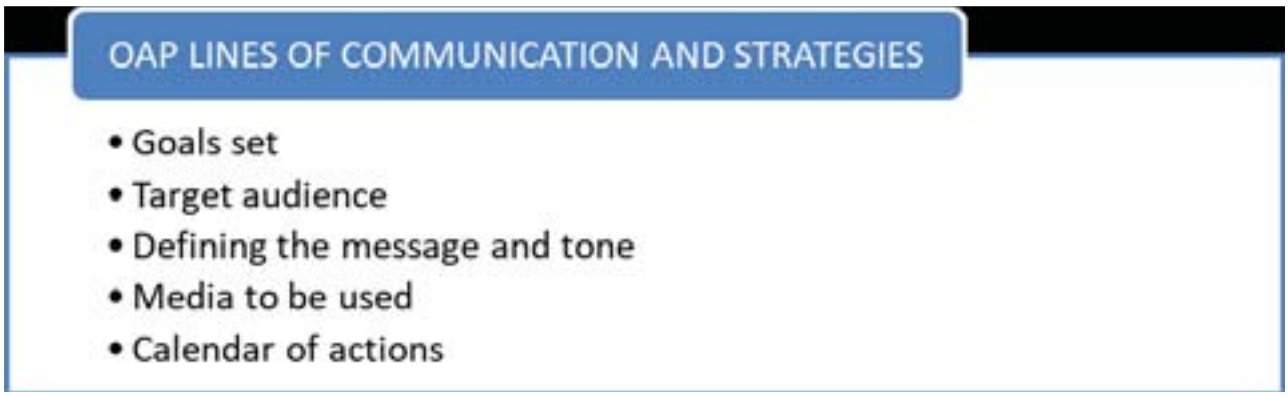

Figure 2 Lines and strategies of communication

Photo 1 Development of one of the activities at the UPV Summer School.

Our target audience ranges from 3 to 17 years of age in different stages of schooling. For outreach, a brief audiovisual format is preferred, always bearing in mind that each individual's level of knowledge is not a determining factor in excluding them. One challenge we face in achieving adequate transmission of information and values is getting rid of the idea that scientific knowledge is for experts only. In this sense, it is essential to have a cultural mediator, an intermediary figure between the scientific community and the public to be in charge of extracting information, synthesizing it and adapting it for dissemination. The dissemination of the project has been carried out in a variety of media and platforms in order to reach the widest possible audience.

The following communication channels have been strategically used:
1. Social Media: the reach and popularity of the social networks Instagram, TikTok and Facebook have been leveraged. These profiles have been used regularly to share content related to the project, interact with followers and keep our community informed on the latest developments.
The Ocean Art Project (OAP) website: The project has its own website, which is a central source of information where visitors can learn more about the initiative, access free resources and updates, as well as contact OAP.
3. Email: A system of email distribution lists has been set up to reach 3,000 pre-university schools, representing a population of around 900,000 children and young people in the 2022-2023 academic year. These have been differentiated into four educational stages: Pre-school, Primary, Compulsory Secondary and Vocational Training. Events are announced, connections are maintained with the educational community and specific activities are offered such as competitions, training courses for teachers, MOOC-EDX UPV (Massive Online Open Courses), didactic guides and recreational material.
4. Participation in fairs: The presence of the project at national fairs geared specifically for children and youth, such as EXPOJOVE (with its 140,000 visitors in 2022) is crucial. These events provide an in-person platform for interacting with the public, presenting the project and raising awareness.

5. Media: Collaboration with media outlets, both radio and television, has allowed the project to be more widely disseminated. Interviews, reports, and media coverage have helped highlight the importance and achievements of the Ocean Art project.
6. Collaboration with specialists and influencers: The involvement of specialists in the field, such as Eugenio Monesma with 1.2 million followers on YouTube, has provided expert perspective and significant reach. Likewise, the occasional collaboration with influencers, such as Melani, winner of La Voz Kids, has helped in making content go viral and reaching a wider and more diverse audience.

Conclusions

In short, the Ocean Art Project's dissemination strategy has been and continues to be multifaceted, leveraging a combination of digital media, presence at events, collaborations with former experts and influential personalities, and media coverage. This diversification of channels and approaches has helped the project continue reaching an ever wider and more effective audience, thus generating greater impact and awareness of our cause.

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Dwelling on space
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Benecon | Prof. Arch. Carmine Gambardella UNESCO Chair on Landscape Cultural Heritage and Territorial Governance

Nicola Pisacane Drawing the Uniqueness of Intangible Heritage. 'Gigli di Nola' obelisks and their procession

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Abstract
The paper presents some of the results of the survey and census activities of the architectural and urban heritage of the city of Nola, the scene of the 'Gigli' procession. 'Gigli di Nola' obelisks are included in the Network of large Italian shoulder machines, inscribed since 2013 in the UNESCO Intangible Heritage List. The research highlighted the relationship between tangible and intangible aspects and between tradition and digital innovation.

Keywords: Intangible Heritage, Gigli di Nola, GIS, survey, census.

1. Introduction
'Gigli di Nola' obelisks and their procession, recognized as an intangible heritage within the Italian Celebrations of big shoulder-borne processional structures [1], have always had a deep connection with the local community that during the centuries has maintained a cohesive sense of participation with obvious social implications. The characters of immateriality of the big shoulder-borne processional structures connect to the expectations of the community that retains material contents in its memory such as those related to the wisdom of papier-mâché or wooden carpentry.

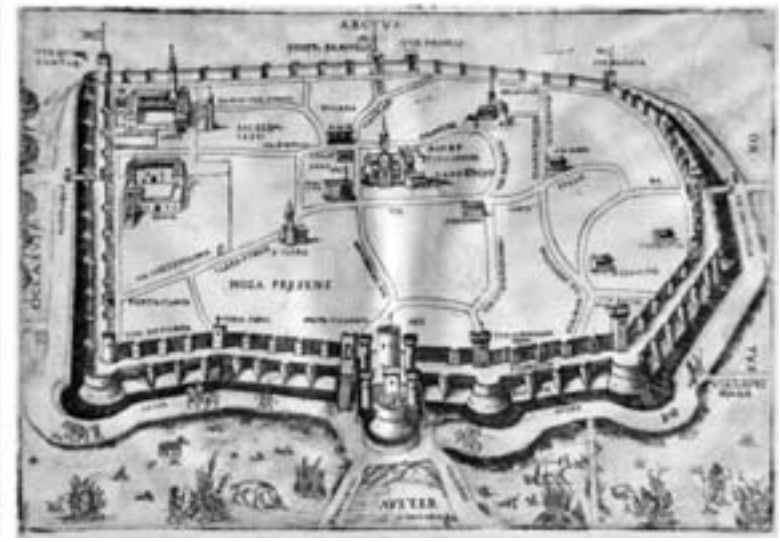

Fig. 1: A. Leone and G. Mocetto *De Nola* Treatise (1514): *Nola presens*.

Obelisk remains singular for the condensation of know-how. The definition of the dimensions of the wooden machines in relation to the urban structure of the city, represented as early as the 16th century

by Ambrogio Leone [2] with great mapping expertise, allows us to grasp the material values and topological relations between the place, its architecture, and its festivity [3]. On the other hand, the more technical, artistic, and cooperative process aspects of the construction of the artifacts related to the Feast (from obelisks, to clothes, to papier-mâché) emphasize the immaterial character of the 'Gigli' that built, is torn down and rebuilt, while retaining its symbolic value and the interaction between the Feast and the Community (from artists, to artisans, to bearers and cradlers, to spectators).

2. SAVAGE Project

Safeguarding the authenticity of the 'Gigli di Nola' obelisks was the subject of the SAVAGE Project - Safeguarding and Valorisation of Authenticity in the Management of the 'Gigli di Nola' obelisks funded by Campania Region following a competitive call to the Università della Campania Luigi Vanvitelli - Department of Architecture and Industrial Design. The University, guarantor of scientific directions of research and operational projects aimed at the preservation and enhancement of cultural elements inscribed in the UNESCO Intangible Cultural Heritage List, has activated synergistic processes of collaboration within a broad partnership - with wide representation of the local territory - recognizing the strategic role that intangible heritage has in the development of the territory. The University, through the SAVAGE Project hosted UNESCO themes within the research that carried out in a preliminary phase of the project itself an extensive knowledge activity by organizing and classifying a large endowment of documentary heritage and sources, proposing an innovative approach for knowledge that can be put at the service of the communities themselves. The project, moreover, took place in a time frame in which the COVID-19 epidemiological emergency prevented the celebration of the feast itself, requiring a rethinking of some actions and the strengthening of some issues related to the technological innovation of the heritage also in line with the European digital agenda.

3. Survey and mapping activities

Among the activities conducted as part of the aforementioned project, some involved the instrumental and visual survey of some buildings, of urban contexts in relation to the festival machines, not only in geometric-dimensional aspects but also with reference to the qualities of the natural and built environment. Survey and analysis activities focused on the historic centre, in particular, on the street and urban backdrops affected by the festival path. Analysis of the survey data revealed common features that were highlighted in relation to architectures.

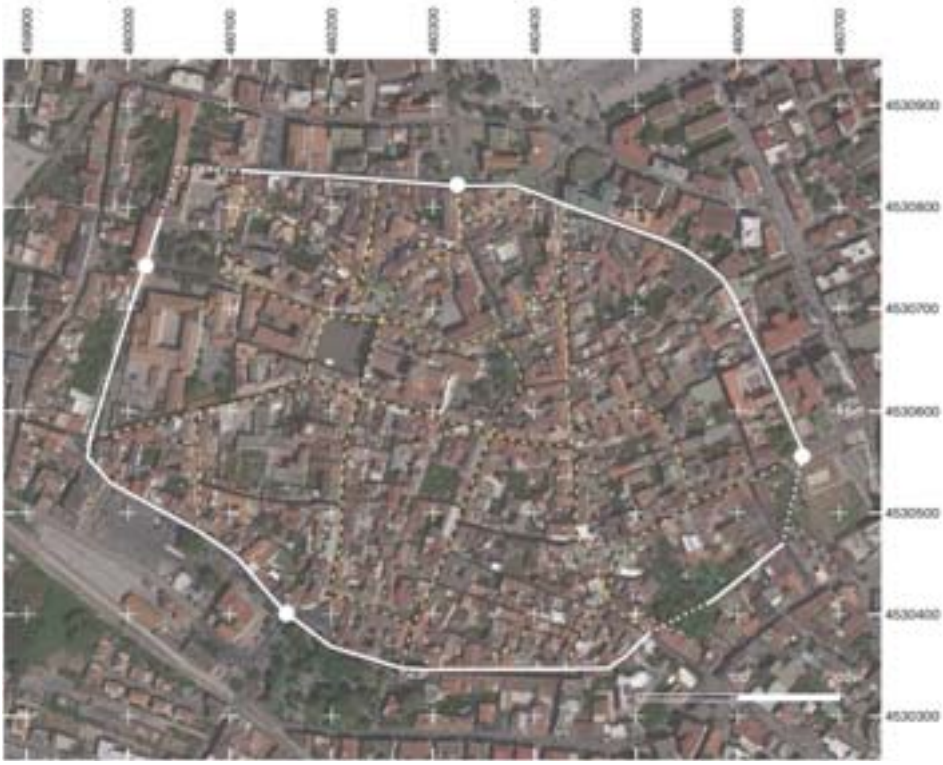

Fig. 2: GIS project (map system WGS84/UTM 33N) highlighting the boundary of Nola in 16th century (continuous white line), urban gates (white dots) and road path (dashed line) as identified in A. Leone table. Argenziano et alii, 2021.

Survey activities highlighted buildings material and compositional characteristics, regardless the dimensional value of the individual element. All information was catalogued and digitized using GIS (Geographic Information System), which enabled data acquisition, geolocated recording, visualization, and information sharing. This system allowed a comprehensive analysis of the area without loss of information, as through its is possible to manage the geometric data of the artifacts, topological data and the whole system of related information.
The street layout of the historical centre of the city of Nola maintains its layout unchanged as readable by the comparison also performed in GIS environment between contemporary cartography and the sixteenth-century images accompanying Ambrogio Leone's *De Nola*, with the simultaneous comparison between the location of the main civil and religious buildings [4]. Such a road route has been the setting for the 'Gigli' Ballad for countless years. Such a route embraces several streets in the centre where there were formerly places of worship, now forgotten or even lost as a result of urban transformations in recent centuries. Within this route, which winds through very narrow streets, there are crucial points where local groups -'paranze'- show off their expertise, applying special techniques, to face challenges of skill aimed at overcoming certain compulsory tests dictated by the conformation of the route.
The survey was also carried out through an ad hoc elaborated form designed to guide the survey at all points. The form was compiled for each building without the possibility of derogation in any place, identifying a strict coding system that would uniquely allow the identification of each property and each street arch. The census form was compiled on smartphones through specific application that allows the construction of attribute table in offline mode and subsequent data populating directly in situ taking advantage of the geolocation systems of the same device. Open-air data acquisition for both urban fronts and road axes allows good satellite coverage of the acquisition device and decent accuracy of the metric data.

Fig. 3: GIS project: buildings database.

Fig. 4: GIS project: streets census.

In summary, the study of the collected data brought in evidence not only the permanence over the centuries of the road layout, but also some formal and functional characteristics common to the roads analysed to crossed by the procession. In particular, the survey highlighted the large number of balconies, most of them of very small projection on the facades facing the streets. In addition, the roofs of the buildings facing the route mostly have flat roofs, capable of accommodating a large number of visitors who can enjoy a view of the festival from above on the days of the celebrations.
Along with these features, it is also noticeable how street lighting and street furniture are always placed on one side of the street, never encroaching on the 'Gigli' procession.

4. Conclusions

Activity here described has highlighted how material characters related to architectural forms and urban structure adapt to the intangible characters of 'Gigli di Nola' obelisks and its procession by highlighting mutual influences and adaptations. Building and urban heritage digitalization also constitutes an important database that records the state of construction and represents a digital storage of information that is always open and populated with additional data by placing the aspects of technological innovation alongside tradition.

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Francesca MUZZILLO, Fosca TORTORELLI Urban vineyards in contemporary cities; from neglected areas into vibrant and attractive spaces

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Abstract
The article is focalized on urban vineyards, considered as spaces which can represent a desire of new rurality. They are also a strategic key for real good environmental effects on general urban quality.
Starting from the observation of antique Pompeii, as in the concrete case of the ancient San Martino vineyard, urban vineyards can transform unused or neglected urban areas into lively and attractive spaces and can act as an educational tool, involving the community in the production of local foods and products, as well as hosting a variety of plants and insects, contributing to local biodiversity.

Keywords: Natural spaces, landscape, urban vineyard; sustainability. Heritage

1. The desire of natural spaces
Urban life is changing, at the same time communities express the desire to find better places for enjoying everyday moments of profound wellness.
The article focuses on urban vineyards, considered as spaces capable of representing the desire for a new rurality. They also constitute a strategic key to truly positive environmental effects on general urban quality.
We could start from Pompeian open spaces closely linked to architecture in a setup capable of creating two different sensations: the first of being isolated in a restricted place, the second of being perceptively connected with other adjacent voids. This integration is today very important as the life of more than half of global population is concentrated in urban areas and over the next few years the urbanization process is supposed to expand. In this perspective a new vision of urban life is essential with the goal of pursuing different ways of life in urban spaces.
Urban vineyards, where they remain, are places where is evident the ancient practice of previous generations. We could look at the case of Vienna where a lot of wine is produced within urban area, following an old tradition.
The reference, however, remains ancient Pompeii. There the orchards and the gardens showed a passion for nature, like the design had been made by the nature itself, and not by human hand, with a sense of respect to the inherent intentions of places. Pompeii is so today an example of agricultural Spaces Design. We could start from Pompeian open spaces strictly connected with architecture into a layout which was capable to create two different sensations: the first one of being isolated in a confined place, the second one of being perceptively connected with other adjacent voids. With concatenated views two apparently opposed sensations were compounded together. Le Corbusier in Pompeii was fascinated by its open spaces appearing at the same time as enclosed and opened with a succession of multiple views. A correlated system of connected points recurs in Le Corbusier's Pompeian sketches. Studies of Amedeo Maiuri show that the connectedness of layout was, anyway, corresponding to the connectedness of human relationship, involving at the same time the appearance of places and the lives of Pompeian people. Hence, we could certainly deduce one principle: the relation of open spaces is also a relation of people, so their design value should come from a system which is both physically and

socially offered, encouraging social connectedness through consciousness of connection between each designed area even in remote positions. Definitively the interactions among single places should rely on the interactions of human daily life with the medium of strategic projects that comprehensibly highlight the sense of reunion attraction

2. “La Vigna di San Martino” as an example of landscape value and as a cultural heritage to be protected and promoted

For our country, wine is synonymous with culture, history, tradition, but also with the future, with a world that has undergone many changes in recent years and with an increasingly necessary search for sustainable and innovative solutions, and it is right in front of us the challenge of climate change, that living in increasingly green and sustainable cities cannot and must not remain an utopia.
More and more realities have come into question to create this synergistic relationship between urban space and nature, not only through the cultivation of vertical gardens and urban vegetable gardens, but often also through the creation of true metropolitan vineyards.
There are realities in which the presence of a vineyard, in addition to having a landscape, production and historical-cultural value, acquires a deeper dimension that binds and recreates the ancestral bond between man and nature, returning in today's temporality to the places that are the offspring of an urbanization process, a connection with their rural dimension.
Although it may seem singular, the city of Naples has been, from a certain avant-garde point of view, so much so that it ranks second in Europe in terms of number of hectares of vineyards. This splendid Neapolitan reality has always maintained an unusual connection between city and countryside throughout its evolutionary history.
If we look at the Tavola Strozzi by the painter Francesco Rosselli, dating back to 1470, the Vomero hill catches the eye, which is immortalized together with the entire city; it is an area that saw its first urbanization only towards the second half of the 1600s. In fact, as is evident from the painting, these were places that had always been entirely dedicated to grazing and cultivation. Precisely because of this agricultural vocation, the Neapolitans called the Vomerese area 'the broccoli hill' for centuries. The rustic landscape and the tranquility of the countryside impressed the nobles so much that they decided to establish their own summer residences in Vomero. This habit then expanded in the eighteenth century, when the construction of Via Salvator Rosa allowed mobility between the center and Vomero.
Naples, in particular, has a very ancient wine tradition, and it is possible to find some urban vineyards in the city and its surroundings.
Urban vineyards are in fact areas planted with vines located within cities or in their immediate vicinity; these vineyards can be small or large and are often cultivated for grape production and wine production, both on a personal level, but not only.
Within the Neapolitan urban nucleus, Posillipo, Agnano, Vomero, Camaldoli, Quarto and Chiaiano are some of the most affected areas.
There are several cases to be examined, in particular in the Vomero district, we find the Vigna di San Martino, (Fig. 1) one of the most significant metropolitan wine oases, unique in its kind; it is an urban agricultural territory which since 2010 has been declared an "Asset of historical and artistic interest" and has become a National Monument by decree of the Ministry of Cultural Heritage, issued on the proposal of the Superintendence of architectural and landscape heritage of Naples and its province.
A request made by the owner Giuseppe Morra, custodian of this place rich in history since 1988, a man of art, gallery owner and entrepreneur, who immediately carried out various interventions for its redevelopment.

Fig. 1: The “Vigna di San Martino”

The vineyards occupy 3.2 of the total 7.5 hectares, therefore a considerable share of the entire surface area of the farm. This ancient Vigna dei Monaci di San Martino has been found in all images of Naples for at least six centuries, as a precious fragment of greenery, which survived the building looting.
Part of this agricultural area has been managed for over twenty years by the "Piedi per la Terra" Association, which implements all actions aimed at supporting this "precious garden", not only making it accessible to visitors, but as a laboratory space for the recovery and sharing of the culture of the Earth, according to the Systemic approach to Ecology, between training, agriculture, art and sustainability practices. It is aimed at all citizens with particular attention paid to children and becomes an educational place attentive to the promotion of sustainability, as well as urban regeneration and last but not least a tourist attraction. (Fig. 2)
Urban vineyards can transform unused or neglected urban areas into vibrant and attractive spaces and can serve as an educational tool, engaging the community in the production of local food and products, as well as hosting a variety of plants and insects, contributing to local biodiversity.
The social and well-being aspect is important, as cultivating and working in urban vineyards can promote an active and healthy lifestyle.

Fig. 2: Vines into the “Vigna di San Martino”

The rural world thus finds a living space within the city and fits into the urban context precisely to safeguard its own identity, the role it poses is to spread life models traditionally based on the relationship with nature to contaminate the " citizens” of urban agglomerations.
A vision that develops towards the stimulation, organization and use of resources linked to sustainability, to create spaces for sharing and promote the passion for living with taste and beauty, in a careful and aware manner towards the surrounding world.
The Urban Vineyard represents a rural, historical and landscape heritage of high cultural and tourist value because it is the perfect synthesis between the values of past and future, countryside and city, work and free time, tradition and innovation.

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Angela P. COLONNA, Alessandro RAFFA Communities of Knowledge, Traditional Knowledge and Adaptation. The UNESCO site of the Sassi of Matera as an experimental laboratory of water resource management in a changing climate

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Abstract
Climate change effects are at risk of impacting the UNESCO site of the Sassi and its cultural landscape, but also its communities. How can Sassi's 'Community of Knowledge' can contribute in climate adaptation process? By focusing on water historical management cycle – that has been critical inside the Sassi nomination inside the World Heritage List – and its traditional knowledges and practices, the contribution reflects on the possibility to experiment an inclusive path for equitable adaptation design.

Keywords: Communities of Knowledge; Traditional Knowledge; Climate Change; Adaptation; Design

1. Climate change and the symbiotic evolution of the Sassi

Climate change effects, both extreme or elusive, are at risk of impacting and will increasingly impact the Sassi and its cultural landscape, but also its communities. Periods of prolonged heat and concentrated and heavy rainfall, together with the anthropogenic transformations of the recent past, are at risk of altering its peculiar symbiotic condition between man and nature. Climatological projections, however uncertain, show that, in the next hundred years and without adequate measures, the Sassi could experience a climate similar to the current one in the city of Mendes, Algeria, with a two-degree increase in temperature, and a reduction in days and annual amount of precipitation [1]. The site of the Sassi has been shaped over millennia by traditional knowledge and practices, expression of the mutual adaptation between man, community and environment. Traditional knowledge and practices have shaped a place we look as paradigmatic for the culture of sustainability, allowing it to be inhabited uninterruptedly till today [2]. For the Sassi, its value consists of is a commons value, a collective work stratified over time and through tradition, whereby the intangible heritage of collective knowledge is a generator of the material heritage of settlement and landscape. The ability to perceive changes in the ecosystem has enabled constant adaptation to the natural environment over time, continually refining survival techniques and handing down know-how over the millennia, an expression of that symbiotic human/nature relationship. The Sassi constitute a sophisticated urban ecosystem based on the scarcity of resources and the need to make appropriate and collective use of them, which remained almost intact until the 19th century. Examples of this are the ingenious systems of water capture, distillation and condensation in different seasons and weather conditions. In particular, the historical water management cycle, which modernity already rendered out of date, today is challenged by the effects of climate change. But historical water management cycle, and both its intangible and tangible heritage, had contributed thirty years ago to the inclusion of the Sassi into the World Heritage List.

2. The "Mediterranean Rupestrian Ecosystem" model and the climate challenge

The model that the Management Plan for the UNESCO site of the Sassi wants to realize is that of "Mediterranean Rupestrian Ecosystem" [3]. The Management Plan draws on the legacy of the traditional

model of the Sassi to nurture the new ecological paradigm, actualizing that archaic Mediterranean model, and experimenting in Matera with a laboratory of environmental and social sustainability.

The Management Plan's openness to the global challenges and clashes today with the lack of awareness about the risks of present and future climate variability, but also with the scarcity of studies on the effects of climate change on the Sassi. But perhaps the greatest limitation concerns the gaze toward climate change, understood primarily as a threat to the authenticity and integrity of the site (especially of its material dimension) and not to the opportunities that may result from a complex interpretation of the concept of adaptation. A change of perspective is needed, one that reconnects the future management of the site to the most recent developments on climate resilience, that assign to heritage, communities and their "Endogenous ways of Knowing" [4], a proactive role in the challenge of adaptation and sustainable development. Can the Sassi, and its cultural landscape, become an experimental laboratory of a new culture of adaptation in a changing climate? [5] This challenging question inspired a reflection within the UNESCO Chair on Mediterranean Cultural Landscapes and Communities of Knowledge, University of Basilicata, also in light of the forthcoming establishment of the Sassi Observatory for the implementation of the UNESCO Site Management Plan [6]. How can Sassi's 'Community of Knowledge' and its traditional knowledge can contribute in climate adaptation process?

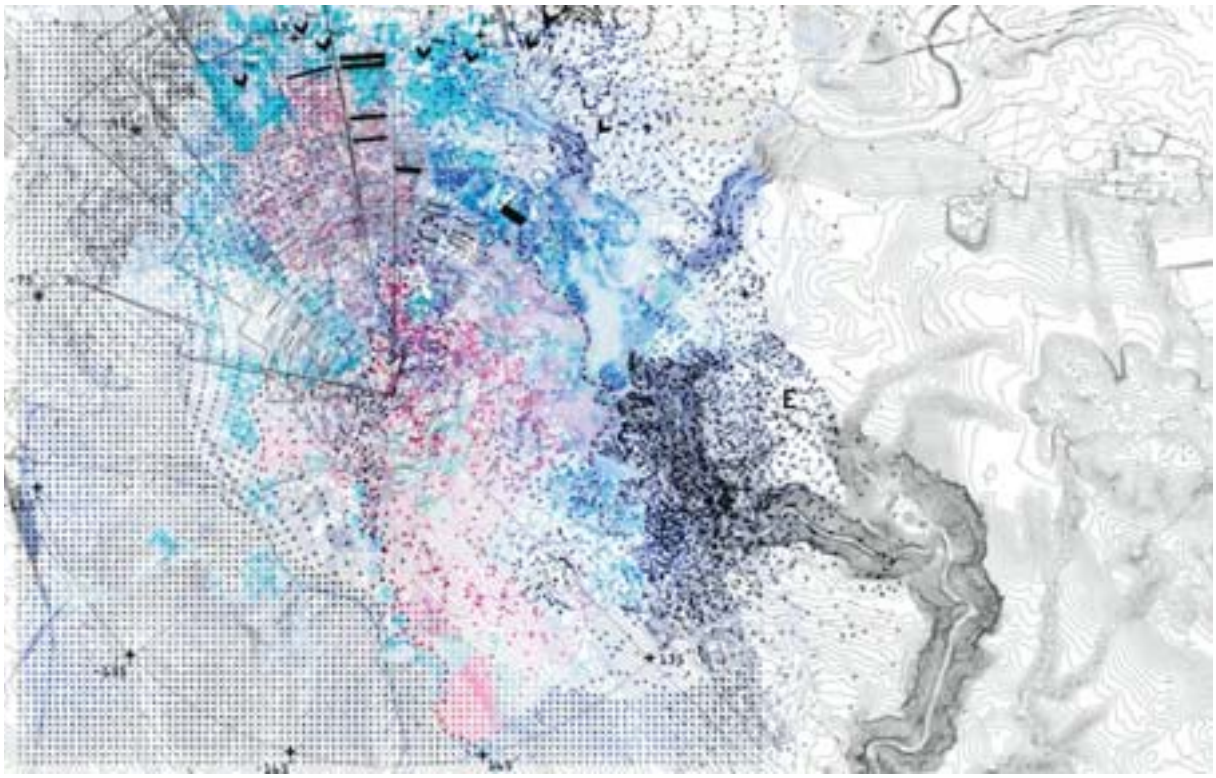

Fig. 1: CHA. Climate Heritage Atlas. The map intersects climate change phenomena (flashfloods, windstorms and heatwaves), social and ecological vulnerabilities and tourism pressure in the UNESCO Cultural Landscape of the Sassi and the Park of Rupestrian Churches, Matera. © A. Raffa.

3. Towards an experimental laboratory

From this perspective, the rediscovery and enhancement of the body of knowledge related to the historical use of water will inform shared and inclusive processes of adaptation to the changing climate. First of all, it will allow to increase the understanding on the construction process of Matera and its bio-cultural landscape inside the Mediterranean basin. And it is precisely the historical management of the water resource, an expression of the Sassi's traditional knowledge, that today appears forgotten, as well as many of its material forms, between past transformations, current climatic phenomena, and future scenarios. Water management palimpsest will be at the center of a community-oriented project/process in order to build a knowledge framework that, on the one hand, will raise awareness on climate change issue and, on the other, can inform a shared project of adaptation in the medium/long term, coherent with the goal of heritage enhancement. The characteristic of historic settlements, defined by the specific and differentiated qualities of multiple places, the space of "location" [7], is synergic with a diffuse local knowledge that, before modernity, was the basis of the relationship between communities and places.

In the perspective of an experimental laboratory on water-related traditional knowledge and climate change adaptation inside the Sassi's Observatory, the rediscovering and enhancement of intangible heritage, as well as its tangible expressions, does not have a mere archaeological and testimonial value, but is instrumental to the actualization of a cognitive and design-oriented approach. This integrative approach will recover the capacity for local observation and 'situated' cognition [8], harmonizing these with today's most advanced scientific knowledge, will revitalize the ancient sustainable logic and will rehabilitate communities' sense of place. In this way, UNESCO site management also becomes a design opportunity to address current challenges, i.e., climate change, and it does so through facilitating processes of dynamic construction of "Communities of Knowledge" [9] [10] for equitable adaptation. In this perspective, the process for the Management Plan and the Observatory, and in particular the symposiums-workshops [11] they had been both nurtured on, represent a relevant methodological-operational substratum for building a culture of adaptation that embraces intangible heritage in its various facets as structural in the climate challenge and from which to design shared strategies and actions.

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Sabina Martusciello ***'Cucina italiana'*****: identity design**

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Abstract

"An Italian cuisine understood as a unitary model, codified in precise rules, has never existed and still does not exist. However, if we think of it as a network of knowledge and practices [...] it is clear that an 'Italian' culinary style has existed since the Middle Ages". (Montanari M., 2020)
How is healthy eating of Italian cuisine taught at school?
What are the icons of correct nutrition?
How is it represented? What models are used in learning?
The response, not only local but global, is a devastating sign, an "obese" design that "feeds" the minds of children and adolescents.
So, it must recommence to draw an alimentary texture made up of warp and weft, (physical) space and time (of waiting, of patience, of humility, of sharing), to educate to healthy alimentation through the three main ingredients 'ali-mente-azione'.

Keywords: cucina italiana, identity, design, food pyramid, 'alimentazione'

1. *'Cucina Italiana'*, intangible cultural heritage UNESCO list.

In 2021, a scientific committee coordinated by Massimo Montanari - Emeritus of Food History at the University of Bologna - promoted the candidacy of "Italian Cuisine between sustainability and biocultural diversity" in the UNESCO representative list.
In August 2023, the National Commission unanimously approved the candidacy pending the final evaluation by UNESCO.
Italian cuisine is understood as a set of social practices, rituals and gestures, a manifestation of creativity and a form of protection of biodiversity.
Regional diversity, cultural exchange, sacred value of preparation, conviviality represent the identity values of Italian cuisine described as early as 1891 by Pellegrino Artusi who in his book tells the history of Italy through the different ways of implementing the practice of home cooking.
"Identities are not written in the genes of a people but are built historically, in the daily dynamics of conversation between different men, experiences, cultures […] This is exactly the kind of identity that we must look for in the food and gastronomic history of a Italy that shapes itself as a space of common values, shared knowledge and flavours". (Montanari M, 2010)

2. Safeguarding intangible cultural heritage in education

How is healthy eating of Italian cuisine taught at school?
What are the icons of correct nutrition?
How is it represented? What models are used in learning?
The response, not only local but global, is a devastating sign, an "obese" design that "feeds" the minds of children and adolescents.

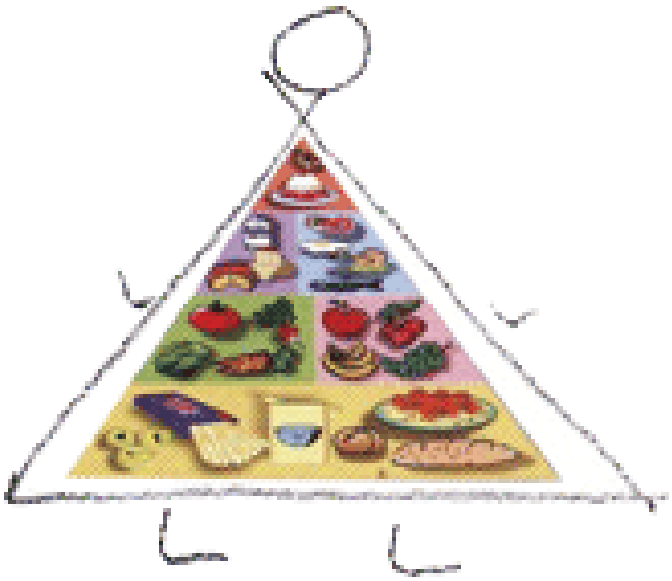

Fig. 1: Martusciello S., Food pyramid is a “obese” sign and design, 2016

“Food pyramid” teached to the school students of every order and degree is a macroscopic iconographic error, a sign in project absence, a thought sign, studied and producted directly by nutritionists, modified and integrated by anthropologists and even surely corrected in proteic equilibrium, it results missing of modal, ecological, emotional, educative, communicative requirements, involved in the design field. Food pyramid is a sign of schizophrenic respect to the concept of healthy alimentation, paradoxically is the opposite form, in contrast to substance.

The Project of Applied Research LANDesign® aims to train (ex ducere) “ali-ment-azione” of the five senses plus one, that is the good common sense, hybrid actions between creativity, “ali”, science “mente”, products “azione”.
We eat trough mouth, but we feed us with real and virtual products, digital and tactile products; we feed us with nose – feeding the olfaction, with ears – feeding the hearing, with eyes – feeding the eyesight, we feed us with pictures, sign, colors, emotions…
Signs are forms that translate principles, concepts, behaviors, the (sign) form is substance: healthy alimentation is together assimilated with “food pyramid” in its countless editions and reinterpretations. All children in scholastic age know and redraw the triangle that contains, starting from the base, cereals, fruits and vegetables, then fish, mee, eggs, legumes, milk and derivatives and at the top fats and sweets. Unfortunately the percentage of obese children grows “dramatically”.
Food Pyramid “teached” to the school students of every order and degree is a macroscopic iconographic error, a sign in project absence, a thought sign, studied and producted directly by nutritionists, modified and integradet by anthropologists and even surely corrected in proteic equilibrium, it results missing of modal, ecological, emotional, educative, communicative requirements, involved in the design field. Food pyramid is a sign of schizophrenic respect to the concept of healthy alimentation, paradoxically is the opposite form, in contrast to substance.
Pyramid is the most rigid, static, monolithic solid, the healthy alimentation, instead, requires elasticity, movements, flexibility. Pyramid is the sign of insulation, of secret, of buried memory by sepulture. Healthy alimentation preserves the memories of shared memories, food rituality, hospitality.
“As a Plutarco’s character says in his convivial Dispute (II,10) <<We humans don’t feed us each other just to eat and drink, but to eat and drink together>>. This aspect is decisive: for this reason, food, for we humans is a cultural event that overall produces “convivio” (from Latin: live together), so live like a community, that means to put together all gifts that everyone has, even debts that each other has.
Share to live together!” (Bianchi E., 2015).
Pyramid encloses an authoritarian imperative and not a democratic consense; pyramis is an algid sign of opulence against harmony that is equilibrium of different parts; pyramid returns to the buildings in which humans (slaves) are used for realization of single product which they will never benefit.
Healthy alimentation, instead, is equilibrium of colors and of local colors of own land, of its seasonality. The stratified representation of the “food basket” superimposes met to fish, fish to cheese and fruit to vegetable and overall is placed “che cherry” (on the cake) that becomes the coveted summit: another macroscopic formal error, because our view is of perspective type, with optical converging toward a point. Moveover just as nutritionists teach, healthy alimentation can’t be compartmentalized, don’t exist

containments band, extra virgin olive oil, that is near to summit - in some pyramids – is used to spice vegetables and bread: food is equilibrium, harmony, not insulation.
Are we sure that healthy alimentation is inside or outside the pyramid?
Which pyramid? Because literature has produced and produce a lot of them, adding mistakes on mistakes; there is always a new food pyramid with a new formal mistake, and form is substance, overall the symbolic form! Water, for example, is situated on the faces and not inside the compartmentalized sections, physical activity is situated under the pyramid and it seems to translate the impossible challenge to conjugate the movement subjected to the monolithic weight of pyramid! And if I respected every prescription food, and if I eat only lying on armchair, watching TV, will I be evenly ensured in weight?
And if I eat using a smartphone in multitasking mode? How much distraction am I eating? There is efficiency, result of a careful process in which we perceive the taste savoring slowly, we feed the eyesight with which we "eat" for 90% and we educate the nose "we taste before with nose, everything is in the nose, the world is in the nose […] there aren't words, news neither more precise then ones nose receive". (Calvino.I., 1972)

3. Conclusion

The teaching use of "food pyramid" results absolutely distorcing. Children metabolize this monolithic form, in which it's not allowed elasticity, mobility, action. Pyramid is a big body with small head, and if we add two little feet, a circle on the top, and two hands on lateral faces, we get the fattest solid".
So, it must recommence to draw an alimentary texture made up of warp and weft, (physical) space and time (of waiting, of patience, of humility, of sharing), to educate to healthy alimentation through the three main ingredients ali-ment-azione.

The "Ali" (wings) emotional/creative ingredient, intangible, or else memory, memories, smells, herbs, scents, view, sounds, taste; the "Mente" (mind) scientific/rational ingredient of qualitative and quantitative chemical-nutritional values; the "Azione" (action), physical/modal ingredient, or else habits, conviviality, playful/educational relations and products which activate virtuosos processes.

"An Italian cuisine understood as a unitary model, codified in precise rules, has never existed and still does not exist. However, if we think of it as a network of knowledge and practices [...] it is clear that an 'Italian' culinary style has existed since the Middle Ages". (Montanari M., 2020)

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International Conference
Dwelling on space
representation and safeguarding of its tangible and intangible heritage
Benecon | Prof. Arch. Carmine Gambardella UNESCO Chair on Landscape Cultural Heritage and Territorial Governance

Dominik LENGYEL, Catherine TOULOUSE How Visual Abstraction Safeguards the Intangible Heritage of Architecture

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Abstract
Architecture is generally considered to be a tangible cultural heritage. However, this heritage is the accidental remnant of an architecture whose meaning, spatial presence and visual appearance can only be explored and described in a tentative and hypothetical way. Such hypotheses, however, do not usually address decay, but rather the original state, which will forever remain unknown, if not the idea behind the architecture. Even if architecture in its long history has not been designed by architects in the modern sense, it is nevertheless always the result of an ideal concept, a creative will that has materialised. The aim of visual abstraction is to give form to this creative will. In line with the scientific hypothetical description of architecture, it shows the idea behind the realisation. However, this idea is not material, but immaterial. This becomes clear in the contrast between the tangible and this intangible, albeit hypothetical, heritage. The paper shows how visual abstraction is able to emphasise the intangible heritage of architecture, whereby it can simultaneously become part of the active vocabulary of today's architectural design activity.

Keywords: abstraction, idealisation, design, architecture, knowledge

Fig. 1: The amphitheatre of Dyrrachium today and how it might have been planned.

1. Selected projects
The projects selected here from the authors' portfolio show historical architectural sites, including World Heritage Sites, whose visualisation of hypothetical historical conditions was created in close collaboration between the authors as representatives of the discipline of architecture and the sciences of archaeology, historical building research and art history. The visualisations correspond to the direct translation of the respective scientific hypothesis, while the authors' photographs show either the very same architectural context or relevant comparative buildings. The photographs each depict the tangible cultural heritage, with historicity dominating at first glance. In most cases, this impression of historicity is reinforced by varying degrees of degradation. The visualisations, on the other hand, do not show the original appearance in any of the cases, which in principle will remain unknown forever, but rather the probable intention behind their realisation, the idea or the sum of the considerations that may have been accountable for their realisation.

Fig. 2: The view of the sea front of Dyrrachium from a distance today and how it might have been planned.

Fig. 3: The façade of the Colosseum in Rome and the vision of its counterpart in Dyrrachium.

Fig. 4: The spatial compositions of the basement of the amphitheatre at Pozzuoli compared with the entrance area as it might have been planned for the amphitheatre at Dyrrachium.

1.1 The ancient amphitheatre in Dyrrachium

So little remains today of the ancient amphitheatre in Dyrrachium, today Durrës in Albania, at the bridgehead of the crossing of the Adriatic Sea from Rome via the Via Appia as the western end point of the Via Egnatia to Byzantium, that it is difficult to imagine the site as an amphitheatre. In addition, the few remains have been covered with a supposedly protective layer of concrete, which even obscures the material integrity. The tangible heritage is literally hidden, fortunately to a large extent in underground corridors, those parts of the access system that allow the amphitheatre to be unquestionably unique, resulting from its arrangement rotated in relation to the surrounding terrain. But even from these later

findings, enough information can be derived to form a picture of a probable design concept that may have formed the basis for its realisation [1]. The intangible heritage here is the intellectual achievement of constructing an amphitheatre in a completely asymmetrical and unique way and also arranging the entrances to the rows of seats completely irregularly. The intended image, however, must have been clear: the usual amphitheatre as an expression of the identity of the Roman empire with an exterior that corresponds to expectations, both in its long-distance effect and in its details.

Fig. 5: The passage to the audience area in the Vienna Burgtheater and one of its models, the presumed conception of the visual appearance of one of the vomiteries of the amphitheatre of Dyrrachium.

1.2 Die ancient metropolis Pergamon

Much more of the ancient metropolis of Pergamon has been preserved and, above all, much more can be seen than of the not insignificant city of Dyrrachium, but this is mainly due to the fact that the city mountain on which the metropolis was located is no longer used as a settlement area, while the Roman city extension, which is likely to have been similar in structure to that of Dyrrachium, is almost completely built over today. In any case, sufficient research has been carried out on Roman city structures on flat plains and buried cities such as Pompeii or Herculaneum provide sufficient material for intensive study. The situation is different on slopes such as those of the city mountain, which are now almost completely devoid of traces of antiquity due to earthquakes and other erosion. But here too, there are sufficient finds to suggest that the entire mountain, at least its western, southern and eastern slopes, were almost completely built on. This image differs considerably from the current state, so much so that the physical model of the mountain, which until its closure for renovation of the Pergamon Museum Berlin, shows it as a largely open park landscape in which the large buildings were positioned like solitary structures.

Fig. 6: The city mountain of Pergamon today and as assumed for the year 200 CE.

Fig. 7: The Altar of Zeus, which today stands as the Pergamon Altar in the Pergamon Museum in Berlin, and in its presumed original urban context around 200 CE as part of the skyline of the upper part of the city.

In contrast, the visualisation, on the basis of which the authors will design the new physical model for the time after the reopening in a few years, shows the city mountain as a real metropolis. This idea is supported, among other things, by the visualisation of the city skyline as an introspection, i.e. seen from within the city. It strongly suggests that even in ancient times terraces might have been laid out in such a way as to create overwhelming visual impressions [4]. Both the planning of the layout of the city, whether actually planned in the modern sense or successively through consecutive design initiatives, but in particular the construction of special structures such as terraces, show the intention behind architecture as intangible cultural heritage.

1.3 Bern Minster

Bern Minster, an exemplary representative of architecture from the new era, still stands today and, thanks to extensive restoration work, may no longer have its original materiality throughout, but it still has an almost original appearance. The reason for the research on the first century, a large compendium and new standard work, for which numerous visualisations were created in close cooperation with specialist researchers, but also to illustrate several book chapters by other authors, was the realisation that the cathedral did not follow a single construction plan, but rather that the planning was changed as construction progressed [5]. This circumstance is suggested by details in the realisation which, firstly, make little sense in the current spatial concept and, secondly, would indeed produce a consistent image for a different spatial concept. A central component was therefore the visualisation of the presumed idea of the unrealised spatial concept. In addition, however, it was intended to give the intermediate phases of the realisation a visual appearance which, as in the projects of antiquity described above, should not correspond to the actual appearance but to the presumed underlying idea, which, according to the researchers involved, is much easier to describe than the actual appearance. The texture of stone surfaces that are no longer preserved, for example, would be entirely speculative, whereas the form is argued to be well-founded. In all three examples, this is by no means a matter of a design preference for grey tones rather than polychromy. On the contrary, the scientific certainty of the geometry is much higher than that of the polychromy or the joint pattern of the stones. In favour of an overall higher scientific certainty of the visualisations, many aspects of architecture are therefore abstracted from physical reality, not as a loss, but for the purpose of focusing on the aspect of geometry, the aspect with the highest scientific certainty. In order to emphasise the importance of knowledge being in focus, the concept developed by the authors for the visualisations shown here is called the "visualisation of uncertainty", consisting of the two parts Design of Abstraction and Virtual Photography.

Fig. 8: Bern Minster today and in the period 1529-1588 CE as seen from the opposite bank of the River Aare.

2. Conclusion

Architecture consists not only of haptic testimonies, but also of ideas and concepts that are the basis of every realisation. Not only recognising this as an independent cultural heritage, but also making it visible and thus allowing it to enter the active vocabulary of architecture today as visual inspiration, is possible through a focused visualisation of the hypothetical idea behind the realisation [6]. In this way, the material heritage is neither replaced nor relativised. However, it is supplemented, and this supplement is ultimately independent of the material heritage, it is based on it, but can even outlast it if the decay of the material heritage continues. Either way, it is a value in its own right, albeit a hypothetical one [2,3].

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International Conference
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Maria Natale Legal rules in progress
From the protection of “works of art” to the safeguarding of intangible cultural heritage

Maria Natale

Abstract
The "tangible - intangible" dualism refers to the existence of two realities which are, at least apparently, very different from each other; surely, the material one has established itself as dominant. Even in the legal world, which lives on intangible rules, the consideration about materiality has been predominant, taking on different characteristics according to different centuries. This essay, through the selection of some legal provisions adopted from the beginning of the 20th century, aims to demonstrate how persistent the identification of cultural heritage with "things" of art has been in the Italian legal system.
Thus, through a historical-juridical approach we aim to answer two questions: when did the turning point towards a different consideration of cultural heritage take place? When did heritage protection begin to include intangible assets?
In this way, before turning attention to the innovation brought by the UNESCO Convention for the protection of intangible cultural heritage, the extraordinary innovative perspective of the Italian Constitution must be underlined. The debate that took place in the Constituent Assembly on these topics was decisive in giving life, within the constitutional rules, to the original and very broad concepts of culture and cultural heritage.

Keywords: Cultural heritage - Historical development of rules about cultural heritage - Italian Constituent Assembly – Intangible heritage.

1. From the protection of “things” to the safeguarding of cultural heritage
The "tangible - intangible" dualism refers to the existence of two realities which are, at least apparently, very different from each other. Historical analysis confirms that, between these two realities, the tangible has established itself as the dominant one. This approach is certainly evident in some fields such as architecture or engineering in which it’s undeniable that the notion of materiality is historically associated with the selection and use of physical materials for the creation of works and buildings. But this consideration is also true for law. Even in the legal world, which lives on intangible rules, the consideration about materiality has been prevalent, taking on different characteristics according to different centuries.
It is undeniable that this concept has influenced the protection of what can be defined as cultural heritage. Materiality has historically had pre-eminence in defining the content of the historical and artistic heritage.
To understand how intrinsic, the identification of cultural heritage with material things, is in Italian legal culture, we can refer to the two legislative initiatives that preceded the most important Bottai law: the Nasi law (L. 185/1902) and the Rosadi-Rava law (L. 364/1909).
The Nasi law, which came into force on 12 July 1902, had a very limited field of application. It was the first unitary, albeit incomplete and disorganized, law regarding cultural heritage. Its rules were applied to "monuments, buildings and movable objects that have antiquity or artistic value" (article 1). It established the so-called "Single Catalogue" of monuments and works of historical, artistic and archaeological interest: the cataloging of the "things" was the specific result of that attention towards the protection of the heritage, which had manifested itself, since the end of the 19th century, "not least

encouraged by a new national pride, which was taking root in even very different environments, not necessarily resulting in nationalism and fascism". [1]
The Nasi law paved the way for the next one Rosadi-Rava law (L. 364/1909). [2]
The aspect of certain originality of this law was the introduction of the inalienability of cultural heritage. The "things" that were owned by the State or other public or moral bodies were subject to an obligation, defined as "notification": the public interest of the "things" obliged private subjects, holders or owners of "things of important artistic or historical interest", to observe certain behaviors. Furthermore, against the danger of the dispersion of cultural heritage, it was established that the State could assert the right of pre-emption. In this way, the law introduced stronger constraints to protect the national cultural heritage, and demonstrated an important change, although prudent, in the definition of the relationship between public interests and private property. [3] Thus, the law and its implementing regulation of 1913 (Royal Decree of 30 January 1913, n. 363) sealed the birth of the so called *Soprintendenze*, which were the clear manifestation of the need for intense administrative structure serving cultural heritage.
The absolute lack of reference to the landscape and natural beauty was filled only thanks to the interest of Benedetto Croce: the bill - called "For the protection of natural beauty and properties of particular historical interest" - became the law 778/1922. [4] It was fundamental for subsequent legislative approaches, but it was also at the basis of a singular dystonia that characterized the Italian legal system: the existence of a line of separation between landscape and cultural heritage, such as the first element was necessarily extraneous to the second one. It's a legal characteristic that can't be considered extraneous to the general configuration of the rules, that were both rigidly characterized in the repressive sense of abuses and rigid defense of "things".
Respecting this approach of rigidity and materiality, they established the basis of Italian legislation at the beginning of the 20th century. Thus, the set of these provisions makes us understand how ingrained the identification of cultural heritage with "things" has been in legal culture.
In 1939, two laws, which represented two fundamental texts regarding the protection of cultural heritage, profoundly innovated the legal system. [5]
However, both laws show the perfect adherence to the notion of materiality of the legal asset to be protected.
The first of the two laws, so called the Bottai Law (law n. 1089 of 1939), is an emblematic text to exemplify that heritage was identified only with "things" of artistic and historical interest.
The article 1 of the Bottai law, in fact, provided that it applied to "things, immovable and movable, which present artistic interest, historical, archaeological or ethnographic, including: things involving paleontology, prehistory and primitive civilizations; things of numismatic interest; manuscripts, autographs, correspondence, notable documents, incunabula, as well as books, prints and engravings of a rare and valuable nature. Villas, parks and gardens of artistic or historical interest were also included.
It is evident that the formulation of the law was in line with a very old tradition, the most ancient, according to which the notion of cultural heritage is perfectly identifiable with works of art and with all the material expressions of art itself. In this way, the law demonstrates how the mentality of jurists has always considered materiality an essential qualification. And this notion, included in the Bottai law, has persisted: the Bottai law has represented, for almost sixty years, the main regulatory reference in the field of cultural heritage and has constituted an essential reference for the Italian Constitution.
The law n°1947 of 1939 extended protection to what was not included in the Bottai law, but it had the merit of going beyond the aesthetic notion of cultural heritage.
Cultural heritage, far from being considered a manifestation of aesthetic values, is considered the most significant testimony of human history. Therefore, the legal system had to safeguard cultural heritage, not so much for its own individuality, but in consideration of the interrelationships with the spatial context and with natural and social dynamics.
These rules constitute a highly valuable regulatory framework. Since the early years of the 20th century, legal culture has been able to develop a highly coherent and effective regulatory system, often taken as a model by other national legislation. It is a valuable framework even if it contrasts with a reality that often manifests a backwardness of mentality in the management of cultural heritage and landscape. [6]

2. A new approach: towards the protection of the intangible

The set of rules, adopted in Italy around the beginning of the 20th century, shows how persistent the identification of cultural heritage with "things" of art has been in the Italian legal system Thus, through a historical-juridical approach we aim to answer two questions: when did the turning point towards a different consideration of cultural heritage take place? When did heritage protection begin to include intangible assets?
These questions allow us to reconstruct the stages of development of rules which have progressively included intangible assets in the category of cultural assets.
In this way, before turning attention to the innovation brought by the UNESCO Convention for the protection of intangible cultural heritage, the extraordinary innovative perspective of the Italian

Constitution must be underlined. The debate that took place in the Constituent Assembly on these topics was decisive in giving life, within the constitutional rules, to the original and very broad notions of culture and cultural heritage.
Italy is among the few modern countries to have included the protection of the historical, artistic and landscape heritage among the fundamental principles of its Constitution, thus recognizing its characteristics as founding values of national identity. The fact that the principle of protection of artistic and cultural heritage has had the status of a constitutional norm (art. 9) is an achievement of extraordinary value.
The historical-legal analysis confirms how long and complex the process of developing rules to protect cultural heritage was. And even before that, it is worth highlighting the long process that took place to give birth to the idea that cultural heritage must be protected by law, even better if constitutional. After the Second World War, less than half of the states had developed any protection legislation. In this context, Italian legislation takes on extraordinary value.
Even more, the provisions of the Italian Constitution are very significant both for the rank to which the protection of assets is elevated and for the several clear references to profiles of immateriality.
The use of expressions with an immaterial content, such as culture, landscape, historical and artistic heritage, art, in their broadest sense, testifies to a new look at things. The legal categories directly linked to materiality had appeared to the Constituent Assembly as legally ineffective for protecting goods that were much more than “things”: they embodied values, they constituted the foundations on which to build the new republican legal system.
Behind those new rules there was the debate that had marked Italian legal culture between those, like Vittorio Emanuele Orlando, who denied the constituent function and the conception of the Constitution as a rule with prescriptive content, and those, like Costantino Mortati, who read the transformation of institutional structures as a sign of a broader transformation of the State. [7]
More generally, the constituent debate was marked by the comparison with a theme that became central in the nineteenth-twentieth century public law debate: the establishment of the "social rights", that pertain to the individual as part of society. It was an original but not entirely foreign dimension to nineteenth-century constitutionalism, which "substantiated it with a positive value of protecting the effective participation of all in the political and social life of the country". It was in this context that an "appreciable effort by the Constituents was also measured in dealing with the constitutional models developed between the nineteenth and twentieth centuries at a European and non-European level. An effort which achieved, at all, the important result of contributing to taking the debate away from danger of a suffocating provincialism by which Italian culture had been enveloped during the fascist regime". [8]
And in this context, it’s undeniable that the reference to culture, to freedom of art, to protection of artistic heritage was infrequent in the constitutional documents. In other words, it was not at all obvious that a Constitution would deal with such problems. These considerations allow us to understand the extremely original value of our Constitution due to its content.
Furthermore, the Italian Constitution not only had to archive obsolete terminology, but had to establish the pillars of a new reality: new principles capable of founding new social and cultural relationships. An iconic statement is found in Aldo Moro's report on the principles of social relations, in which the deputy clarified: "The constitutional declarations on education must not only serve to guarantee this fundamental right of the human person, but also to indicate the meaning , humanistic and ethical, of the State which, pursuing the aim of culture as the supreme collective interest, leaves people sufficient freedom to form themselves in an ethical and human sense and does not itself provide with arbitrary oppression, unlike the totalitarian State, the criteria of that which is humane and ethical". [9]
Aldo Moro's statement reveals the profound meaning of a belief: freedom is guaranteed only if education is capable of making the individual able to choose. The rules go and must go far beyond the protection of works of art and monuments. They must stand up to promote culture, protect history, art and heritage as a whole. The promotion of culture, the guarantee of education, the protection of heritage and landscape are part of a single plan: they are the pillars capable of giving substance to the ideal of a free community, bearer of a common ethical and human sense.
These considerations demonstrate the awareness of a lively and passionate humanism in post-war Italy, which was in a condition of objective economic difficulty, but which felt the need to protect a deep notion of heritage, legacy of the past and founding principle of a new national belonging and a new civil coexistence.
This is the first and true meaning of the protection of cultural heritage and gives us back the originality of the Italian Constitution.

- At an international level, the Convention for the Protection of Intangible Cultural Heritage had the merit of recognizing a new dignity of cultural heritage to practices, representations, expressions, knowledge and skills.
- However, the recognition of an immaterial cultural dimension is only one of the original features of the Convention. On a historical-juridical level, the definition of the object of protection starting “from below" is also notable. In fact, only what is recognized as such by the groups or individuals - who

create, cultivate and transmit it - can be recognized as intangible cultural heritage. Communities, groups, and in some cases individuals, are called upon to identify and recognize what they feel is part of their cultural heritage.

- Faced with the risks of globalization, intangible cultural heritage becomes essential for maintaining cultural diversity. The material cultural entity in itself is not relevant: the knowledge and skills that are transmitted from one generation to another have pre-eminence.
- In this field, it is important to underline that the fundamental principle for the inclusion in the UNESCO list is not the universal value of that property, but its representativeness of human diversity and creativity, its linkage to a community, but also to individuals: through that, they develop the sense of belonging to the same society. In this way, the Convention represents a historically important stage because it demonstrates the awareness of the need to push the boundaries of protection beyond the barriers of regulatory tradition.

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Antonella Giarra, Marco Annetta, Cristiana Spano, Marco Trifuoggi An integrated approach for a better quality of urban air: the MonAir Project.

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Abstract
Air pollution is one of the major environmental challenges nowadays. The Monair Project, conducted in the Campania municipality of Pomigliano D'Arco, deals with this problem with the aim of identifying the sources of emissions of air pollutants, their typology, and the impact of human activities on this phenomenon. The information collected during the period of study, from 2017 to today, will allow us to develop suitable strategies for mitigating air pollution.

Keywords: Air pollution, particulate matter, PAHs, environmental impact, health impact

1. Introduction
Urban air pollution is a multifactorial and global problem that has only been improving in recent years. It is a condition in which the quality of the atmosphere is altered by the presence of pollutants in concentrations that have a negative impact on human health and the environment [1]. Increasing urbanization, increased vehicular traffic, and intensified industrial activities have contributed to increase levels of air pollutants in urban areas. Some Italian industrialized cities, historically characterized by a high level of pollution, have undertaken a series of initiatives in recent decades, aimed at improving air quality. For example, Milan and Turin, two of the most polluted cities in Italy in the 1970s, are now showing a "*greener*" feel [2]. However, air pollution is also an emerging problem in southern Italian cities. In fact, since the autumn of 2015, the Regional Agency for Environmental Protection of Campania (ARPAC) has detected significant exceedances of the legal limit values for atmospheric PM_{10} concentrations in several municipalities in Campania. Both the average annual limit value, set at 40 $\mu g/m^3$, and the number of days of exceedance, equal to 35 days per year, were exceeded [3]. Alarmed by this evidence, the municipality of Pomigliano D'arco decided to undertake a collaboration with the Advanced Metrological and Technological Services Center (CeSMA) of the University of Naples Federico II, with the ACE-*Analytical Chemistry for the Environment* laboratory, undergoing environmental monitoring as part of the MonAir project. The project is aimed at researching the sources of emission of territorial air pollutants, their type, and the assessment of the anthropic impact on the phenomenon, to be able to identify possible environmental mitigation strategies. The project included a preliminary *screening* phase which, using different monitoring methodologies, assessed the levels of air pollution in different points of the territory and interpreted the data to identify any emission sources. The planning of the second phase of the project is based on the results of the exploratory survey and involves the construction of a monitoring network in strategic points of the territory. Pollution levels at these sites are monitored and mathematical models are applied to understand how pollutants spread through the air. The project debunked some false myths related to air pollution. It has been shown that pollution is not only linked to emissions from factories, incinerators and other industrial activities but is due to widespread and distributed emissions in the territory. Part of the project focuses on determining the amount of particulate matter in the air, focusing on the fractions identified as PM_{10} and $PM_{2.5}$, for which legislative limits are set. The acronym PM (Particulate Matter) refers to a set of solid and liquid particles, of different sizes and compositions, suspended in the air. Such species can be produced naturally through volcanic activity, forest fires, and the dispersal of pollen, spores, and Saharan dust. In addition,

they can also be produced through human activities such as vehicular traffic, industrial activities and the combustion of biomass and tobacco. These particles are not spherical and are classified based on their aerodynamic behaviour and size, distinguishing three fractions: the inhalable fraction capable of penetrating the human body through the nose and mouth; the thoracic fraction can reach the upper airway to the larynx; the breathable fraction can penetrate deeper into the lungs [4]. Larger particles generally cause irritation that disappear within a few hours, while smaller particles cause greater damage to the cardiovascular, respiratory, and hormonal systems, and promote the onset of cancer and cancer [5,6]. The hazardousness of particulate matter also depends on the species it carries, such as, for example, polycyclic aromatic hydrocarbons (PAHs). PAHs are molecules produced largely during the combustion of organic matter such as coal, wood, biomass, and oil. Many of these species need to be monitored as the International Agency for Research on Cancer (IARC) classifies them as probable human carcinogens [7,8,9]. The monitoring of congeners and their relationships also provides us with important information to identify emission sources [10,11].

2. Material and methods

To monitor these air pollutants, the "*Dual Channel*" instrument was installed at the municipal building of the municipality of Pomigliano D'Arco. The device is capable of sampling large amounts of air and depositing atmospheric particles on a quartz filter. The particles are then analyzed to determine their composition and concentration, which allows the air quality to be estimated. Figure 1 shows the instrument used for the air sampling.

Fig. 1: SWAM 5 Dual Channel Sampler.

3. Results and discussion

From the chemical analyses conducted on the filters and the subsequent interpretation of the data obtained, it was deduced that there is a closely correlated trend between PM and PAHs. These species tend to follow a seasonal profile, with lower concentrations during the summer and higher during the winter, due to domestic heating and the increased use of boilers, stoves, and fireplaces. Figure 2 shows the annual trend of PM_{10} and $PM_{2.5}$ in the period June 2018-March 2019 and the figure 3 shows the annual trend of PAHs in 2022.

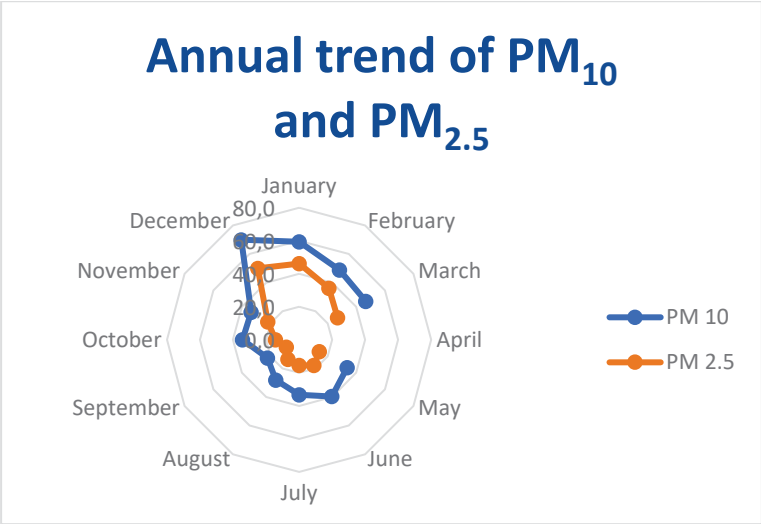

Fig. 2: Pomigliano D'Arco, annual trend of PM_{10} and $PM_{2.5}$ in the period June 2018-March 2019.

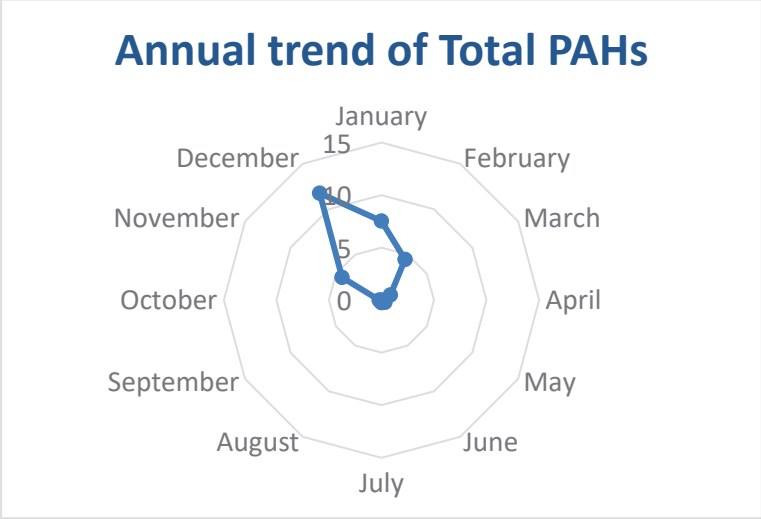

Fig. 3: Pomigliano D'Arco, annual trend of PAHs in 2022.

In addition, further data obtained show that meteorological conditions greatly influence the concentration and distribution of these pollutants: wind helps to disperse particles, while rain and thunderstorms break down dust on the ground.

4.Conclusions

Air pollution is affected by multiple contributions, due to meteorological, natural, and anthropic factors. Often the amount of pollutants, such as PM10 and PM2.5, exceeds the legal limits. Given their toxic action, it is necessary to take measures to reduce emissions and mitigate the phenomenon of pollution. Cities can incentivise shared and sustainable mobility, such as public electric transport and cycling; harnessing renewable energy such as solar, wind and electricity, rather than fossil fuels; improve the regulation of vehicular traffic, for example by requiring the use of alternate number plates; create vertical parks and gardens to take advantage of vegetation's ability to clean the air of these pollutants.

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Andrey V. VASILYEV Research of Environmental Polliution Near to the Places of Development of Oil and Gas Fields in Russian Federation

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Abstract

This paper is devoted to the problem of research of environmental pollution near to the places of developement of oil and gas fields. Results of complex experimental researches of negative impact of oil-containing waste in regions of development and exploitation of oil and gas fields in Russian Federation are described. In number of cases increased values of oil containing waste and heavy metals were determined in soil and in water environment. For oil wells of Mogutovskoye field acute toxicity of soil samples near to the wells and increasing of maximum permissible concentrations of methane were determined. Results of quantitative chemical analysis of soil samples and of monitoring of toxicological impact of oil containing waste in areas of different oil fields of Samara and Orenburg regions of Russian Federation by using of biological testing methods are considered. Results of analysis are showing that a number of samples are having increased toxicity and are causing acute toxic effect to the test-organisms green algae *Chlorella vulgaris* Beijer and *Scenedesmus quadricauda* (Turpin) Brébisson, crustaceans *Daphnia magna* Straus. In number of cases increased values of oil products was observed. Results of the atmosphere air monitoring near to the mothballed wells of the Mogutovskoye oil field was Almost twice the excess of $MPK_{m.s.}$ of methane near to the mothballed wells of the Mogutovskoye oil field was observed. Thus, it was determined that negative impact of oil-containing waste in areas of oil fields it is complex in nature and may cause significant ecological risks for air, water and soil.

Keywords: Oil-containing wastes, impact, research, oil and gas fields, development, pollution

1. Introduction

Oil containing waste may cause complex negative impact to the soil, air and water medium and pose a great danger as for the humans as for the biosphere in total [1-8, 12, 13].

For the development of the effective methods and solutions to reduce negative impact of oil containing wastes to the biosphere it is necessary to carry out ecological monitoring [7, 9, 10, 14]. Results of ecological monitoring allow us not only to get real values of substances, but also to determine the ratio between a certain concentration of a substance which is polluting the environment, and the likelihood of a negative impact on human health, to estimate ecological risks of negative impact to the biosphere.

The actual task is a complex research of environmental pollution near to the places of developement of oil and gas fields. The purpose of reserxch described in this paper is to carry out comprehensive environmental monitoring of negative impact of oil containing wastes in areas of development of oil fields and to get new experimental data.

2. Materials and methods of research

Selection of the methods of ecological monitoring during the impact of oil containing waste and oil products to biosphere should be made taking into account available sources of pollutions and the kinds of pollutions: chemical, biochemical, microbiological etc. [2, 6-8].

Oil containing waste may have high degree of toxicity [7, 9-11, 14, 15]. One of efficient approaches for the determination of the degree of toxicity of the soil and water objects polluted by the oil containing wastes and by the oil products is using of the methods of biological indication and of biological testing [6, 9, 11, 14], giving us an objective integral estimation of the quality of environment and grounds for forecasting the state of ecosystems.

Complex approach in carrying out environmental monitoring of oil containing wastes (combination of methods of biological indication and of biological testing, methods of quantitative chemical analysis, radiation control etc.) with systematic observation is allowing us to judge not only the quantitative characteristics of pollutions, but also about perspectives of community structure changes, productivity of populations and about the sustainability of ecosystems.

It should be noted that for the estimation of negative impact of oil containing wastes it is necessary to carry out researches not only of the waste itself but also the land areas and water objects near to the places of development of oil and gas fields, oil containing wells etc. In particular, the analysis of soil ground samples, bottom sediments, radiation control, measurements of parameters of air environment etc. it should be carried out.

When conducting quantitative chemical analysis of oil containing waste on the presence of oil products it is reasonable to use federal environmental regulation (PND F) 16.1:2.21-98, for heavy metals – federal environmental regulations (PND F) 16.1.40-03 (cadmium, cuprum, lead, zink), FR.1.31.2010.07281 (nickel), federal environmental regulation (PND F) 16.1:2.3:2.2:3.57-08 (aluminum). When determining the percentage of components of oil containing wastes it is necessary to determine oil products (federal environmental regulation (PND F) 16.1.2:2.2:2.3.3.64-10), humidity (Russian Sate Standard 2477-2014, federal environmental regulation (PND F) 16.2.2:2.3:3.27-02), ash content (federal environmental regulation (PND F) 16.2.2:2.3:3.29-02), the hydrogen index (federal environmental regulation (PND F) 16.2.2:2.3:3.27-02).

During the estimation of toxic impact of oil containing wastes in soil and in water objects it is reasonable to use green algae *Chlorella vulgaris* Beijer and *Scenedesmus quadricauda* (Turpin) Brébisson, crustaceans *Daphnia magna* Straus [2, 9, 10, 13] (federal environmental regulation (PND F) T 14.1:2:4.12-06, 16.1:2:3:3.9-06, FR.139.2007.03222, FR.139.2007.03223 etc.).

3. Results of experimental research of environmental pollutions near to Yakushkinskoye field of Samara Region of Russian Federation

In Sergievsk district of Samara region of Russian Federation soil samples were analyzed in the area of production wells of Yakushkinskoye field, taken in the different distances from the wells.

Table 1

Results of laboratory researches of soil samples near the well No 1027 and at the distance 1 m from the well of Yakushkinskoye field of Samara region of Russian Federation

Name of the component (indicator), unit of measurement	Result of measurement and attributed measurement error (uncertainty)	
	soil sample near the well No 1027	soil sample at the distance1 m from the well No 1027
Cadmium (gross form), mg/kg	b.d.l.	b.d.l.
Cuprum (gross form), mg/kg	47.09±14,13	58.09±15.10
Lead (gross form), mg/kg	b.d.l.	b.d.l.
Zink (gross form), mg/kg	b.d.l.	52±18
Nickel (gross form), mg/kg	26.7±6.94	43.12±11.21
Aluminum (gross form), mg/kg	1.01±0.41	1.29±0.52
Oil products (gross form), mg/kg	26.67±10.67	29.41±11.76

Note to table 1: b.d.l. – below detection limit.

For production well No 1027 it was determined increased content of heavy metals (Cu, Ni, gross form) and of oil products.

4. Results of experimental research of environmental pollutions near to Mogutovskoye field of Orenburg region of Russian Federation

Pollutions of soil and of air, radiological characteristics near to oil pipelines and mothballed oil wells in the area of Mogutovskoye field of Orenburg region were also investigated. Oil pipeline is shown in fig.

1. Measurements of gas emissions near the well No 107 of Mogutovskoye oil field of Orenburd region are shown in fig. 2.
Results of laboratory research of soil samples in area of the well No 107 of Mogutovskoye field of Orenburg region are shown in table 2. Analysis of results of measurements is showing that near to the well and at the distance 2.5 m from the well there is a significant content of oil products and of zink (gross form).

Fig. 1: Oil pipeline in Mogutovskoye oil field of Orenburd region.

Table 2

Results of laboratory researches of soil samples near the well No 107 and at the distance 2.5 m from the well No 107 of Mogutovskoye field of Orenburg region

Name of the component (indicator), unit of measurement	Result of measurement and attributed measurement error (uncertainty)	
	soil sample near the well No 107	soil sample at the distance 2,5 m from the well No 107
Cadmium (gross form), mg/kg	0,75±0,30	b.d.l.
Cuprum (gross form), mg/kg	10,8±3,2	17±5
Lead (gross form), mg/kg	b.d.l.	b.d.l.
Zink (gross form), mg/kg	72±25	52±18
Nickel (gross form), mg/kg	b.d.l.	b.d.l.
Aluminum (gross form), mg/kg	b.d.l.	b.d.l.
Oil products (gross form), mg/kg	1150±290	300±75

Note to table 2: b.d.l. – below detection limit.

Analyses of samples taken near the well No 103, and also near to the oil pipeline of the Mogutovskoye field of Orenburg region, are showing the increased content of oil products.

Fig. 2: Measurements of gas emissions near the well No 107 of Mogutovskoye oil field of Orenburd region.

Results of biological testing of soil samples taken near to the wells No 103 and No 107 with using of test-objects algae *Scenedesmus quadricauda* and crustacean *Daphnia magna* are showing that the studied samples have an acute toxic effect. For the samples of soil taken near to the well No 103 by algae a change in the fluorescence level (inhibition) 94% was observed (without diluting the water extract), by daphnia - mortality 100% (without diluting the water extract). For the samples of soil taken near to the well No 107 by algae a change in the fluorescence level (inhibition) 92% was observed (without diluting the water extract), by daphnia – mortality 100% (without diluting the water extract).
The state of the atmosphere air near to the mothballed wells of the Mogutovskoye oil field was estimating with using of gas analyzer GANK-4 by methane, carbon monoxide, limiting hydrocarbons and hydrogen sulfides content. At the maximum permissible single concentration ($MPK_{m.s.}$) of methane (approximately safe level of exposure) in atmosphere air 50 mg/m^3 in a number of points of measurements exceeds were observed: in the area of well No 103 the average concentration of methane was measured equal 88.5 mg/m^3, in the area of well No 107 the average concentration of methane was measured equal 95.9 мг/м^3. Thus, almost twice the excess of $MPK_{m.s.}$ of methane was observed. An insignificant exceeding of maximum permissible concentration for hydrogen sulfide was also found near to the well No 107. According to other parameters of atmospheric air, no exceeding has been determined.
In results of measurements of gamma-radiation and of volume activity of radon in the air near to the oil field and the mothballed wells of the Mogutovskoye oil field no excess of admissible norms was detected.

5. Conclusions

Complex experimental researches of negative impact of oil containing wastes in the areas of development and exploitation of oil and gas fields were carries out.
Results of monitoring of toxic impact of oil containing wastes in areas of different oil fields of Samara and Orenburg regions of Russian Federation are showing that the number of the samples are having increased pollution by oil containing products and an acute toxic impact. Results of quantitative chemical analysis of samples, including pipelines oil wells and pipelines, are also showing that, in some cases, there is an increased content of oil products and of the some heavy metals.
Almost twice the excess of $MPK_{m.s.}$ of methane near to the mothballed wells of the Mogutovskoye oil field was observed.
Thus, it was established that negative impact of oil containing wastes in the areas of oil fields it is complex in nature and may cause significant ecological risks as for air and water environment, as for the soil.
Results of this work are allowing us to carry out more efficient and quality monitoring of negative impact of oil containing waste to the humans and to biosphere, to develop the measures to reduce negative impact.

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Rosaria Parente, Elif Hasret Kumcu, Giuseppe Ciaburro **THE IMPACT OF FLOODS ON AGRICULTURAL TERRITORY: AN APPROACH BASED ON REMOTE SENSING**

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Abstract

Floods are a serious natural hazard that can cause extensive damage to people and property. Adequate knowledge of the territory can help reduce the impact of floods, allowing prevention to be better planned and the economic risk to be quantified. In a recent study, researchers used aerial observation to identify and quantify damage to agricultural land in a large area of Southern Italy after a flood event. The airborne multisensor platform used by the researchers was composed of an Itres CASI1500 hyperspectral camera complete with INS inertial platform and GPS antenna. The integration of the sensors with specific flight plans and the comparative reading of the data on specific software platforms has made it possible to develop multiple topics aimed at simplifying the complexity of anthropic and natural phenomena not easily detectable with a traditional human-oriented approach. The very high-resolution precision of the camera allowed a visual assessment of the damage. A first estimate of the debris-affected surface in a strip of land was obtained in a GIS environment using the SAM algorithm and visually interpreting the false-color and natural-color representations of the CASI data. This study demonstrates that aerial observation can be an effective technique for identifying and quantifying flood damage. This information can be used to improve prevention plans and reduce the impact of these natural events and to plan awareness campaigns on the potential of green marketing to alleviate the consequences of floods.

Keywords: floods, natural disasters, green marketing, remote sensing, hyperspectral sensor

INTRODUCTION

Floods are among the most devastating natural hazards in the world and cause the greatest percentage of deaths and property damage. The impact of floods can be mitigated with adequate knowledge of the territory, which allows prevention plans to be better organized with an appropriate analysis of the areas at risk, which allows the resulting economic risk to be appropriately calculated [1]. Climate change is responsible for an increase in the probability of floods occurring and an increase in the extent of the danger, while it is certain that demographic and economic development causes a continuous increase in the vulnerability of many areas subject to flooding [2]. Floods can cause extensive damage to agricultural areas. Floodwaters can erode soil, damage infrastructure and agricultural equipment, and destroy crops.

Crops are among the commodities most vulnerable to floods. Water can damage or destroy plants through drowning: Water can suffocate plants, preventing them from breathing and absorbing nutrients. But floods also cause sediment transport, in fact the water can transport sediments which can cover the plants, preventing them from receiving light and heat. Finally, a flood can cause infestations of parasites and diseases: Floods can favor the spread of parasites and diseases, which can damage or destroy plants [3].

The crops most sensitive to floods are those that have a poorly developed root system, such as horticultural crops and fruit crops. The most resistant crops, however, are those that have a deep root system, such as cereal crops. Floods can also damage or destroy agricultural infrastructure and equipment. Floodwaters can indeed erode the soil: Soil erosion can damage roads, paths and irrigation canals. Floodwaters can also carry debris: Waterborne debris can damage fences, farm equipment and homes. Finally, excess water can cause electrical failures: Electrical failures can interrupt agricultural activities, such as irrigation and harvesting [4].

Flood damage to agricultural areas can have a significant impact on the local and national economy. Economic losses can lead to production losses, in fact, the loss of crops can lead to a reduction in agricultural production and an increase in food prices. Income losses are also possible, in fact production losses can lead to a reduction in the income of farms and agricultural workers. All this inevitably causes huge job losses in the agricultural sector. It may be of considerable importance to be able to appropriately evaluate the economic risk that a flood may entail, but to do so new tools must be used that allow us to automatically evaluate the extent of the damage [5].

There are several measures that can be taken to mitigate flood damage to agricultural areas. These measures can be divided into two categories: Prevention and adaptation measures. The former aim to reduce the probability or intensity of flood events. These measures include the construction of dams, embankments, and drainage channels. Adaptation measures, on the other hand, aim to reduce the impact of flood events. These measures include the use of flood-resistant crops, crop diversification and the adoption of sustainable agricultural practices [6-8].

Floods are a serious problem for agricultural areas. Flood damage can have a significant impact on local and national economies. It is important to take mitigation measures to reduce flood risk and mitigate the impact of flood events that occur. There are many examples of damage caused by floods to agricultural areas: In 2023, floods in Emilia-Romagna (Italy) caused billions of euros in damage to the agricultural sector. 42% of the utilized agricultural area (UAA) was affected by the events, with production losses of over 1.5 billion euros. In 2022, floods in China caused more than 10 billion euros in damage to the agricultural sector. Rice, corn, and cotton crops were severely damaged. In 2021, floods in India caused more than €5 billion in damage to the agricultural sector. Wheat, barley, and cotton crops were destroyed. These examples highlight the importance of taking mitigation measures to reduce flood risk and mitigate the impact of flood events that occur.

Green marketing activities should include strategies to prevent damages caused by natural disasters. In this context, campaigns that promote environmental sustainability, reduce the effects of climate change and raise awareness on water management issues stand out. Green marketing should organize effective campaigns to raise public awareness about the reality of climate change. Climate change is an important factor causing extreme rainfall and flood events [9-12].

In order to promote the effective management of water resources, green marketing can organize campaigns focusing on water conservation and effective water use. Green marketing can be used in urban planning to promote environmentally friendly infrastructures. For example, environmentally friendly infrastructure such as waterproof green spaces, rainwater harvesting systems and erosion control measures can reduce the risk of flooding. Encouraging the transition of agriculture to environmentally friendly methods can reduce erosion and water pollution. Green marketing can facilitate this transition by providing farmers with support in switching to environmentally friendly practices. By organizing campaigns to combat water pollution, the problem of water pollution that causes floods can be alleviated. Environmentally friendly waste management can reduce the impact of industrial activities on water resources [9].

Green marketing can be an effective tool to educate and raise awareness of communities about flood risk. Campaigns that encourage community participation can help local people become more prepared and resilient to floods. It can also foster innovation by introducing and supporting environmental technologies. Solutions such as smart city technologies and flood forecasting systems can be marketed effectively. Green marketing can increase the flood resilience of societies by promoting sustainable practices, together with awareness and education campaigns to prevent floods [13].

In a study examining the changes in travel plans resulting from flood disasters, individuals' image perceptions were analyzed. In this context, it has been revealed that tourists who decided not to travel due to floods believed that the weather conditions would be bad, the atmosphere would be depressing, and the destination was generally unsafe. The media generally tends to publish live reports on the most negatively affected areas. Perceived concerns about safety may arise from the media's tendency to present stories about water pollution, flash floods, and severe weather forecasts. The three main reasons for the decision not to visit relate to the general state of the destination, indicating that these perceptions are largely driven by sensational media coverage. To reduce confusion regarding the extent of the disaster and the location of affected areas, marketing organizations and those responsible for communicating disaster-related information should not 'regionalize' affected areas but instead refer to each region individually. While communicating with a national audience, one must use the space individually. The tourism market needs to be informed about areas not affected by floods so that they

can consider alternative destinations if they review their current travel plans. Marketing organizations are advised to work closely with the media and other organizations likely to convey disaster-related information to ensure that the visitor market remains informed about the actual security situation of the destination. This can reduce personal safety concerns and ensure that relevant news stories portray the event objectively [14-15].
Green marketing strategies for flood-affected areas should aim to promote sustainable tourism, adopt nature-friendly practices and increase environmental awareness of the community. In this context, the importance of sustainable tourism can be emphasized by organizing environmental education programs for local people and tourists. It is important to launch campaigns to raise environmental awareness through social media, local press and interactive events. During the rebuilding process in flood-affected areas, it is important to adopt environmentally friendly and energy efficient infrastructures. The use of local products in tourism can contribute to sustainable development. You can promote ecotourism by preserving natural beauty and complying with sustainable tourism standards. It is important to involve local people in processes and encourage community participation in tourism management. Adopting environmental certifications to support green marketing strategies gives confidence to tourists and can contribute to the promotion of sustainable tourism [16-19].
In this study, aerial remote sensing was used to identify and estimate damage to agricultural land in a large area of Southern Italy. Due to the variety of phenomena found on the ground in the times following the flood event, the research group chose to use an airborne multisensor platform consisting of an Itres CASI1500 hyperspectral camera complete with INS inertial platform and GPS antenna. The integration of the sensors with specific flight plans and the comparative reading of the data on specific software platforms, according to a scientific protocol developed by the researchers, allows the elaboration of multiple themes aimed at simplifying the complexity of anthropic and natural phenomena not easily detectable with a traditional human oriented approach.

CASE STUDY: FLOOD OF 12 AUGUST 2015 IN CALABRIA (ITALY)

On the night between 11 and 12 August 2015, a coastal area of Calabria, in Southern Italy, was hit by a devastating flood. The rainfall, which was concentrated in a short period of time, reached record levels, causing extensive damage in Corigliano Calabro and Rossano. On 14 August 2015, a hyperspectral and photographic remote sensing flight was carried out over an area of approximately 141 km2 in Calabria. The flight was carried out in the time slots before dawn and local solar noon, to obtain the best synchronous acquisition with respect to the reality of the locations [20]. The sensor used, an Itres CASI-1500, was configured for 36-band spectral acquisition with a pixel resolution of 1 m on the ground [21].

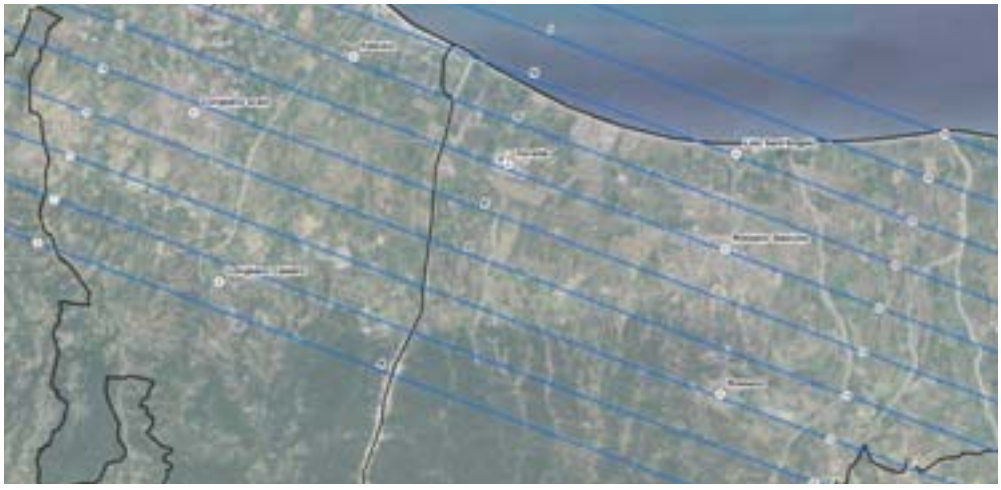

Figure 1: Ultra-high resolution hyperspectral and photographic remote sensing flight planning.

To ensure uniform coverage of the area, 10 parallel running lines were designed, with a 20% overlap between the lines. Given the characteristics of the sensor and the type of expected spectral data, the aerial scan was planned in the local solar zenith time slot, between 11:30 and 15:35 local time. At the end of the flights, the hyperspectral and photographic images acquired, together with the aircraft's attitude and flight position data, were appropriately archived according to organizational methods functional to the subsequent image pre-processing phase. The image pre-processing process images

was aimed at correcting radiometric and geometric errors and georeferencing images through the following activities: differential correction of GPS data, processing of inertial data, radiometric calibration (correction) of images and orthorectification.

Occasional floods, during a flood event, leave clear traces of debris on urban and rural areas. The spectral signature of debris can be automatically identified over large areas using similarity criteria. This approach is particularly effective where the spectral contrast between the debris and the affected surface is high, as in the case of roads, railways, and other artificial surfaces. In rural areas, where spectral contrast is reduced, the visual interpretation of hyperspectral data in their natural color and false color representations allows the path of debris flows to be identified more effectively. To evaluate the areas subject to debris deposits, the Spectral Angle Mapper (SAM) algorithm was used. It is an algorithm for evaluating the similarity between a measurement and a spectral signature taken as a reference. From a strictly mathematical point of view, an N-channel hyperspectral measurement is a vector in an N-dimensional space. The SAM calculates the angular distance between the measurement and a collection of pre-defined spectral signatures and gives the measurement the same thematic label as the closest reference signature. The advantage provided by SAM is that two similar spectral signatures but with different brightness, whether due to the presence of shadows or to normal intrinsic variability of the observed surface, appear to have low or zero angular distance. This reduces the possibility of misclassification due to these factors, especially in urban areas, where they are more frequent.

For the processing of remote sensing data in this mission with the SAM algorithm [22], the reference spectral signatures were collected in the same CASI images, corresponding to the major watercourses. Figure 2 shows some examples of the results of SAM processing, with a zoom of the natural color images acquired by the PhaseOne camera.

(a)   (b)

Figure 2: Comparison between a flooded area (a) with a high-resolution image and the identification of flooded areas with the SAM algorithm (b).

The very high-resolution detail allows a visual quantification of the damage. A first estimate of the surface affected by debris in this strip was calculated in a GIS environment based on the SAM algorithm, the visual interpretations of the false color and natural color representations of the CASI data.

CONCLUSIONS

In this work, aerial observation was used to identify and quantify the damage to the agricultural territory of a large area of Southern Italy. Due to the diversity of phenomena found on the ground in the times following the flood event, the research group chose to use an airborne multisensor platform composed of an Itres CASI1500 hyperspectral camera complete with INS inertial platform and GPS antenna. The integration of the sensors with specific flight plans and the comparative reading of the data on specific software platforms, according to a scientific protocol developed by the researchers, allows the elaboration of multiple themes aimed at simplifying the complexity of anthropic and natural phenomena

not easily detectable with a traditional human-oriented approach. Ultra-high-resolution precision allows for visual measurement of damage. A first estimate of the debris-affected surface in this strip was calculated in a GIS environment based on the SAM algorithm, visual interpretation of the false-color and natural-color representations of the CASI data.

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Maria Vittoria Bramante Cultural Heritage: from the Faro Convention to the Cultural Routes of the Council of Europe

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Abstract
This Convention is based on the idea that knowledge and use of heritage form part of the citizen's right to participate in cultural life as defined in the Universal Declaration of Human Rights. The text presents heritage both as a resource for human development, the enhancement of cultural diversity and the promotion of intercultural dialogue, and as part of an economic development model based on the principles of sustainable resource use.

Keyword: Faro Convention, Cultural Routes, Cultural Heritage, Identity

1. The Faro Convention
«Cultural geography» describes the privileged area of research in the field of the right to cultural and identity heritage, material and immaterial heritage. Referring to the various instruments of the Council of Europe, in particular the European Cultural Convention (1954), the Convention for the Protection of the Architectural Heritage of Europe (1985), the European Convention on the Protection of the Archaeological Heritage (1992, revised) and the European Landscape Convention (2000), the right freely to participate in cultural life is enshrined in the United Nations Universal Declaration of Human Rights (1948) and guaranteed by the International Covenant on Economic, Social and Cultural Rights (1966). A cultural heritage is a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time; b a heritage community consists of people who value specific aspects of cultural heritage which they wish, within the framework of public action, to sustain and transmit to future generations.
Convinced of the importance of creating a pan-European framework for co-operation in the dynamic process of putting these principles into effect, the Parties agree to promote an understanding of the common heritage of Europe, which consists of: a all forms of cultural heritage in Europe which together constitute a shared source of remembrance, understanding, identity, cohesion and creativity, and b the ideals, principles and values, derived from the experience gained through progress and past conflicts, which foster the development of a peaceful and stable society, founded on respect for human rights, democracy and the rule of law.
The Parties recognise that: a everyone, alone or collectively, has the right to benefit from the cultural heritage and to contribute towards its enrichment; everyone, alone or collectively, has the responsibility to respect the cultural heritage of others as much as their own heritage, and consequently the common heritage of Europe; c exercise of the right to cultural heritage may be subject only to those restrictions which are necessary in a democratic society for the protection of the public interest and the rights and freedoms of others; and the Parties undertake to: a recognise the public interest associated with elements of the cultural heritage in accordance with their importance to society; b enhance the value of the cultural heritage through its identification, study, interpretation, protection, conservation and presentation; censure, in the specific context of each Party, that legislative provisions exist for exercising the right to cultural heritage; d foster an economic and social climate which supports participation in cultural heritage activities; e promote cultural heritage protection as a central factor in the mutually supporting objectives of sustainable development, cultural diversity and contemporary creativity; f recognise the value of cultural heritage situated on territories under their jurisdiction, regardless of its

origin; g formulate integrated strategies to facilitate the implementation of the provisions of this Convention.
There is awareness, already attested in the Santiago Declaration, of the inseparable relationship between environment, heritage and quality of life, a triad of the articulations of cultural geography. The Parties undertake to utilise all heritage aspects of the cultural environment to: a enrich the processes of economic, political, social and cultural development and land-use planning, resorting to cultural heritage impact assessments and adopting mitigation strategies where necessary; b promote an integrated approach to policies concerning cultural, biological, geological and landscape diversity to achieve a balance between these elements; c reinforce social cohesion by fostering a sense of shared responsibility towards the places in which people live; d promote the objective of quality in contemporary additions to the environment without endangering its cultural values. To sustain the cultural heritage, the Parties undertake to: a promote respect for the integrity of the cultural heritage by ensuring that decisions about change include an understanding of the cultural values involved; b define and promote principles for sustainable management, and to encourage maintenance; c ensure that all general technical regulations take account of the specific conservation requirements of cultural heritage; d promote the use of materials, techniques and skills based on tradition, and explore their potential for contemporary applications; e promote high-quality work through systems of professional qualifications and accreditation for individuals, businesses and institutions. In order to make full use of the potential of the cultural heritage as a factor in sustainable economic development, the Parties undertake to: a raise awareness and utilise the economic potential of the cultural heritage; b take into account the specific character and interests of the cultural heritage when devising economic policies; censure that these policies respect the integrity of the cultural heritage without compromising its inherent values. In other words, the Faro Convention constitutes the framework discipline of regulation within the Council of Europe aimed at using the instrument of the recognized Cultural Itinerary, which clearly presents itself as a key to tourism development, clearly of excellence and accredited.

2. Cultural Routes of the Council of Europe

The "geography of the anthropic and natural heritage" is evidence of a cohesion based on the commonality of European values, practices and traditions, and requires the adoption, sub specie iuris, of a supranational policy of custody, promotion and dissemination of this heritage intangible.
The Cultural Itineraries of the European Council, which, starting from 2005, in line with the Faro Convention, sanction first of all the importance of the link of the local community with its own region, and, from here, with the criterion of territorial, thematic, religious, naturalistic, the network is built from place to place. Local participation, through Cultural Routes networks, clearly attracts new activities, encourages sustainable tourism, while ensuring that economic use does not threaten the heritage itself.
In point of law, a Cultural Route of the Council of Europe, otherwise referred to as a European Cultural Route, is the legally relevant certification of a network that promotes, ratione loci, culture and history for the commonality of values, memories , knowledge, practices of an identity nature, which is released by the Council of Europe, following a procedural process aimed at sacramentalizing, regulating it with the attribution of a specific image, a cultural program, geographically anchored, in which they identify and the European community foundations are recognized and, periodically, their relevance and contemporaneity are verified.
The Council of Europe Cultural Route implies the association of the Council of Europe logo with a 'route', and does not have the character of stability. it, as an accredited certified European cultural route, was born with the declaration of the Camino de Santiago de Compostela in 1987. Subsequently, given the cruciality of the action of protection, safeguard and promotion of the common European heritage, the sensitivity of the States and Community Institutions led to a definition of the bodies and procedures.
On 23 October 1987 the Council of Europe adopted the Declaration of Santiago de Compostela in which it is stated that the sense of humanity of society, the ideals of freedom and justice and the trust in progress have constituted real principles which, over the course of history, have shaped the different cultures of the States and have contributed to establishing the truly, specifically, European identity. The "European cultural identity" is the result of collective memory, which acts like the links of a network, and mutually cross paths towards a single direction, eliminating distances, diversity, borders, linguistic barriers.
The «Council of Europe Cultural Route» decided «the revitalisation of one of those roads, che sono proprie dell'eredità culturale europea in quanto memoria e bene tangibile coevo e fruibile, e dichiara il percorso tradizionale che conduce al santuario di Santiago de Compostela that route che highly symbolic in the process of European unification, e che will serve as a reference and example for future projects», with an identifying mark.
With this Declaration the Council of Europe concretely identifies an element of cohesion and attraction for the development of the European community in terms of citizenship and protection of the common cultural heritage, both tangible and intangible, inviting the community of citizens to follow this path, to

live it as "tourists of their own traditional heritage", to exercise a subjective, personal right, which will then be consecrated in the Faro Convention of 2005 to cultural heritage.
In particular, the Council elevates the route to an exemplary model for institutions and citizens in order to evaluate community memory, recognize physical paths as attractors of personal elements and different national cultures.

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Elif Hasret KUMCU DIGITAL MARKETING APPLICATIONS IN GREEN MARKETING

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Abstract
Green marketing, which promotes environmentally friendly and sustainable products, has gained traction in recent years, driven by growing consumer awareness of environmental issues. Digital marketing has emerged as a powerful tool to support green marketing efforts, providing effective channels to reach environmentally conscious consumers. This study delves into the utilization of digital marketing in green marketing, assessing its effectiveness in promoting sustainable consumption patterns and driving eco-friendly product adoption. The findings shed light on the strategies and best practices for effectively integrating digital marketing into green marketing campaigns, fostering a more sustainable consumer landscape.

INTRODUCTION
Green marketing is the marketing of environmentally friendly and sustainable products. Digital marketing in this area aims to encourage the choice of green products by making it easier for customers to learn more about the products and assess the environmental impact of the products. Digital marketing can use tools such as online platforms, social media, email marketing and search engine optimisation to promote green products.
Blog posts, social media ads and email campaigns that highlight the features and benefits of green products can provide customers with more information about the product. Interactive content can also be created that allows customers to explore the environmental impact of products.
Digital marketing also makes it possible to visually display environmental certifications and quality certificates to promote green products, and customers can view these documents directly from the product pages.
Digital marketing aims to bring green products to a wider audience and help customers choose these products. However, digital marketing strategies need to be implemented effectively and customer expectations need to be managed correctly. Sustainable green marketing practices can effectively reach larger audiences in less time thanks to digital marketing applications. This study aims to examine how digital marketing is used in the context of green marketing and its effectiveness in promoting environmentally friendly products and practices.

GREEN MARKETING
Green marketing is a concept widely studied in the scientific literature, but it currently does not have a universal definition (Groening et al. 2018:172). Although it is generally understood as a marketing practice that raises environmental issues, this term is also expressed by other terms such as environmental, ecological or eco-marketing (Nunes, 2019:20). Charter and Polonsky (1999: 45) define green marketing as marketing or promoting a product based on its environmental performance or improvement. The late 1980s mark the first phase of green marketing, when the concept was introduced and discussed within the industry (Peattie & Crane, 2005:360). The anticipated emergence of a green wave has encouraged many marketers to engage in various forms of green marketing at the beginning of this first phase (Vandermerwe & Oliff, 1990:14). It has been seen as a very important concept that

aims to bring the activities of companies into a closer and more harmonious relationship with the environment (Majeed et al. 2022:14). Many marketers expected green marketing activities to lead to positive consumer responses, translating into growth in market share or sales.
Despite reports that environmental issues constitute one of the most important public concerns, market growth for green products has remained below marketers' expectations. The second phase of green marketing began in the 1990s, when marketers began to seek consumer feedback (Wong et al, 1996:272). Gradually, marketers realized that the consumer's concern for the environment and desire for green products did not translate into purchasing behavior (Schrum et al., 1995).
Since the mid-1990s, consumers have become increasingly aware of environmental and social problems (Strong, 1996). Green consumerism has emerged as a new force as critical consumers begin to demand social responsibility from companies (Guraˇu & Ranchhod, 2014). A green consumer is defined as a consumer who actively protects the environment by choosing green products by refusing to purchase products that harm the environment during production, use or final disposal, consume too much energy or have non-recyclable packaging. Green products are products that offer a variety of potential benefits to the environment because they are made from environmentally friendly resources, have the potential to save resources, can be recycled, and have minimal environmental impact at all stages of their life cycle (Biswas and Roy, 2016:213).

The third phase of green marketing is characterized by a deeper environmental awareness, a growing sense of corporate social responsibility and an increasing emphasis on sustainable development (Peattie & Crane, 2005: 365). Since 2000, green marketing, the application of more advanced technology, stricter government enforcement against misleading claims, government regulations and incentives, and closer scrutiny from various environmental organizations and the media have characterized the third phase (Guraˇu and Ranchhod, 2005; Ottman, 2007).). Companies communicate the environmentally friendly characteristics of their products, leading to the growth of a significant segment of well-informed green consumers (Maniatis, 2015: 220). Many green products have improved significantly and regained consumer confidence in the 2000s, leading some researchers to hypothesize that green marketing is now “making a comeback” (Ottman, 2007, p. 26). Green marketing covers a wide range of activities and trends in marketing activities that change products, production processes, packaging, labeling and advertising strategies, all aimed at meeting human needs with minimal environmental impact (Podvorica and Ukaj, 2019: 13).
Two trends are predicted to be inevitable in the near future of green marketing. First, the environmentally friendly/green approach will become more common (Hanas, 2007). Second, companies in developed countries will initiate international green marketing to expand their markets, increase sales, and benefit from the positive image of their green brands created in their local markets (Guraˇu and Ranchhod, 2005).

DIGITAL MARKETING

The American Marketing Association defines digital marketing as activities, institutions, and processes that leverage digital technologies to create, communicate, and deliver value for customers and other stakeholders (ama.org). The importance of digital marketing is increasing every year, especially as a means of providing customers with new features, attracting attention, and selling services and products (Ghorbani et al., 2021:1). As a result of the development of digital shopping and information technology, new challenges arise as internet marketing and social media have a significant impact on consumer behavior, forcing companies to find new ways to influence the consumer at every stage of their decisions (Bilkova, 2021:129).
Digital marketing is defined as an adaptable, technology-enabled process in which companies collaborate with customers and partners to jointly create, communicate, deliver and sustain value for all stakeholders. Digital marketing engages consumers with sellers electronically via email, websites, online forums and newsgroups, interactive television, mobile communications, etc. brings together based on information and communication technologies. It is also defined as the digital business transformation process that includes new marketing methods (Veleva and Tsvetanova, 2020:1).
The adaptive process enabled by digital technologies creates value in new ways in new digital environments. Enabled by digital technologies, organizations are developing core capabilities to jointly create value for their customers and themselves. The processes enabled by digital technologies create value through new customer experiences and interactions between customers. Promising directions for the development of digital marketing have been identified, including artificial intelligence, virtual reality, digital content management, mobile marketing and advertising, business-to-business marketing, electronic word-of-mouth marketing, and ethical aspects. Among the most important tools of digital marketing, social media and branded applications stand out, with the aim of effectively promoting products and services to consumers in the current business environment (Vieira et al., 2021:720).

Digital marketing itself is enabled by a set of adaptable digital touchpoints that span the marketing activity, institutions, processes and customers. As more offline customers shift to digital technologies and younger, digitally oriented consumers join the ranks of buyers (Bughin, 2015: 360), the number of touchpoints is also increasing. According to Putri (2021:88), to be successful in today's age, a company needs a marketer who has up-to-date knowledge of digital marketing tools and applications such as website, email, mobile, and interactive TV.
Digital marketing conceptualizes a one-size-fits-all digital campaign that delivers multiple customer benefits with a single click. It provides efficiency and effectiveness through digital advertising campaigns, operations and management (Pradhan and Nigam, 2018:13).
The digital marketing process includes the integration of computer and communication technologies, innovative application of digital tools, interactive digital marketing research and supporting market makers with data-driven marketing solutions, which is the new direction of future development.

DIGITAL GREEN MARKETING

Contemporary promotional policies of companies require the provision of relevant communication channels to increase green competitiveness. To achieve this, companies must implement increasingly complex competitive marketing strategies that combine traditional offline and online communications (Dementyev, Kwilinski, 2020: 110). The trend in modern marketing includes the complete digitalization of communication processes and the significant dominance of online channels to promote goods and services and disseminate information about company activities (Bozhkova et al. 2018.75). This digitalization and virtualization of communication processes driven by Industry 4.0 adjusts the nature of a company's interactive processes in the fields of management, finance, marketing and training (Artyukhov et al. 2021:4).
Social media; It is a new marketing promotion tool that allows companies to communicate with their customers while constantly monitoring the content, timing and frequency of social media conversations. Therefore, it is important to identify the benefits of social media marketing, apply best practices, and use experimental design (Dapko et al.2021:360).
Bashirpur and Mohammadyan (2019:25) identified the effective factors in individuals' tendency to purchase green products and found that ecological knowledge plays a more prominent role. Communicating ecological information through digital marketing channels is important in terms of accelerating consumer access to information. Digital marketing offers a variety of tools and strategies that can be effectively applied to the field of green marketing.
Social media marketing; Social media platforms are a popular tool for businesses to engage with consumers and promote their products. Social media is used to promote environmentally friendly products, share sustainability practices, and encourage consumers to adopt environmentally friendly behaviors. According to a study by Sprout Social, 62% of consumers believe it is important for brands to take a stand on environmental issues, and 58% of consumers would prefer to buy from an environmentally responsible company (sproutsocial.com).
Phenomenon marketing (influencer marketing); It is emerging as a popular digital marketing method where brands collaborate with social media influencers to promote their products. Brands can promote their environmentally friendly products and practices by partnering with eco-influencers who have a certain following. According to a survey by Morning Consult, 65% of consumers say they are more likely to purchase a product recommended by an influencer (morningconsult.com).
Email marketing; It is a cost-effective way to reach a wide audience with targeted messaging. Brands can use email marketing to educate consumers about environmentally friendly products and promote special offers. According to a study by Campaign Monitor, personalized emails have a 29% higher open rate and 41% higher click-through rate than non-personalized emails. (campaignmonitor.com)
Search engine optimization (SEO); It is the process of optimizing a website to rank higher in search engine results. Brands can use SEO to target environmentally conscious consumers who are looking for environmentally friendly products and services. According to a study by HubSpot, the top five search results on Google receive 75% of user clicks, highlighting the importance of ranking high in search results (hubspot.com)
Content marketing; It involves creating and sharing informative content designed to engage consumers and promote a brand's products. Brands use content marketing to educate consumers about environmentally friendly products, share sustainability practices, and encourage environmentally friendly behaviors. According to a survey by the Content Marketing Institute, 91% of business-to-business marketers effectively use content marketing to reach customers. (contentmarketinginstitute.com)
Digital marketing offers a variety of tools and strategies that can be effectively applied to the field of green marketing. Brands use social media marketing, influencer marketing, email marketing, SEO and

content marketing to effectively promote their environmentally friendly products and services and engage with environmentally conscious consumers.

Consumers of green products and services exhibit heterogeneity due to different socio-demographic structures, values, behavioral determinants, education levels and degrees of environmental literacy (Gleim, 2013:45). Therefore, it is very difficult to define the consumer category in the digital age and summarize the main features of the digital portrait of the green consumer. It is important. The portrait of the green consumer includes socio-demographic characteristics, psychological characteristics, behavioral characteristics and geographical determinants (Biswas, 2016: 212).

The processes of promoting green competitiveness are significantly determined by the dynamic and behavioral nature of consumers of green products and services, leading marketing strategies to develop green competitiveness to use a multi-channel digital approach, and continuous communication with personalized green consumers. Compared to other marketing strategies, multi-channel digital strategies take into account the heterogeneity of consumers of green goods and services, personalize them, establish integrated communication, ensure continuity of the purchasing process, consumer information and experience, use multimedia orientation and interact with consumers (Shi et al. 2013: 1164).

Establishing a scientific basis to increase the reliability and accuracy of the selection of digital marketing communication channels is important in the context of increasing the competitiveness of businesses in sustainable and green marketing practices.

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The Contactfood Platform

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Abstract

Contactfood is a **software platform** aimed at facilitating direct communication between organic agricultural producers and consumers, bypassing intermediaries and ensuring **transparency**. Furthermore, Contactfood encourages organic production, supports companies transitioning to organic farming, and provides consumers with a **traceability** system to assist them in choosing organic products, allowing them to access information about production events.

Keywords: organic production, traceability, direct communication, software platform.

1. Current State: Organic Agriculture in Administrative Choices

In our country, organic product sales have seen significant growth over the last decade, with a 133% increase when comparing 2021 values to those of 2011. With nearly 3.9 billion euros in sales and a 4% increase compared to 2020, domestic consumption represents the most significant segment of organic product consumption. This increase has affected all sales channels, demonstrating the increased interest of consumers in purchasing organic products. By choosing organic products, consumers show their support for ethical and environmental sustainability values, as well as a preference for products with Italian raw materials among their criteria for selection.[1]

On the other hand, in 2021, the European Parliament welcomed the "Farm to Fork" strategy, endorsing its recommendations. In the approved text, the members of Parliament emphasized the need for greater sustainability at every stage of the food supply chain and reiterated that everyone, from the farmer to the consumer, has a role to play in this regard. The parliamentary position demonstrates a sensitivity to the importance of sustainable, healthy, and respectful food systems, aiming to achieve the objectives of the European Green Deal related to climate, biodiversity, zero pollution, and public health.[2]

Indeed, within the framework of the Green Deal strategy, which aims to make the European Union greenhouse gas emissions neutral by 2050, organic agriculture plays an essential role. It can reduce air, water, and soil pollution, limit the consumption of natural resources, combat climate change and biodiversity loss, and provide healthy products.[3][4]

2. Project Objectives

Despite the administrative awareness of the growth in the organic market, it must be acknowledged that significant issues still remain, primarily related to a lack of knowledge of the involved parties (Producers and Consumers); this is also fueled by fears of counterfeiting that undermines the trust between the parties. The **Contactfood** project (**C**ontrolled product **O**rigin with a **N**ew **T**echnology for **A** "**C**onsumer **T**o **F**arm" **O**rganized and **O**pen **D**ialogue) aims to address these informational needs with the goal of fully leveraging the values of organic productions through the following activities:

- Develop and make available a tool that enables direct communication between organic agricultural producers and consumers: producers can communicate (directly) information about production methods and processing phases for each product batch, and consumers can learn about product characteristics and related production methods through a product traceability process;
- Support the transition of agricultural companies toward organic production, emphasizing their contribution to sustainability, including biodiversity conservation and animal welfare;
- Increase consumer confidence through accurate information and education about the characteristics and benefits of organic products in terms of food safety, nutritional value, and environmental sustainability.

3. Results: The Contactfood Platform

Neatec SpA, a leading company in the ICT sector, promoted and developed the Contactfood project, with the collaboration of the **Telematic University San Raffaele**. Contactfood is a software platform consisting of a web portal and a mobile application. The portal is further divided into two sections: a restricted access part (Producer Portal) and a public part (Consumer Portal).

3.1. Producer Portal

Designed as a tool for organic farm producers, this portal allows producers to independently and systematically upload information about their company, production methodologies, and events that mark the production process. As a first step, producers can register their company within the system through a configuration process. Subsequently, they can record production data (events) and batch codes introduced to the market, connecting them to ensure product traceability.

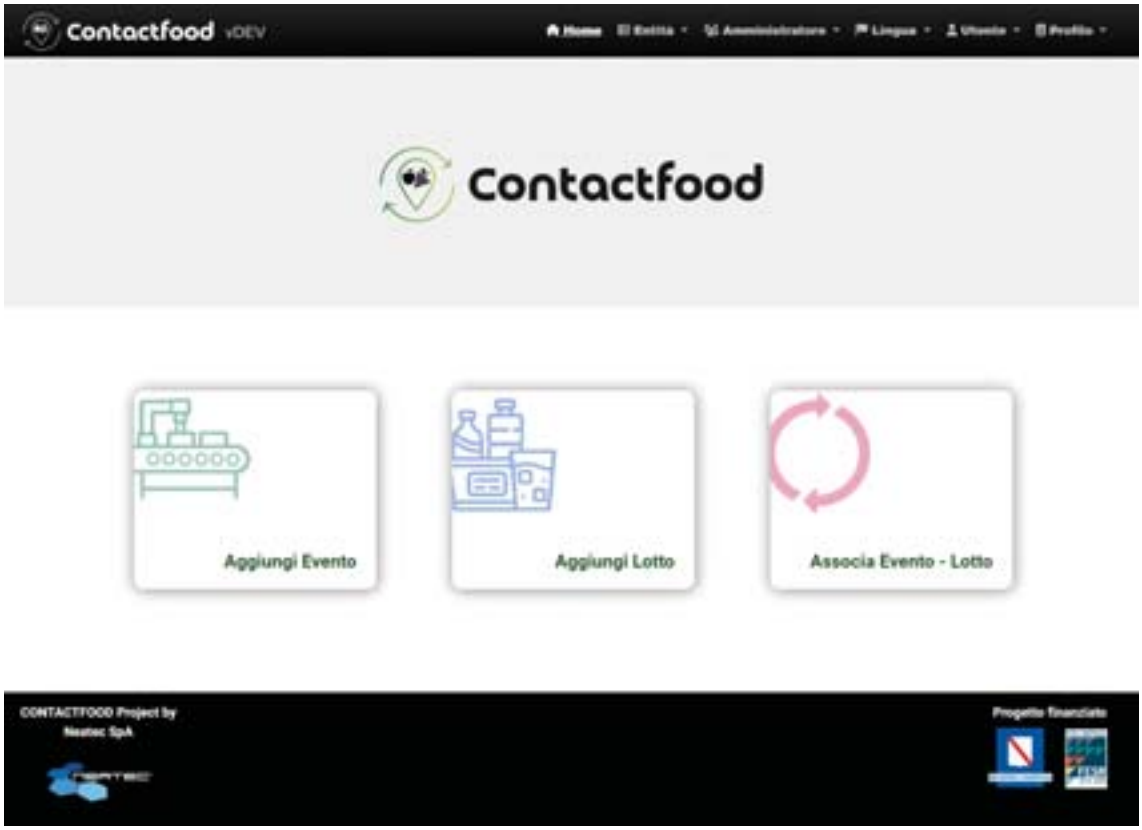

Fig. 1: Producer portal Homepage

3.2. Consumer Portal

Designed for a broader user base, this portal serves as the showcase of the Contactfood project and extends its focus to the other interested party, the Consumer, making them the beneficiary of field-collected data and a source of additional information themselves. The function of the portal is twofold: i) it serves as a tool through which consumer users can trace all stages of the supply chain, and ii) it is a space for interaction that enables producers and consumers to get in touch directly, exchanging ideas or feedback in a discussion **Forum**.

Fig. 2: Consumer portal Homepage

3.3. Mobile App

In response to the objective of supporting agricultural companies in the transition to organic farming and providing accurate information, the mobile app serves as a connection and comparison interface. It offers users an internal messaging system (Chatbot) to deepen their knowledge of organic agriculture, or to connect with experts in the field. Users can interact with the chatbot freely (by typing questions in natural language) or through a set of predefined questions to facilitate navigation. Through the app, users can also access the same features available on the web portal, such as traceability and consultation of the catalogue of companies and their respective products.

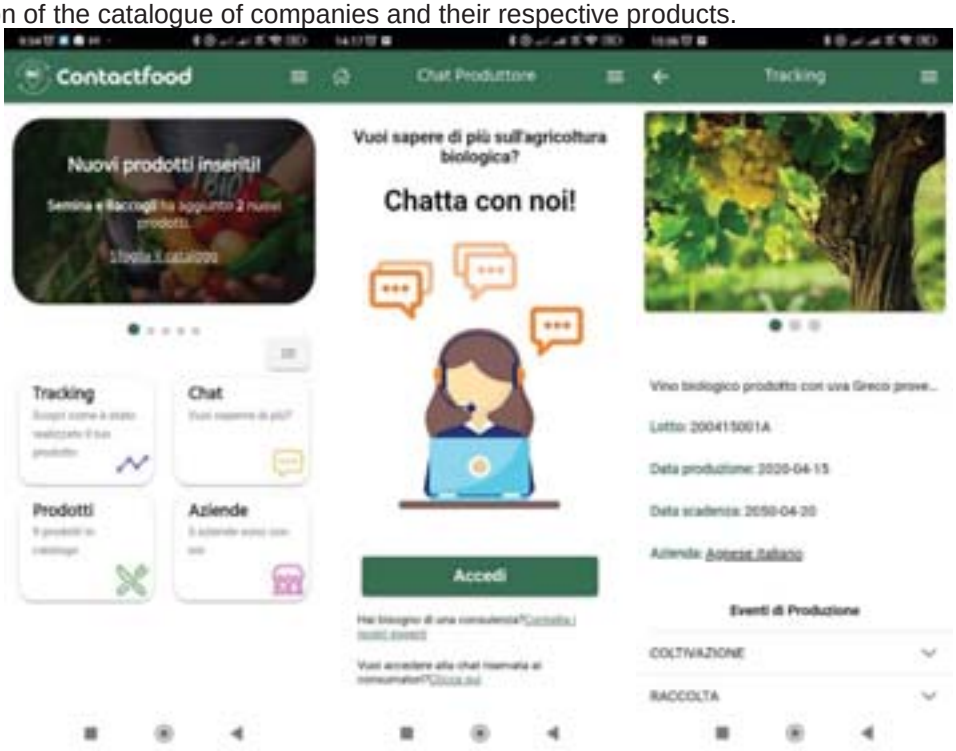

Fig. 3: App mobile pages

4. Conclusions

In response to recent administrative strategies that have strongly emphasized the need to promote organic production among producers/consumers and to improve its knowledge, Contactfood stands out as a project aimed at fulfilling these objectives. More specifically, Contactfood's intent is to yield innovation in the organic production process, where the novelty lies in the active and direct participation of all interested parties.

The platform is accessible and usable for free, offered by Neatec SpA as a service to the community thanks to the funding provided by the **Campania Region**. The web portal can be accessed at the link **contactfood.neatec.it**, while the mobile application is available for both Android and iOS devices and can be downloaded directly from their respective dedicated app stores.

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Ilaria Cavaliere, Dario Costantino Ghost Town Refuge. An innovative Project for the ghost town of Craco.

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Abstract
This paper aims at describing a redevelopment project for the ghost town of Craco, in Basilicata, thought to improve its role as a touristic place through an innovative intervention. The project exploits new technologies and materials to realize some pavilions, conceived to be modern, but also well integrated with the historical context.
This proposal does not mean to be the best one for this case study, but only a possible one, with the goal to help reflect on the possibility to use innovative techniques and materials for the enhancement of heritage, especially if damaged after a natural disaster.

Keywords: Architectural Design, Heritage, Digital Fabrication, 3D printing, Craco

1. Introduction
This paper aims at describing a project for the ghost town of Craco designed during the authors' degree thesis in 2020[6], at the department of Architecture, Construction and Design of the Polytechnic of Bari. The idea for the project was inspired by the Ghost Town Refuge Competition proposed by the Young Architects Competitions association in 2019.
Craco is a town in Basilicata, in the Southern Italy, which is completely abandoned because of some landslides that irreversibly damaged the place.
The challenge consisted in the architectural redevelopment of Craco, imagining a way to allow visitors to dwell among ruins. The competition rules required some specific facilities such as shelters for trekkers, some suites, a service centre, a restaurant, a library and an exhibition space, together with the design of panoramic and rest areas.

2. The project

2.1 History and information
Before the design phase, research to fully understand the case study has been carried on, distinguishing all the different expansions.
We decided to implement our historical analysis by flying through the abandoned alleys with an advanced drone that could film the inaccessible areas. Then we used some frames to create a digital twin of the town to improve both the analysis and the design process.

2.2. Landscape design
The soil of Craco is predominantly clayey and unstable. It is subject to continuous changes both in the physical and in the mechanical characteristics, due to suction, and volume changes because of variations in humidity. Moreover, the human settlement has involved cuts in the ground favouring the

[6] The thesis, titled *Architettura e Realtà Virtuale. Verso la definizione di metodi e modelli progettuali innovativi*, was tutored by prof. Giuseppe Fallacara. The members of the thesis group were Maria Lucia Valentina Alemanno, Ilaria Cavaliere, Dario Costantino, Alessandro De Bellis, Isabella Giordano.

creation of infiltration routes for water. Moreover, landslides have disrupted and slowly continue to alter the landscape [1, 2, 3].
The first step of the design process dealt with a targeted action to strengthen the soil. Therefore, we applied the principles of naturalistic engineering [4] and we hypothesized a series of terraces in the southern area of the city, designed to mend the east edge with the west edge. They develop according to the contour lines, reducing their visual impact. The walls of the terraces are made in *opus poligonalis*, that looks like traditional dry stone, but which is statically more efficient.
The terraced area is meant for agriculture, while the south-east area, that is adjacent to the road, is meant to remain natural, implementing the vegetation with species of the Mediterranean maquis used for soil reinforcement (juniper, broom, downy oak, etc.).

2.3 The water system

We also reasoned about a possible system to reuse superficial water, by hypothesizing some paths that water could follow. Inside the old town the paving was exploited together with the slope to create a flowing path that converges in some collection points, placed in correspondence of the chosen rest areas and panoramic places. All the terraces in front of the town are thought to have a slight slope aimed at distributing water directly on the cultivated soil.

2.4 The pavilions

Given the problems of the site, we established that all the new construction would be light and performing, so as not to weigh on the unstable ground; they also should have contributed to a water management system and recalled local shapes and materials. We decided to study minimal surfaces[7] to obtain thin vaulted shells [5, 6, 7] that somehow recall the traditional vaults visible among the ruins and that could also be used as water collectors. Water is collected thanks to the funnel geometry of the vertical structures, that have an underground tank on the bottom where it is purified and redistributed.
From a planimetric point of view, it was established that while gradually distancing themselves from the city, buildings were less and less bound to the configuration of the town, assuming more organic shapes: the restaurant, the café, the wellness center and the exhibition center, for example, have a configuration that blends with the existing structures, while the library and the office building appear completely devoid of formal links with the context, taking the contour lines as a reference.

Fig. 1: Masterplan of the project.

[7] Minimal surfaces are those surfaces that fill the space inside a given boundary having the least possible area. They work just like soap films and they were used in the past by the architect Frei Otto and the engineer Sergio Musmeci.

Fig. 2: Cross section of the southern area of Craco.

Fig. 3: Rendering of the restaurant and of the central square, with the library and the office building. Both the buildings are in the southern area of Craco.

Fig. 4: External and internal view of the suites, placed on the western side of Craco.

2.5 The building system

3D printing was considered the best option for the construction of the designed buildings. This choice is linked to a series of advantages: it does not require the same amount of formwork which a cast-in-place material would require, it requires less manpower and construction times are significantly reduced [8]. Moreover, 3D printing is particularly suitable for delicate contexts like Craco, since it offers the possibility to intervene with a higher precision and with less danger for workers [9].

The chosen material is a geopolymer concrete. Geopolymers are binders obtained from a chemical reaction of polymerization between silico-aluminous components and an alkaline liquid and they have equal or superior mechanical performance than concrete, they are highly resistant to heat and chemical attack, they are waterproof and they are compatible with stone material. Moreover, they are eco-sustainable, since the silico-aluminous component can be industrial waste material, like fly ash or blast furnace slag [10, 11].

We hypothesized to build the structure divided in parts, since it would be impossible to print a monolithic structure with such overhangs. A robotic arm placed on a railway can start printing the vertical structures correctly placed, while another one can fabricate the remaining parts with the help of a pre-cast soil, to avoid printed supports. All the pieces can be assembled with the help of custom centrings and then glass and a waterproof carbon fiber layer can be added. Carbon fiber would also work as a structural reinforcement. Moreover, a photovoltaic sheath aimed at providing energy both for the building and for other sustainable devices can be installed.

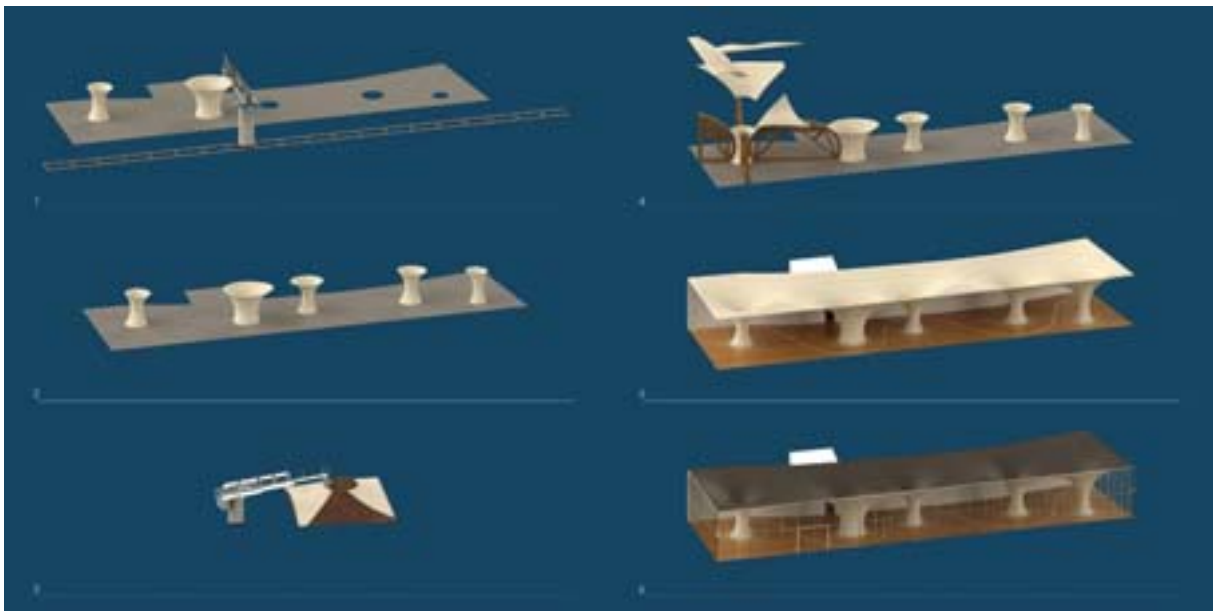

Fig. 5: Scheme of the construction process.

3. Conclusions

Many different choices could be done for the town of Craco and the restoration approach would undoubtedly be the most plausible for this case study, but it was decided to adopt a different strategy in compliance with the experimental approach adopted for this thesis. Of course, it is only one of the possible strategies and not necessarily the best, but it helped explore innovative ways to enhance heritage damaged by natural disasters by employing innovative technologies and materials, with a particular attention to sustainability.

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*Alexandrino Basto Diogo, Francisco Carlos Almeida Nascimento e Oliveira_***Architectonic conceptual paradigms - from vernacular to digital architecture**

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Abstract

The article intends to examine the transformative effects on architectural conception brought about by various representation tools and processes. The ideation of architectural artifacts is informed by methods and idiosyncrasies intrinsic to architectural knowledge. Representation processes serve as the medium through which these are crystallized.

There exists a dialectical relationship between ideation methodologies and representation methods, whether Autographic or Allographic. This interaction brings about consequences in morphology, spatial perception, and tectonics. Different modes of representation lead to distinct design practices and these practices, in turn, both shape and inform the exercise of architectural ideation, exerting a significant influence on the resulting architectural artefact.

The analysis of these representation processes can decode the associated design methodologies, revealing both the limitations and strengths inherent in the act of design.

By gaining insight into one's own architectural processes and methodologies, architects can critically engage with, and potentially demystify, narratives constructed by other disciplines, such as history and anthropology, which might analyze the architect as a case study.

We observe the strategies employed by architects in their project development, focusing on the theoretical foundations and the practical frameworks provided by varying representation tools and processes.

To fully understand the implications of Autographic and Allographic representation, it is vital to comprehend the construction process. This understanding elucidates how such representations influence the evolution of ideas, as well as the articulation of form and space.

The new representation techniques introduce new challenges to the professional practice of architects, digital design obliges to innovations on the teaching methodologies.

Keywords: representation processes, autographic process, allographic process, project methodologies, vernacular architecture, digital design.

1 Introduction

Architecture, as a discipline involves, encompasses both the spatial conception and the constructive realization of architectural artifacts. These dual aspects demarcate the architect's realm of influence, further substantiating the essence of the disciplinary content of Architecture.

The ideation process in architecture is significantly influenced by the medium used for representation. Thus, the chosen means of representation not only informs but also delineates the architect's conceptual methodology. This has ramifications for both formal expressiveness and the articulation of space.

William Mitchell (1944-2010), in discussing the interplay between drawing and construction, stated that "architects tend to design what they can build, and to build what they can design" [1]. While this dialectic might initially appear reductive and immutable, it holds profound significance for architectural practice. Any transformation in representation techniques or breakthroughs in tectonic innovations invariably lead to an evolution in both design methodology and the construction process. Such shifts have substantial implications for spatial and morphological definitions, expanding architectural horizons and amplifying the field's potential.

2. Thinking Through Action - Autographic Representation

In medieval times, the master constructor - a predecessor to the modern-day architect - concentrated the roles of architect, engineer, artist, and even scientist [2]. From this perspective, the architect can be viewed as an initiate, distinguished from the uninitiated or profane.

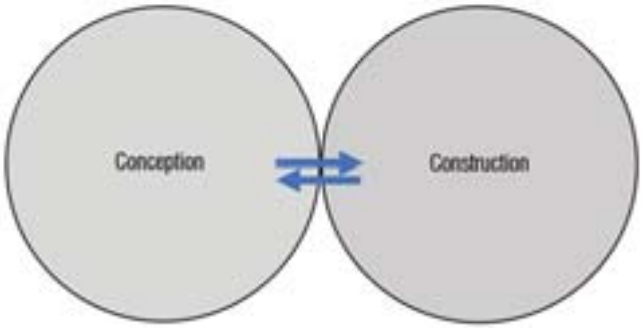

Fig. 1: Autographic representation scheme - representation made directly on the materials.

Their education echoed the medieval tradition: learning occurred within the workshop setting through hands-on engagement, emphasizing the master/apprentice dynamic. This educational model centered on disciplines like construction, painting, and metallurgy. Iconic figures such as Filippo Brunelleschi (1377-1446), Michelangelo (1475-1564), and Leonardo da Vinci (1452-1519) exemplify this formative process.

The master constructor draws heavily upon tacit knowledge, a type of understanding rooted in experiential learning. This knowledge stems not merely from sensory input, but also from practical know-how. Due to its deeply empirical nature, tacit knowledge eludes systematic codification and defies articulation through words or mathematical expressions, and this stands in contrast to propositional knowledge, which is based on explicit statements or propositions, independent of personal experience. According to Peter Dormer, the closer a craft aligns with art, the more challenging it becomes to systematize it through propositions.

These professionals materialized their cognitive model of a building, taking an active role in both its realization and the coordination of the construction process [3].

The described approach embodies an autographic model of representation (Figure 1), wherein the designers are also the builders. Consequently, the ideation of architectural artifacts is deeply tangled with technology. The form or morphology emerges from an intimate understanding of materials and the inherent possibilities within their transformation methods. The master constructor imparts both rationality and poetic essence to the material, tailoring techniques to fulfill the tangible expression of the architectural artifact.

Within this methodological framework, technique is foundational. Morphology is inextricably linked to technological constraints, with its delineation rooted in the tectonic possibilities [4].

The conception process is heavily influenced by technology and is a direct consequence of the representation methodologies and adheres to a constructivist paradigm wherein the shape is derived from tectonics. This stands in complete contrast to the functionalist and logical design thinking of the Modern Movement, encapsulated by the maxim, “form follows function.”

These divergent conceptual methodologies, stemming not only from distinct technological conditions but primarily from varied representation processes, produce not just different morphologies but also different spatial logics and modes of appropriation.

We see numerous examples, such as convents, that were designed with an intrinsic versatility allowing them to effortlessly accommodate varied functions, and in contrast, structures born from a strict functionalist logic often face significant challenges when repurposed for alternate uses.

In the master constructor's conceptual approach, representation, and construction coexist within the same temporal and spatial realm. The manual methods are emblematic of "thinking through action" (Figure 2), often serving as the singular genuine bridge between intention and expression [3].

Fig. 2: Autographic representation, master constructor materializes his idea directly, representation and construction coexist.

3. Building Trough the Drawing - Allographic representation

The introduction of drawing into the architectural ideation process brought a paradigm shift in project methodology. This change conducted to novel cognitive processes that had ramifications for the expressiveness and morphology of the architectural artifact; structures began to be depicted before their actual construction.

Drawing evolved into a pivotal mediator between conceptualization and realization. This transition enabled a departure from the traditional practices of the master constructor, who once relied on materiality as the primary conduit for manifesting his idea.

With the advent of drawing, the material and its transformative technique no longer hold a secondary role in the design process of architectural artifacts. Instead, geometry and its operational methods ascend, taking on a key role in the evolution of the architectural idea.

This paradigmatic shift results from alterations in representation media, leading to transformations in ideational and methodological approaches. Such changes have repercussions on workflow, representation methodologies, and the very modalities of learning and conceptualizing architecture.

The establishment of a new representation process paved the way for the emergence of the architect as a distinct profession, a development rooted in the knowledge promoted during the Renaissance. The nuances in representation techniques, academic training, and design methodology set architects apart from the traditional practices of master constructors.

This professional evolution was largely impelled by the incorporation of drawing into the design process. While architects operate within a 'thinking/drawing' paradigm, master constructors navigated a 'thinking/building' approach. In this new landscape, tectonics shifted from being a vehicle for ideational expression to solely serving the manifestation of the architectural artifact. Kolarevic describes this transition as “a history of dissociation,” wherein the architect's detachment from the construction site engendered a revamped approach to conceptualizing, designing, and actualizing architectural artifacts [5].

Leon Battista Alberti (1404-1472), a leading figure in the new design methodology, provided a crucial contribution to the foundational discipline of architecture with his seminal work, “De re aedificatoria”, published in 1485.

Alberti's practice mirrored the emerging spirit of the age, gravitating towards what would later be recognized as the Enlightenment concept. This was grounded in a classical education and a design-centric culture of design, as a conceptual basis, moving away, marking a departure from the former unsystematized, practical, and empirical approach.

Alberti advocated two-dimensional drawing as an essential instrument for both representing and designing architecture. In this context, drawing emerges as the cornerstone of the novel conception/construction paradigm in architecture, serving as a mediating force between these two integral phases of the architectural process.

The rigor and accuracy of technical drawings became instrumental in the transmition of ideas to construction teams. Alberti argued that “the drawing of the building is the original, and the building is its copy.” Highlighting this transformative methodological shift, Carpo properly stated, “what cannot be represented will not be transmitted, and what is neither represented nor transmitted cannot be imitated”; to this, one might add, nor remembered [4].

Architectural practice experienced a shift to become anchored in theory. The pedagogy evolved into a structured and treatise-driven approach, distancing itself from mere empirical knowledge. As Kolarevic properly notes, " theory served to provide the essence of architecture, and not the practical knowledge of construction” [5].

The act of conception became intertwined with the representation capabilities of drawing. It facilitated the representation of prospective structures. The meticulousness and exactitude of the drawing determined the clarity of the building's depiction and the faithful conveyance of design intents to the construction phase, thereby bridging the realm of design with that of construction.

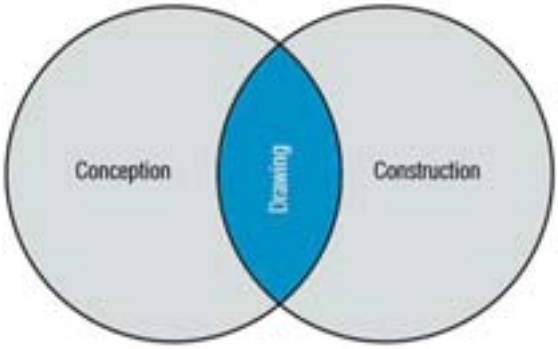

Fig. 3: Allographic representation scheme - representation made through drawing.

To articulate ideas for the tangible realization of architectural artifacts, drawing - utilizing perspective and other graphic conventions - emerged as the primary representation tool. This embraced an allographic approach, leading to the architect's detachment from the construction site [4]. Such a shift underscored the bifurcation of drawing from construction. Consequently, each could emerge in separate cycles, overseen by distinct entities, who might operate within different horizons or even function autonomously.
The bifurcation of responsibilities precipitated the differentiation of professions: the craftsman assumed the role of translating into reality the architect's mental envisioning of the architectural entity.
In the allographic paradigm, the drawing bridges the intangible realm of the idea with the tangible domain of construction. It not only facilitates communication of the proposed solution but also solidifies the conceptual evolution, enabling project analysis and progression. The architectural concept inherently possesses a material dimension. The ideation of the architectural piece prefigures its construction, integrating tasks that culminate in the tangible realization of the envisioned object.
In this framework, the centrality of drawing cannot be overstated. As Pye articulates, it represents “a declaration of the ideal form of the object to be made.” Adhering to Albertian principles, the expertise is appraised by how closely the realized object mirrors the architect's original conception (see figure 4) [6].

Fig. 4: Allographic representation scheme - representation made through drawing, construction is done by workers.

The allographic model manifests with the advancements in graphic methodologies. This intellectual position leans heavily on graphic representation as the fulcrum for materializing objects. Representation intermediates the conceptual act, enabling the conception and construction phases to be undertaken by distinct entities. Consequently, the technological facet of architecture can potentially drift apart from the ideational act - a shift that becomes increasingly apparent.
In this methodological framework, those who ideate the architectural entity are rarely involved in its actualization, replacing hands-on expertise with scholastic knowledge. This transition suggests a new paradigm where the act of actualizing can, in certain scenarios, give way to the act of conceptualizing.

Knowledge rooted in experiential learning gives way to formal, treatise-based understanding. Manual effort is supplanted by intellectual pursuit. The master constructor, once a craftsman deeply entrenched in his work, evolves into the “intellectual” architect. While this newfound emphasis on conceptualization

isn't solely detrimental, the detachment from the tangible building context diminishes the architect's command over and capacity for translating abstract ideas into tectonic realizations.
In this context, the role of the “constructor” emerges, with a practice centered solely on the act of building, devoid of conceptual input. The realm of conception becomes the exclusive territory of the architect.
The architect's increasing detachment from the construction site has unintended consequences. Most notably, it leads to a decline in mastery over the nuances of the construction cycle. This separation is also detrimental in the realm of structural understanding. A lack of firsthand experience with the construction process constrains an appreciation of the material's inherent qualities and the expressive potential of various architectural forms. By not being deeply involved in the construction, the architect inadvertently sacrifices a understanding of structural mechanics.
The advancements in graphical tools, combined with the scholastic orientation of the architect's training, inject a certain level of entropy into the conceptual process. This results in a paradigm shift, where design is increasingly separated from the actual act of building, leading to methodologies that scarcely engage with the tangible attributes of materials and their transformative processes.
Furthermore, the resulting entropy and growing distance between conception and construction extend the duration between the design phase and the execution phase. This delay not only makes the entire process more fragmented and time-intensive but also increases the susceptibility to errors and overlooked details.
The architect, removed from the tangible realities of construction, finds it challenging to anticipate the material implications of the conceived design instantaneously. When a design is represented, it often captures only a fragment of the overall construct, which, when expanded upon, might reveal inconsistencies. Take, for instance, the illustration of a building facade section. This representation might not necessarily align with or seamlessly extend to the entire construct of the architectural piece.
Carpo appropriately highlights this challenge, noting that shapes which prove challenging to draw and quantify were once deemed difficult, if not impossible, to build [4].
Throughout history, complex geometries, often referred to by Rafael Moneo as "forgotten geometries," have been employed as a means to challenge conventional standards of beauty and proportion [5]. While these geometries possess significant structural, spatial, and aesthetic potentials, their intricate nature poses challenges in conception, representation, and construction. As a result, workflows incorporating such geometries tend to be costlier and more time-consuming [4].
Carpo insightfully notes, “if (the architect) cannot design what is in his mind, in a way that others can do it for him, he can always try to do it himself”.
Antoni Gaudí (1852 - 1926) developed a unique method of representatión. This approach seamlessly combined spatial geometry manipulation with structural optimization. Intriguingly, he drew inspiration from the methods established by architect Heinrich Hübsch (1795-1863), who applied Giovanni Poleni's (1683-1731) graphic processes to architectural design [7].
Similarly, faced with the intricate design challenges of the Ronchamp chapel (1954), Le Corbusier resorted to techniques and representational logic reminiscent of autographic processes. Ultimately, it was through crafting a physical model that he could adequately depict the desired architectural space.

4. Digital Master Constructor

The advent of computers, along with the proliferation of digital information and communication technologies, revolutionized the nexus between representation and construction, delivering distinct methodologies and workflows. Indeed, as we transitioned into the 'Information Age,' the paradigm shift mirrored the earlier challenges posed by the Industrial Age, compelling us to rethink not just the design of buildings, but also their manufacturing and construction processes [5].
Digital media's introduction has led to transformative shifts in architectural design and communication. While drawing once stood as the sole intermediary between idea and construction, it's no longer alone. The digitization of mockups and physical models has become integral to the design cycle, leading to a broader emphasis on 'Representation' rather than just drawing [8].
This evolution in Representation, encompassing drawing, physical, and digital models, has catalyzed significant shifts in the architectural design cycle. The incorporation of digital tools in conception, representation, and construction signs a new paradigm.
With these advanced representation tools, architects are no longer confined to basic geometric designs. They can now explore complex geometries that were previously challenging to capture through traditional drawing. Furthermore, the days of relying solely on Cartesian referential processes are

vanishing, giving way to topological referentials anchored in computational methods - both heuristic and iterative.
Associative Design Formation and Generative Design, combined with Topological Formation, have ushered in a new era in architectural conception. This shift transcends the mere “shape” of an individual object, opening the way for a broader “Formation” process informed by shape grammar.
These transformative conceptual shifts are attributed to the advent of modern representation tools. The ramifications are profound, not just in the evolution of spatial morphologies, but also in the very construction of architectural artifacts.
Where once buildings were conceptualized, sketched, and constructed from paper drawings, digital information now drives the entire process. As William Mitchell rightly points out, contemporary architecture is conceived, documented, manufactured, and assembled with digital assistance, characterizing the architecture of the digital age [1].

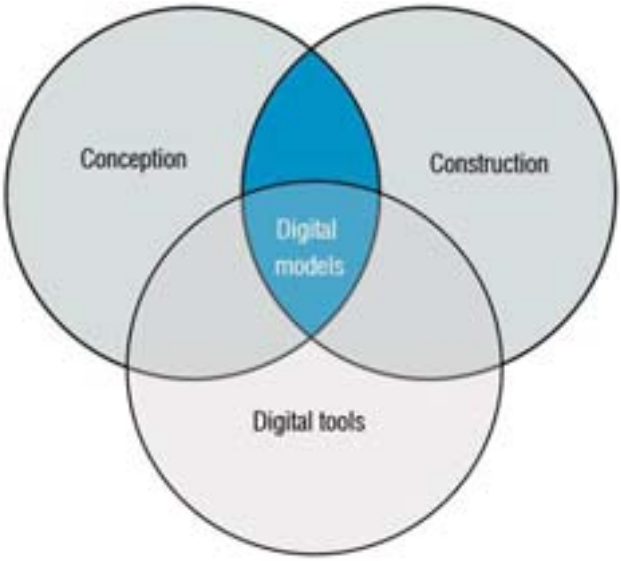

Fig. 4: Digital allographic representation scheme - representation made through digital tools, building an information model.

With the advent of computers and the surge in digital information, there has been a monumental shift in how architectural ideas are visualized and executed. The tools of representation have evolved, transforming from mere line-producing instruments to powerful platforms capable of constructing intricate digital models. This change has deeply influenced operational, cognitive, and methodological processes, resulting in significant impacts on architectural expressivity, morphology, and spatial conception. Instead of merely representing an idea, we now digitally construct that idea.
Historically, the allographic representation process began with a conceptual idea. This idea was then fleshed out through graphic exploration, such as sketches. The final phase involved a meticulous two-dimensional graphic representation, especially in detailed working drawings. Only then could the architectural concept be materialized into a tangible architectural object.
In the era of digital transformation, we witness the emergence of a “new autographic process” in architectural design (as illustrated in figure 5). This evolved workflow starts with an initial idea, which is then graphically represented and explored. This exploration progresses to sketches, which then evolve into both digital and physical models. These models are then converted into comprehensive digital architectural prototypes. Leveraging the rich data from these digital models, work site drawings are generated. Ultimately, these designs culminate in the tangible realization of the architectural concept, executed through manual, mechanical, or digital technological means.
In the traditional allographic model, ideas are represented using specific graphic methods that capture only select aspects of the design, effectively communicating the concept in a broad manner. However, with the advent of digital tools, this method of representation has been revolutionized. Instead of relying on two-dimensional graphical depictions, ideas are now constructed in a three-dimensional digital environment. This shift negates the exclusivity of traditional drawings as the primary means of communication. The emergence of the “digital continuum” disrupts the allographic representation model, as ideas are communicated more holistically through the digital construction of the envisioned object.
The individual conceptualizing the design now also has the capability to build the envisioned object within a digital realm. This is no longer just about representation; it's an embodiment of the idea conveyed through digital materiality. This digital articulation births a fresh tectonic understanding and a novel conceptual paradigm, shifting from the allographic to the autographic approach.

With the integration of CAD/CAM technologies, a seamless fusion of modeling, production, and construction is achieved. This system enables real-time modeling of an object while simultaneously determining its tectonic realization and physical manifestation.
The 'digital continuous' has steered in a transformation in the link between drawing (now evolved to “representation”) and actual construction. As Carpo clarified, the methods born from this paradigm “evoke an ideal and original autographic state” [4].
In this digital age, architects look back to the pre-Albertian model. The fusion of CAD/CAM technologies blurs the distinction between drawing (in the sense of conceptualizing) and building, enabling the same agent to both conceive and digitally construct.
This dynamic, positions the digitally crafted architectural work as the primordial revelation – the original entity. Consequently, the tangible architectural artifact is a reproduction of this digital genesis.
In this new paradigm, the 21st-century architect becomes a digital master builder, reminiscent of his predecessors master masons. Nevertheless, distinctions emerge due to the evolving production processes.
The agility and adaptability of this methodology empower architects to design and construct intricate objects efficiently and economically without the constraints of standardization. Complex geometries can be previewed and assessed in a digital realm, paving the way for their optimization. As Kolarevic rightly puts it, “variety no longer compromises the efficiency and economy of production” [9].
The digital toolkit not only introduces new possibilities but also reshapes the architectural design cycle. Gone is the linear approach, replaced by a simultaneous and interconnected process where design, analysis, and construction engage in real-time dialogues. This results in a design that can be parameterized and adjusted in response to feedback.
Nevertheless, this dynamic framework demands a rigorous methodology from the architect, coupled with adaptability and, crucially, a robust foundation of knowledge to support and catalyse creativity.
This new approach uncovers potential misalignments between the conception of an idea, its representation, the understanding of its structural function, tectonics, and its actual construction. In some instances, this praxis can challenge the conceptual integrity and constructability of the idealized work.

Fig. 5: F. Gehry shows a high commitment to research of the potential of different digital tools, shaping high complexity of geometries, free from stylistic formalisms.

The differentiating factor between these methodologies and digital representation tools lies in their capability to seamlessly link design with materialization. This operational synergy is evident early on in the conceptual phase of digital architectures. Such experiences lay the groundwork for employing integrated computational systems across conception, representation, production, and construction.
For Oxman, it's not the morphological nature that marks the revolutionary essence of the digital project. Instead, it's the richness, variety, and evolution of the design process, facilitated by the incorporation of digital tools in architecture [8].
This presents architects with an opportunity to move away from traditional solutions, which have long been supported by the theoretical foundation of established canons and efficiently conveyed through drawing-based representation processes.
Reproduction or repetition were the normative elements of the mechanical technological condition that supported the era of industrialization.
However, the representation techniques facilitated by digital tools in architecture enable a departure from the standard, normative, and repetitive designs. This shift is encapsulated in the concept of “NonStandard Architectures” [10]. This newly theorized paradigm stems from the innovative instrumental framework, which emphasizes customization and individuality. In essence, it seeks to establish a unique language - be it of the designer, the end-user, a specific epoch, or crafted for future eras.

5. Conception versus Evolution

Architecture intrinsically captures the essence of its era, making it a preferred vehicle of memory. This characteristic draws the attention of historians and anthropologists, who examine architecture through

their distinct lenses and methodologies. But they often overlook the foundational axioms and unique methodologies inherent to the architectural design process.

Different disciplinary trainings, due to varied methodological approaches and professional objectives, often don't align with the conceptual and constructive aims of architects. An analysis based on different assumptions can lead to a distorted understanding of the architect's foundational and operational principles.

While the primary objectives in architectural design are rooted in its conceptual and constructive principles, the approach of historians and anthropologists tend to emphasize the immaterial values intrinsic to architecture, using it as a tool to comprehend the lifestyles and thought processes of various civilizations that define historical epochs. This perspective, while valuable, could sometimes misinterpret architectural intents. Meanwhile, architects are primarily concerned with the tangible realization of their design concepts, which only ascends to the condition of Architecture through material revelation.

Comparing vernacular architecture to contemporary architecture without appropriate methodological references can lead to misinterpretations. It's clear that distinct historical periods bring about significant variations, this cultural and technological background, profoundly influence the spatial and morphological characteristics of architectural artefact.

It's inappropriate to directly compare or analyze these two architectural expressions due to their divergent representation processes, which greatly influence the creation of space and form. The underlying processes that guide their development are inherently different. Vernacular architecture evolves spontaneously, relying on a trial-and-error approach without obeying to formal architectural principles. On the other hand, contemporary architecture, or any architecture made by architects, is supported by a conceptual process.

In vernacular architecture, the conceptual foundations are significantly mitigated, primarily emerging from construction techniques adapted to a specific context. Instead of a deliberate conceptual process, it evolves through a long-standing trial-and-error methodology. Its value results from an iterative cycle of experiences that align with the opportune 'Kairos time' for its physical manifestation.

Rather than a distinct act of conception, it's more accurate to describe the process as an "evolution," analogous to the general systems theory's notion of primary adaptation. This theory suggests that individuals, as part of an environment, evolve by adapting to and reflecting their physical and geographic realities.

Bertalanffy differentiates this regulatory adaptation of organisms to their ecosystems into two categories [11]. The first, primary adaptation, is a static adjustment where the form harmonizes with its environment over millennia. In contrast, secondary adaptation is a dynamic response, characterized by immediate feedback mechanisms that react to changes in the ecosystem in real-time.

The morphology, skin and texture of some fruits allows them adapting to the environment, being an example of a static adaptation. The same thing is the search for the best solution in architecture.

Vernacular architecture is the result of a static adaptation to a morphological specific definition, resulting from the improvement of a model, that time has refined.

The Mashrabiya trusses exemplify static adaptation. These permanent elements, integral to Islamic architecture, define building facades and regulate light and ventilation, serving as thermal moderators for indoor spaces. In contrast, movable components like curtains or shutters represent dynamic adaptation in architecture, offering adjustments based on immediate conditions.

Through static adaptation, the trial-and-error process formalizes a model tailored to a specific context, achieving a solution that is sustainable from economic, environmental, social, and cultural perspectives.

Vernacular architecture doesn't employ a representation process since there isn't a distinct conceptual phase. Instead, it utilizes a pre-established model that is adapted to the construction site. Unlike this, the conceptual act in contemporary architectural practices isn't restricted by time; it doesn't merely react to what's already built but anticipates it. A project anticipates 'time' and the material reality, effectively foreseeing, predicting, and addressing potential challenges even before they manifest. This transition from the abstraction of an idea to the tangible architectural artifact aims to minimize, if not eliminate, errors.

Architectural ideation presupposes the passage from the conceptual plane to the material plane, accepting two cycles, conception, and construction [12]. Vernacular architecture, however, diverges from this path. Instead of nurturing a concept to fruition, it primarily mimics an existing model that's fitted to a specific context. Absent are the distinct phases of conceptual evolution and tangible realization. It leans on tried and tested techniques and spatial resolutions, and since its surrounding context or ecosystem remains largely unchanged, the model itself remains static.

On the other hand, the contemporary architect, equipped with a methodical approach, orchestrates a conceptual journey that unveils innovative and efficient solutions. His design thinking meets the tireless march of "Time Chronos", producing architectural artifacts that skillfully adapt to diverse and evolving contexts, even those previously unknown.

One common mistake of evaluations grounded in anthropological or historical perspectives is a tendency to romanticize vernacular architecture. While outside observers might praise it for its ancestral

or traditional value, local inhabitants might see it differently. For them, vernacular constructions might be a clear reminder of past times marked by hardship and poverty. This perception could lead to a rejection of its materials and design, deeming them archaic and less desirable.
An example of this tension between vernacular techniques and contemporary perceptions is the the SUDU - Sustainable Urban Dwelling Unit project in Addis Ababa, Ethiopia, undertaken in 2010 by Phillipe Block. The organic character of the structures, inherent to the construction method, had to be adapted to a more linear design to resonate with modern architectural sensibilities. Another case in point is the 'Casa Firme' project in Mozambique by the Portuguese architectural collective Blaanc in 2014. Although the design made use of traditional materials like rammed earth, bamboo reeds, and wood, the local inhabitants viewed it as regressive rather than innovative.
It's essential to understand that vernacular architecture and erudite architecture, the latter produced by trained architects, are the expression of different methodological processes, logic and modus operandi. While vernacular architecture evolves naturally and informally, responding to immediate needs and locally available materials, erudite architecture anticipates and manages the different axioms that accounts for various determinants shaping the spatial and physical aspects of the architectural artifact. This form of architecture, in essence, envisions time, predicting the characteristics and feasibility of the end product. Acclaiming vernacular architecture as a pinnacle of perfection and consistency when juxtaposed with architect-designed structures is a improper appreciation, given the inherent difference in the nature and purpose of these two architectural achievements.
Similarly, certain architects' discussions on vernacular architecture can be perplexing. Often, these discussions mirror narratives from entirely different disciplines such as Sociology, Anthropology, and History. By doing so, they overlook the fundamental act of designing, which lies at the heart of architectural practice.
When architects advocate vernacular architecture, it's similar to academically trained painters embracing naïve art. This romanticized approach risks undermining the value of systematic and academic training in architecture. It might inadvertently promote informal architectural practices, which come with their own set of challenges. However, vernacular architecture remains a valuable case study, offering time-tested solutions and serving as a rich source of knowledge.

6 Conclusion

allows us to understand the relationship between representation and the methodological process, which impact the morphological and tectonic definition of the architectural representation and construction the conceptual process.
representation drawing, between design and construction changesthe emergence of two professions, the architect and the builder from the master builder.
directly in the construction of the architectural artefactscholastic drawing and geometry to the physical of the object.
The of digital tools to architecture has the of representation no longer instrumental a digital model.
The possibilities and form more to the –and programmatic–of Architecture concept NonStandart Architectures a language.
Architecture operates within its distinctive methodological framework, and any analysis must recognize its intrinsic principles. Using methodologies from other disciplines might lead to erroneous interpretations. Vernacular architecture evolves over time rather than resulting from a specific design act. True architectural design involves anticipating various spatial attributes, such as functionality, lighting, ventilation, thermal behavior, and more. It encompasses managing construction techniques and manipulating structural systems, foreseeing the physical manifestation of the architectural artefact.
The vernacular model evolves through a process of trial and error, adjusting to its context. Once a model has been tested, it's replicated and fitted to its specific construction site. With the advent of digital tools in architecture, new challenges arise. These tools transform our architectural thought processes, methodologies, and means of expression. It's imperative for academia and architectural theory to scrutinize these changes, nurturing knowledge that supports this evolving practice. This ensures that we harness the potential of these new tools in order to produce a solid and proficient process of designing architecture.

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Giulia Sagarriga An aesthetic of space. Culture, mythology, and art in the Pacific Ocean.

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Abstract
This article delves into the profound relationship between culture, mythology, and space in the Pacific, with a special focus on Tanna Island, Vanuatu. It contrasts Western notions of dividing space with the interconnected tribal cultures of Oceania. The significance of space in Pacific myths is explored, emphasizing its timeless nature in contraposition to a defined concept of “space” that gives birth to a “geographic society”, where shared territory supersedes blood ties. The article unveils a deep connection between space, identity, spirituality, and forms of art in this vibrant island society.

Keywords: Oceania, art, space, Vanuatu, aboriginal

1 Sea of islands

Oceania is a vast region that includes multiple island groups, peoples, and cultures, the essential understanding of which is the interaction between these elements.
There are two terms used to name this area: ‘Pacific Islands’ and ‘Oceania’. They show the duality that is still perceived in this region.
‘Pacific islands’ is the most common; Europeans first described the Pacific as ‘islands in a far sea’ when entering the region. This description evokes the image of small, isolated pieces of land surrounded by an endless ocean.
‘Oceania’ on the other hand, underlines the perception of ‘ocean peoples’, who had lived on islands for more than two thousand years, viewing the whole world as a “sea of islands” [1]. They see a large sea with places to explore where things are seen in the totality of their relationships. They conceive the sea as part of their earth, not a boundary but an extension of home in a different form.
Jules Dumont D’Urville, a French explorer, in 1831 suggested drawing imaginary boundaries to divide Oceania into three colonial regions that still today are in use and define the territories of the Pacific [2]. These regions contained various different societies and languages that influenced each other in the course of their own long history, well before its ‘discovery’.
Only a history of all the communities can define Oceania: these episodes are trans-local and therefore make full sense only when connected to other places and other stories.
From a Western point of view, there are few reliable sources that can explain the complex mechanism behind the origin of the Pacific world. The main references are accountable only to linguistic, botanic, and oral traditions.
Probably driven by climate and population pressure, in 4000 BC ancient people started migrating along the Yellow River settling on the Korean peninsula and across the sea to Japan and Honshu. Due to political shifts, another wave of migration began. From today’s China and Taiwan, people moved into the open sea towards Southeast Asia and Oceania.
We can now state that the necessity of the Western tradition of dividing space and setting boundaries clashes with the oceanic point of view, where the interactions between tribes and migrations generate transformed cultures.

Dividing their world, has given to the inhabitants of Oceania, the perception of being confined in little spaces.

"Their universe comprised not only land surfaces, but the surrounding ocean as far as they could traverse and exploit it, the underworld with its fire-controlling and earth-shaking denizens, and the heavens above with its hierarchies of powerful gods and named stars and constellations that people could count on to guide their ways across the seas. Their world was anything but tiny. Smallness is a state of mind." [3]

1.1 Geographical society

To explain creation and what happened before colonization, each island of the Pacific has slightly different myths that link to each other through a subtle pattern of similarities and analogous names.

The main common feature is the importance of 'space' that is already assumed to exist before the initial chaos that preceded creation. If space is an important aspect, time is instead unreal: it is impossible to place facts temporally.

In Tanna "The word for the day after tomorrow, *neis*, is the same used for the day before today; and the word for indefinite future, *kwumweisen*, is the same for indefinite past." [4]

Space is the principal feature, appearing to be quite precise in nature.

Tanna Island's history in the Vanuatu archipelago is mainly told through mythological cycles, divided into episodes that trace back to the island's early society. In these cycles, humans are seen as regular beings in a magical world, and they are intertwined with nature, both originating simultaneously and explaining each other. Like in all of Oceania, space remains constant, and each episode is reflected in the landscape, creating perfect harmony between space, mythology, culture, and the land. The land in Tanna is the natural matrix of society.

Every myth can be seen as a 'path' with a starting and finishing point and a series of strongholds, represented by the *Yimwaym* (dance clearings), that act as a network in its propagation. This geographical function of myth, where the territory is a mystical entity pre-existing in the past, leads to the social organization described as a 'Geographic Society'. It's defined as a geographical patriotism as opposed to a more common biological one. [5]

To better explain, the local groups are defined by those who share the same territory rather than blood ties. It is not the men who create the territory by drawing divisions derived from their kinship ties, but the territory that creates the group by bringing together men who are in principle kin, but who nevertheless become kin because they live in the same places. In Tanna, the essence of places precedes the existence of men.

"Personal essence and identity are infused into the land. No longer simply a thing, land becomes a place […] Longana [6] thinks of themselves as sharing a territory not only with other living residents but with the memory of their ancestors and the future of their children". [7]

The local group does not own the territory but identifies with it. The principle of identification prevails here over the principle of appropriation. For this reason, a man cannot leave for long periods the place where his ancestors first appeared, because doing so would alienate his identity. [8]

The reading of places therefore leads to a reading at the heart of society because it connects spatially with the allies and temporally with your ancestors. For the people of Tanna, their territory is alive, it is a 'political figure', a place of mediation between themselves and the cosmos.

1.2 Aesthetic of space

Space is organized based on two primary structures: clearings (*Yimwayim* [9]) connected by a network of roads (*sautuk*).

The *yimwayim* has a sacred nature; for the *kastom*, it has been marked into the ground by *Wuhngin* [10] itself. It reflects in space the powers of primordial places and is considered to have existed since the magical period of the foundation of the world. It is the space where the first ancestors appeared, and therefore the place where all the social life and rituals [11] take place. The *Yimwayim* spatially appears as an open space, with bare soil, protected by vast sacred banyan trees (*nepuk* [12]) and externally surrounded by vegetation. [13]

The pattern given by clearing and paths can be considered an aesthetic archetype. The dualistic organization of the center versus the periphery is a recurrent structure with which people arrange spatially.

This aesthetic is the root of spatial organization.

The essence of Tannese art lies in ritual activities, sacred dances, powerful oratory, and cultural presentations. Their art forms are usually temporary: easily discarded, destroyed, or left to decay after their use in rituals or display. [14]
“The Tannese may lack noted art traditions but this by no means implies that they are artless. Their attention instead engages the less material arts of speech, debate, face paint, song, and dance, and a refined cultural aesthetic governs the flow of sound and movement throughout everyday experience. This, in part, involves an aesthetic of space that people use to cultivate their island, and their inhabitation of this island, so that Tanna itself stands as their paramount artistic production.” [15]

Fig. 1: Pacific regional division: Micronesia, Melanesia, Polinesia.


Fig. 2: Bentley Dean, Tanna, 2015;

Fig. 3: Bentley Dean, Tanna, 2015

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[9] Place of traditional dance in Tanna island. Commonly known as Nakamal in Vanuatu, it is the traditional meeting place; used for gatherings, ceremonies, and the drinking of kava;

[10] Spirit that created the world.

[11] Kava drinking, public meetings, dances, exchange rituals, circumcisions;

[12] The banyan (nepuk), in kastom, is an ideal tree that represents man, with its roots sinking into the ground. If we transfer this similarity spatially, we can see that if the tree is the place (Yimwayim) the canoe is the way (sautuk). [10]

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Anna Rita VILLANO, Donatella DIANO, Katia FABBRICATTI Games in Street, intangible cultural heritage for the regeneration, maintenance and care of spaces of collective use

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Abstract
"Playing", an inalienable right (ONU, 1989), has a central role in children's physical, social and intellectual growth. In wartime contexts, playing was welcomed in the residual spaces of the city, an expression of the creativity and social and cultural diversity of young actors. The design and implementation of the first playgrounds after the war aimed to provide responses to the severe psychological and social damage caused by the conflict. Today, the reuse of open spaces as playgrounds constitutes a regeneration strategy that has the potential to stimulate the community dimension of care on the basis of children's involvement and education for collective responsibility.

Keywords: Games in street, spaces of collective use, community in emergencies, collaborative maintenance, urban regeneration

1. Playing in spaces of collective use
With Article 31 of the International Convention on the Rights of the Child, approved in 1989 by the UN General Assembly, "to engage in play" is recognized as an "inalienable right," not only for the physical growth, but also for the social, emotional and intellectual development of the child [1].
Since ancient times, philosophers such as Plato and Aristotle began to debate and agree on the role that play activities had in the education of children and young people [2]. Between 1600 and 1900, numerous theorists, educators, teachers, and pedagogists such as Comenius, Locke, Luther, Basedow, Rousseau [3], Pestalozzi [4], Froebel [5], Dewey [6], and Montessori [7] highlighted the importance of playing for children's development and proposed the integration of play activities into educational programs.
Through play, children practice their relationship with the world, and thus with the city. They use play as a means of developing physical and environmental skills and geographical orientation, as well as to increase independence and create symbolic situations in which they learn about themselves in relation to others [8]. This condition is facilitated in spaces that are not rigidly predetermined but modifiable, public, and accessible, allowing for spontaneous encounters with casual companions from any social background, possibly outdoors and in contact with natural elements, without the continuous control of adults, but with their discreet and reassuring co-presence, especially for younger children [9,10].
The traditional city welcomed play in its streets, squares, alleys, courtyards, lawns and abandoned spaces; the presence of children in these spaces of public use fostered opportunities for sociability, familiarity and conviviality not only among the youngest but also in adults [11].
Games in street are thus manifestations of cultural diversity and human creativity, intangible cultural heritage, transmitted from generation to generation, tools of community union and exchange that safeguarded and enriched them [12].

Fig. 1: Children playing in open spaces. Source: Wikimedia Commons

In the last decades of the nineteenth century, as a solution to issues about children's socialization, health, and motor development induced by the catastrophic conditions of industrializing cities [13], the first playground was built in Manchester, England, in 1895, to serve the Philips Park community.
Over the years, technical regulations on the safety of play spaces [14,15,16,17] have led to the creation of approved and standardized spaces, transforming play from mere leisure to a functional activity “to fill the free spaces of children's lives” [18].
Currently, scientific research, highlighting a deficit in the use of open spaces of public enjoyment by children and the disadvantages that this phenomenon generates on the community and the built heritage [19], is attempting a reversal, supported also by the latest pandemic events that favor outdoor activities [20] and the Pedagogical Guidelines for the Integrated System "Zerosei" promoted by the National Commission for Education and Instructional System [21].

2. Playing in the contexts of War: comparing figures

In the post-World War II years, residual spaces in conflict-affected cities began to be reused as places for children to use for entertainment and leisure activities. Playgrounds, or public spaces designed for the purpose of developing imagination and creativity through play [22], arose in difficult contexts as an attempt to respond to social problems exacerbated by conflict and enemy occupation.
In Northern Europe, Carl Theodor Sorensen, a Danish landscape architect, Lady Allen of Hurtwood, a British pacifist and educator, and Jacoba Mulder, a Dutch urban planner [23], experimented with a new type of playground, inspired by some children playing in the area of a construction site, the *adventure playground* [24]. In this type of playground, the child had materials available for self-building huts and inventing games by also manipulating natural elements, raising small animals, and growing plants. Projects for such playgrounds for children were aimed at reusing and redeveloping residual spaces in cities to make them safer and more liveable.
Between 1947 and 1948, significant is the contribution of Aldo Van Eyck, who created more than 700 playgrounds on abandoned sites and the remains of bombed-out houses [25]. They consisted of a few elements through which children were free to play without following predetermined patterns and logic [26].
Turning their attention to the daily dwelling of young children in cities just emerging from war, and working on urban empty spaces and small transitional spaces, Carl Theodor Sorensen, Lady Allen of Hurtwood, and Aldo Van Eyck interpreted play spaces as a component of a more general physical and social reconstruction of the city, thus making children, who until then had not been included as bearers of needs in city planning practices, visible on the public stage [27].

Fig. 2: Children playing in residual spaces after World War II. Source: Wikimedia Commons

Fig. 3: Playground di Vondel Park, Amsterdam, the Netherlands, designed by Aldo van Eyck.
Source: Wikimedia Commons

Fig. 4: Children enjoying a playground by Aldo van Eych, Amsetrdam, Netherlands, post-World War II.
Source: Wikimedia Commons

3. Games in Street for the regeneration, maintenance and care of spaces of collective use

The Convention for the Safeguarding of Intangible Cultural Heritage, highlighting the profound interdependence between tangible and intangible cultural heritage, emphasizes how education and community participation ensure for both the protection, care and transmission to future generations [28].
The International Convention on the Rights of the Child [1], in Article 29, declares the need to educate children to be responsible within society and to respect the environment.
The open, public space constitutes a special place because the social values of the community are concentrated there; it constitutes a multifunctional space in which a continuous flow of resources takes place [29].
Through play, cultural identity is rediscovered and the community's sense of belonging to places is strengthened; it thus becomes an opportunity to protect the settlement system [30, 31, 22]. Play spaces are thus attested to as a tool for implementing strategies for reuse, rehabilitation and collaborative maintenance of open spaces of collective use: an opportunity to bring different people together by making them interact and collaborate [32].
Play activities that return to the open spaces of cities become tools for caring for the built heritage and community [30].

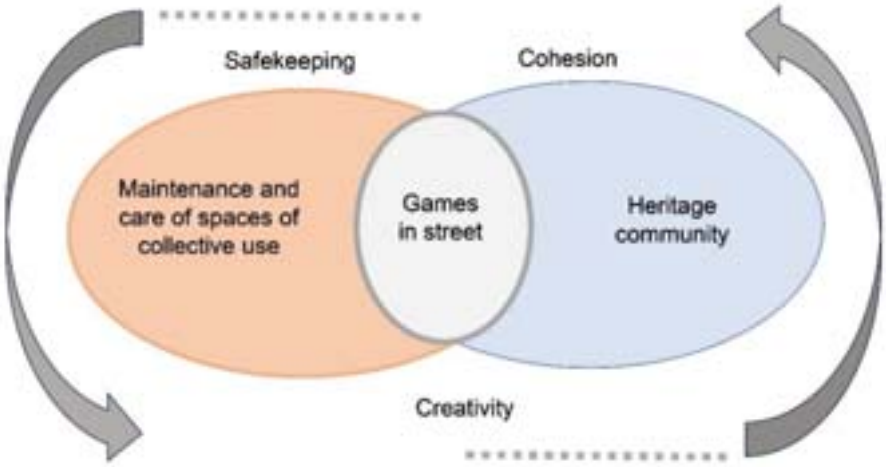

Fig. 5: Scientific approach of the research. Authors' elaboration.

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Roberta VARRIALE, Laura GENOVESE Sperlinga, the last inhabited cave dwelling in Sicily

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Abstract
In the area between the Nebrodi Mountains and Val Demone, troglodytism has been at the basis of the urban experience for millennia and it is still a vital phenomenon today. Nonetheless, caved settlements are very fragile, undergoing the risk of disappearing. The paper introduces the CNR research activity on Sperlinga case as a potential role model in the attempt of balancing its survival, the preservation of tangible and intangible values and their adoption for a sustainable development.

Keywords: cave dwelling, Sicily, remote areas, classification, sustainable development

1. Sperlinga: from the beginnings to the risk of disappearing
Troglodytism has been a significant character of the urban experience in Sicily for millennia and it is still a vital phenomenon today. The area between the Nebrodi Mountains and Val Demone, thanks to several homogeneous and peculiar geological characteristics, has been settled without interruption since prehistoric times, offering a very varied range of cave dwellings, sometimes also adopted as stable settlements [1].
Sperlinga is a small caved village at the foot of the southern slope of the Nebrodi Mountains. It rises 750 meters above sea level, nestled at the base of an imposing rocky spur, on which the medieval castle stands (fig. 1). The castle itself would have been the *fulcrum* of the current settlement, known in the news since the events of the Sicilian Vespers. The village further developed between the 17th and 18th centuries towards the valley below. Towards the early 18th century, a certain uninterrupted flow of travellers began, who promoted it throughout the world: Houël, Saint-Non, Paternò-Castello, Gerhard Rholfs, Mc Escher, Enzo Sellerio, Hermann and many others. Finally, Robert Capa's shots in the countryside around Sperlinga are famous, immortalizing its beauty in the difficult period of the Allied re-conquest at the end of WWII [2-3].
Despite its peculiarity and history, Sperlinga presents all the demographic and economic critical issues of internal areas: territorial isolation, demographic decrease - between 2017 and 2021, the inhabitants of the historic centre went from 1070 to 697 due to both natural and anthropogenic [4] -, increase in the average age, abandonment of the historic buildings in central areas, progressive delocalisation of services; all effects of the constant migration of younger generations in search of occupation, comfortable services and contemporary lifestyles.

Fig. 1: Sperlinga. South-Eastern view of the settlement (by R. Varriale, 2023).

Over the years, the administrations have tested various solutions to deal with Sperlinga's depopulation, particularly by attempting to develop cultural tourism. Nonetheless, the inclusion in the list of the "Borghi più belli d'Italia" - i.e. Most beautiful villages in Italy [5] - in 2017, the UNESCO candidacy in 2017, not least the hypothesis of converting into a military hub in 2022, didn't bring the desired results.

2. The CNR task force

Caved settlements are some of the most significant symbols of the lasting relationship between the natural environment and the local culture resulting in significant elements of local identity. Nonetheless, these elements are very fragile, undergoing the risk of disappearing or being abandoned and eventually transformed into tourist attractions, as already happened to the most famous caved settlements of Matera (Italy) and Göreme (Turkey). Since nowadays the conservation and sustainable development of folk villages in rural and remote areas has become a global issue [6], and the international community pushes towards practices respectful for liveability and place identity [7, 8, 9].

The collaboration between the CNR and the Municipality of Sperlinga has begun in 2020, starting from an Italy-Japan project [10], which was followed, in 2022, by a technical/scientific collaboration agreement between the CNR - Institute for Studies on the Mediterranean (ISMed) and the Municipality of Sperlinga (Prot. ISMed 49/22). The premises are that Sperlinga can be considered an archetype of small villages in internal Italian areas. Furthermore, in its current state, it has the advantage of still being inhabited by its residents and being safe from gentrification processes. The working hypothesis is that the village can become a potential role model in the attempt to balance the survival, the preservation of its tangible and intangible values, and their adoption in enhancement projects for the benefit of local communities. The focus of the CNR' intervention is the interpretation, classification, analysis and enhancement of its relationship with the subsoil, by applying an innovative theoretical approach based on the class of Underground Built Heritage [11, 6].

The paper is the first output of this research activity, based on several inspections carried out by the authors during the last two years. It illustrates the first attempt in the cave dwellings classification, also supported by the analysis of archival, bibliographic and iconographic sources.

3. The classification

SPERLINGA (EN) TABLE OF CAVE DWELLINGS TYPOLOGIES	
A - PURE CAVITIES 	• the access corresponds to the entrance to caved houses; • main doors are: entrances for inhabitants, windows, cat doors; • presence of carved donkey handles and of water pots; • single room; • fire sets whose flue is on the top of the caves;
B - CLOSED ENTRANCE WITH NO BUILT EXTENSION 	• entrances built in the form of a brick house; • interconnection of 2 or more cavities: the entrances to the first level have been transformed into access doors, those located at the upper level have been adopted as windows; • internal wooden or engraved stairs interconnect the two levels;
C – BRICK-BUILT EXTENSION 	houses built as an extetion of the original cavities;
D - BUILT OVER THE TOP OF THE CAVITIES 	houses built on the top of cavities adopted as entrances or cellars.

Fig. 2: Table with the four principal typologies identified during the census (by the Authors).

Fig. 3: The picture shows the transformations that occurred to caved dwellings along the main street C.so Umberto I, between 1800 and 2022 (Municipality of Sperlinga Archive, elaboration by the Authors)

The toponymal Sperlinga derives from the Latin *spelunca*, and means cave, and the organization in caves is the most striking feature of this settlement, probably dating back thousand years ago. The

castle itself, from the 11th century, was carved into the rock, thus obtaining multiple underground spaces (storage, prisons, water deposits, residences, etc.). Sperlinga developed at its base, in close relation to it, with a top-down approach. It is organized in overlapping rows of caves - approximately 9 levels in the Western portion of the town and 5 in the Eastern portion - along the level curves of the rocky ridge. The village developed along the line of the hill in a West-East direction, with a "spindle" layout and the historical connections are ensured by narrow streets and steps obtained by modelling the rock. Recently, a new road network was created, which follows the morphology of the hill and which caused, in some cases, the sacrifice of pre-existing cave spaces (fig. 3).
In the upper part, the village still shows a medieval appearance, with cave dwellings and hypogea, with varied function and typologies, thus leading the authors to the formulation of a general classification, as shown in figure 2. From the easier A to the more elaborated B-C-D, differences in typologies were probably connected with subsequent reuses and settlement phases. Thus in the lower part of the settlement types B and D were most commonly recognized, probably dating back to the 17th and 18th centuries. The North-Eastern portion of the village, on the ridge, is currently almost uninhabited. Here pure cavities (A typ.) are concentrated. These were inhabited until the middle of the last century and are still privately owned, with the exception of six, which were purchased by the Municipality of Sperlinga, which recovered the interiors, organizing them as cave-museum houses.
In any case, it is possible to follow the organization of the town in the modern age starting from the cadastral map of 1936 (fig. 4), which shows, with great precision, the distinction of some types of cave dwellings and all their levels. Unfortunately, this distinction between underground and above-ground environments disappears in the new cadastral map. This lack determines a great difficulty in the definition of a new urban planning addressed towards the settlement sustainable development. This gap must absolutely be remedied before the definition of a recovery plan in order to favour the most suitable consolidation and recovery practices (fig. 5a) with respect to the character of the typologies of cave dwellings involved in the intervention.

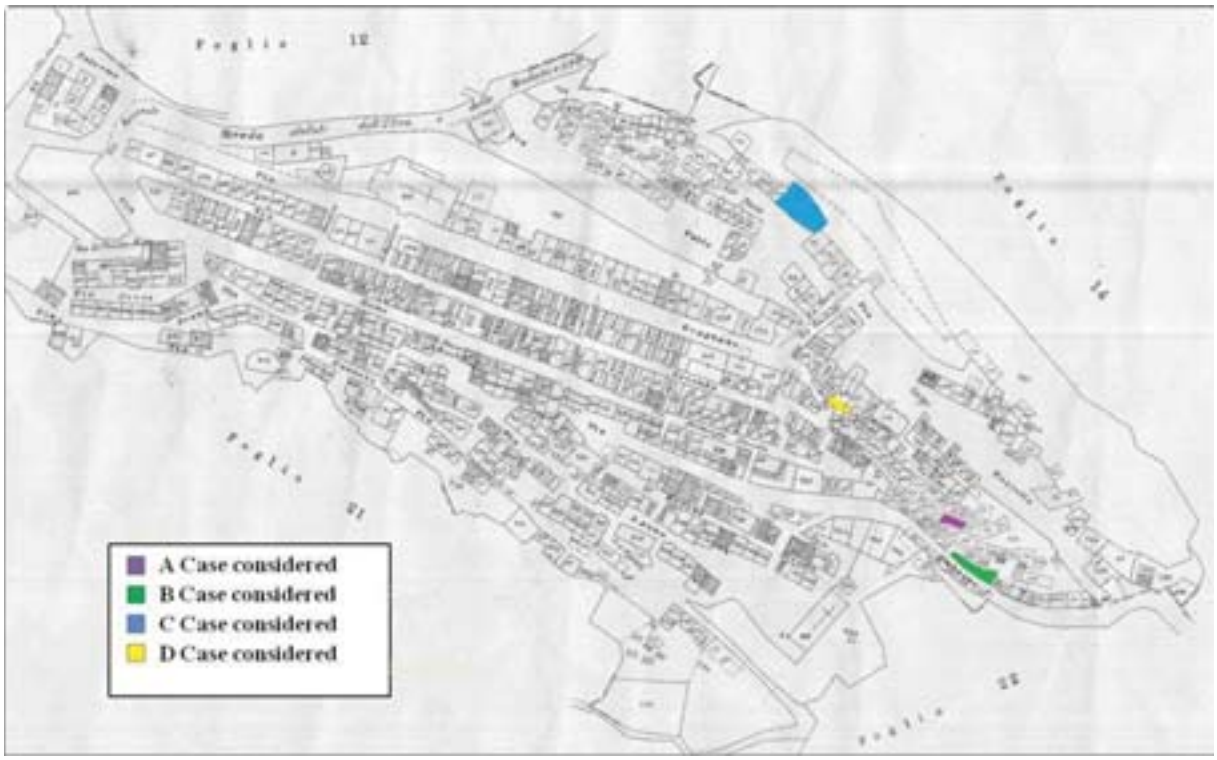

Fig. 4: Localization of our selected case studies on the 1936 land registry (elaboration from the original by the Authors)

4. Conclusions

Sperlinga is a village at risk of disappearing. The unstoppable demographic decline, on the one hand, and the fragility of those cave dwellings that characterize the urban layout (fig.5), on the other hand, have a destructive potential on the existence of the last inhabited Sicilian rock village. Countering this trend is one of the major challenges of the municipal administration, which has opened up to collaboration with an interdisciplinary task force from CNR to define counter strategies for both these critical issues.

The intervention strategy proposed at the outset envisages two lines of intervention. As regards the risk of depopulation, which has even seen the reopening of nursery schools at risk for the 2023/24 school year [12], the proposal aims to define those identity characteristics that can support the development in the tourism sector, of the typical productions and of the cultural activities connected to cave dwellings. The goal is to carry out these projects before the depopulation. This approach seems to be the only possibility of combating the gentrification that has affected the most famous Italian caved settlements, i.e. Matera [13]. With reference to the second issue, prior to the rehabilitation plan, a reformulation of the urban cadastre should be carried out which takes into account cave dwellings typologies that emerged in the classification proposed in this research.

Fig.5: Physical and demographic fragilities. On the left side, picture shows a series of overlapped cave dwellings in the central area, which have been damaged by hydrogeological instability (by R. Varriale). On the right, it is a provocative shot in controversy against the closure of the village schools [12].

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International Conference
Dwelling on space
representation and safeguarding
of its tangible and intangible heritage
Benecon | Prof. Arch. Carmine Gambardella UNESCO Chair on Landscape Cultural Heritage and Territorial Governance

Paola Raffa Signs and codes of communities. Identity and transmission of a heritage of knowledge

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Abstract

The intangible value of the decorations of the oasis-city of Nefta lies in the strong symbolic meaning it represents for the community and in the power that keeps it in close relationship with the surrounding environment. The aesthetic dimension of architecture takes on social value when it allows the community to develop a sense of social and cultural belonging. Furthermore, they have the strong value of promoting respect for cultural diversity and human creativity.

Keywords: Intangible Heritage, urban codes, peaceful coexistence, creativity, Heritage of knowledge.

1. Visual codes for cultural diversity

Urban decorations represent a remarkable communication tool for the communities that inhabit a place. They contain testimonies of ways of living and inhabiting.

The decorations produced by the placement of baked clay bricks, on the walls of courtyard houses and on portals in the medinas, of the Jerid Region in Tunisia, are the main means of intercultural expression by multi-ethnic groups who have cohabited peacefully on the borders of the desert for centuries.

The walls of the houses, built in *pisè*, are covered with clay bricks cooked in rudimentary ovens; a technical act, in which the composition of the figurative elements modifies the aesthetic dimension of the places of daily life.

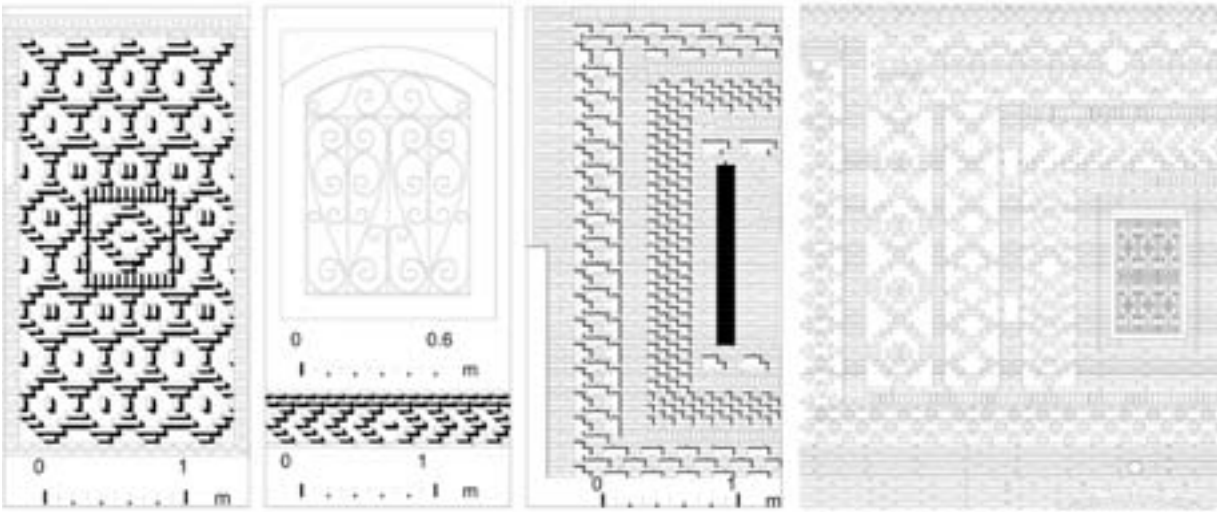

Fig. 1: Decorations of clay bricks placed on the walls of the houses.

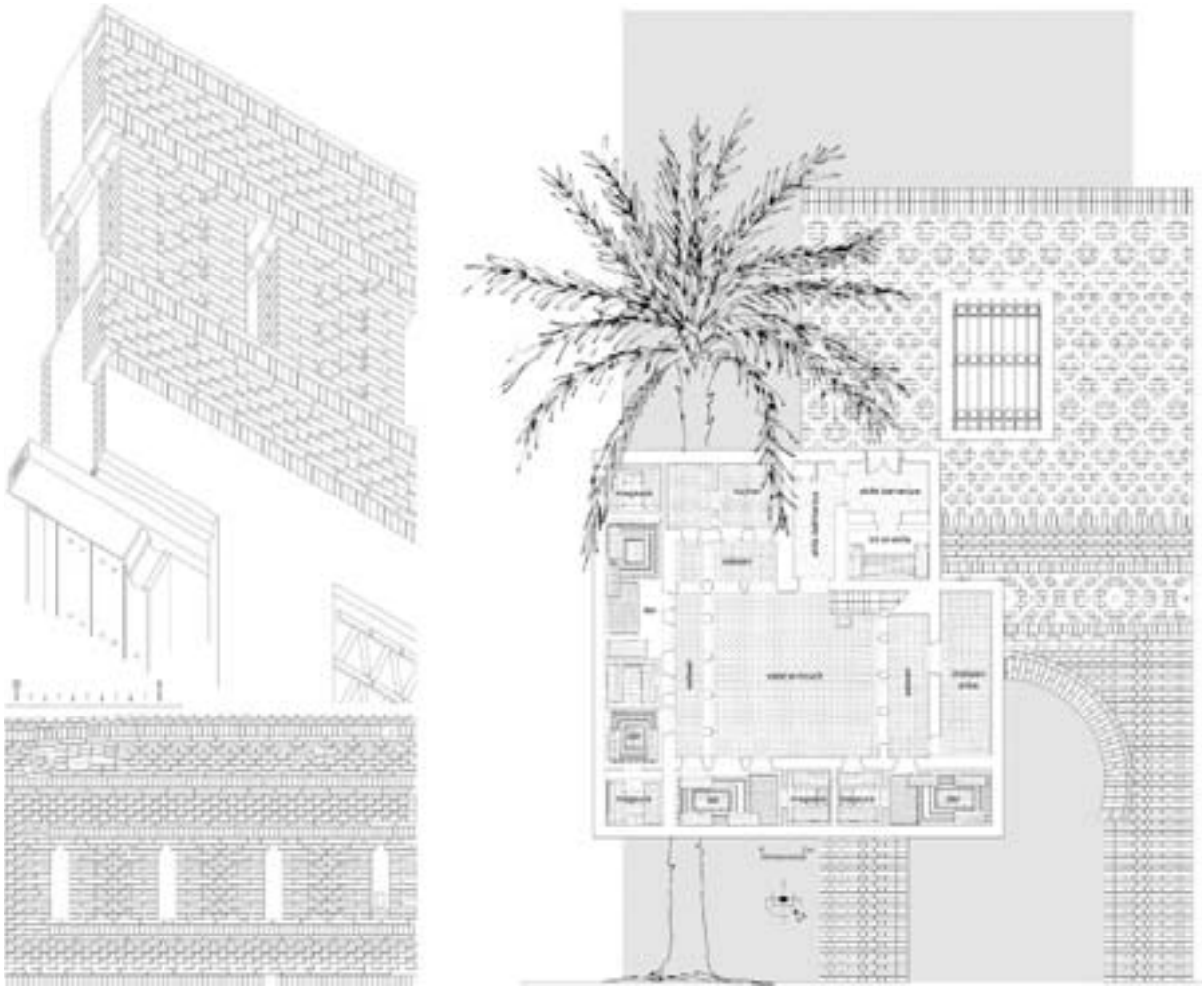

Fig. 2: Decorations system: techniques and ethics value.

The creation of visual communication system placed on boundary elements, such as the facade of the house or the entrance door, indicates the ability to define borders of peaceful coexistence.
Walking through the streets of the medinas of Nefta and Tozeur means crossing a physical space and a social dimension in which clear religious, economic and ethnic messages are expressed through a repertoire of figures that represent a really codified language.
A universe explored through the graphic description of reality in which the imitative process of the sign retraces existing forms, re-proposing them in an expressive form.
The palimpsest of signs becomes the guardian of the real object. A vocabulary of signs obtained from solid elements and placed in figurative sequences capable of building a visual language through non-verbal codes that combine ancestral symbols and modern life worlds.
A visual syntax which, through the composition of decorative registers, unifies different languages and expresses the aesthetic sense of the city and the community.
The placement of the brick develops geometric motifs in recurring figures that can be assimilated to regular polygons contained in a circumference. It summarizes cosmic balance as it evokes the symbol of the center, referring to the center of the World.
The representation of the decorations is graphically reproduced according to the modular arrangement of the brick, placed adjacently or ledge. The representation foresees a graphic difference for each lying plane, this to highlight the definition of the decorative motifs, in the alternation of figure and background. The separation between light and shadow is a clear but discontinuous line in which the depths of the facades can be read.
The module of the decoration is the *galéb*, a brick composed of a mixture of clay and sand. It maintains a ratio between the sides of 1:2, the dimensions are 20x10x4.5 cm, and is composed according to the linear patterns in 33 motifs given by the linear combination.
On the facades, the decorations are defined by placing the brick overhanging the surface of the wall, in this way it is possible to compose the figures in linear shapes that are repeated in frames or rows, and uniform textures for the background or as a connection between the figures.

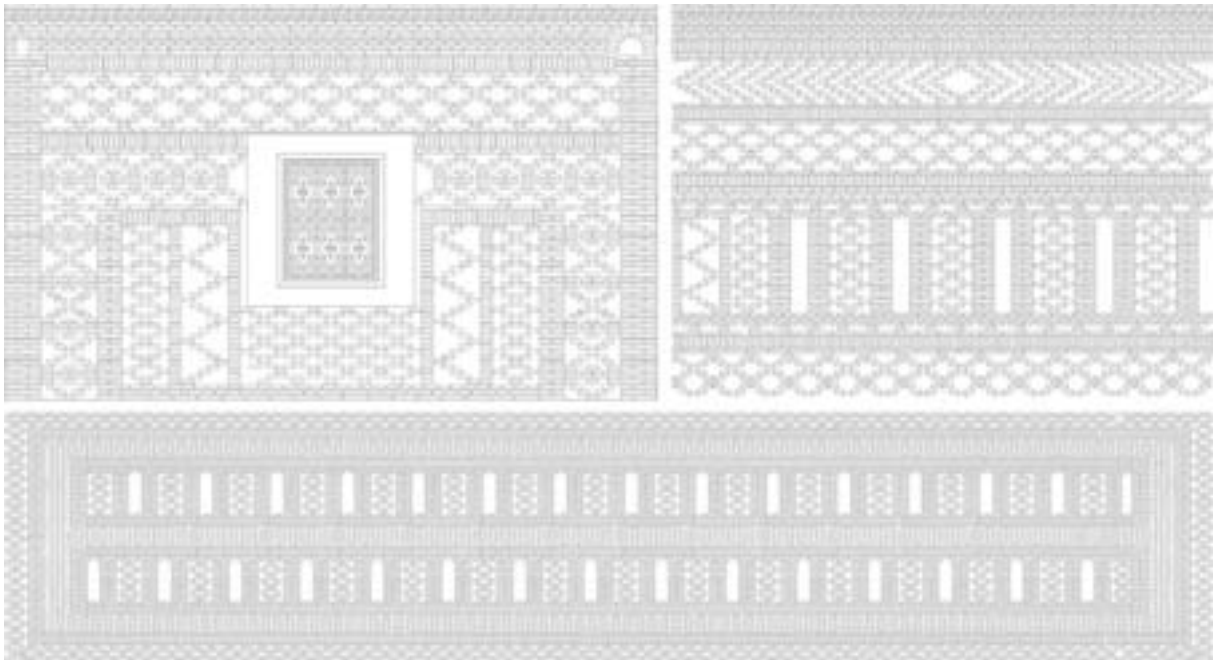

Fig. 3: Writings in code: narrative textures of a community.

Each composition, formed by placing the bricks in linear or staggered succession, alternating the position of the long side with the short side, vertically or horizontally, with aligned or staggered joints, is associated with a figure, the most recurrent being the palm tree, the camel, the snake, the nightingale, which depending on the shape of the wall is repeated in rows, horizontal and vertical, framed in frames, in bundles or simply in the protrusion from the wall.
The meanings associated with the decorative motifs represent a kind of moral declaration of the community and which gives the city immense identity value.
It is linked to the symbolism of the desert, the oasis and to religious values.
Every type of decoration denotes the narrative variation of the same genre, the same motif repeated, without variations, to underline the renewal of a ritual. The same motifs are repeated in the weaving of the carpets in which the design is expressed in the chromatic variations.

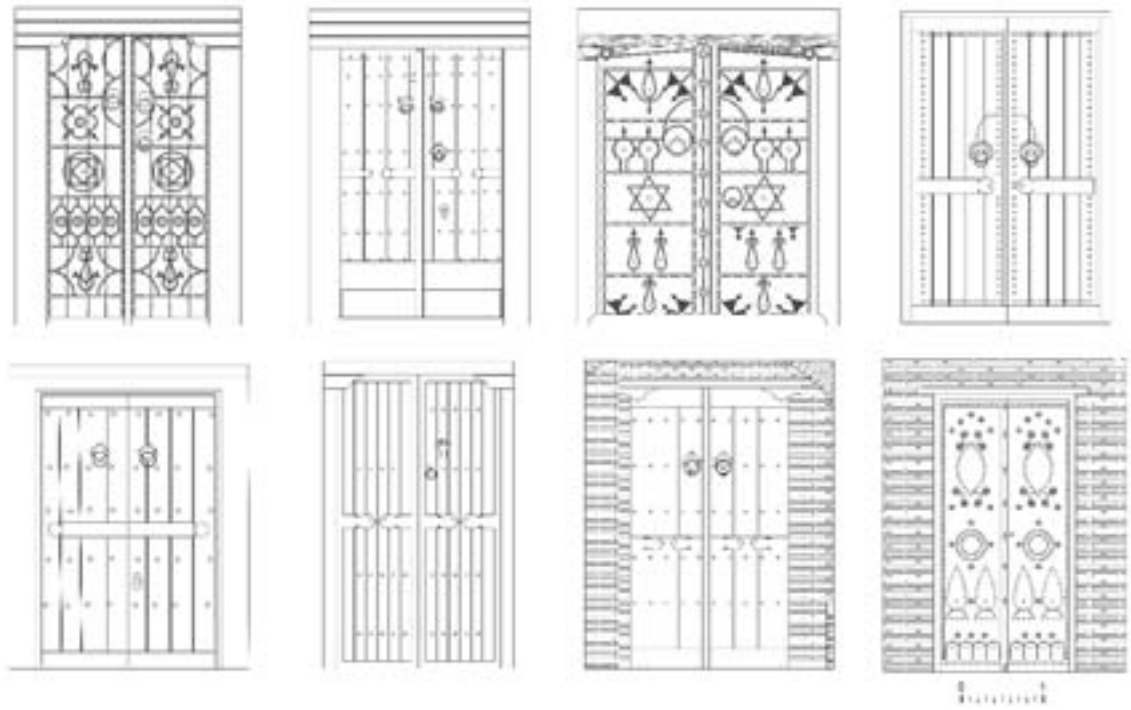

Fig. 4: Decorative studs on the entrance doors.

Even the entrance doors host decorative motifs that reflect expressions of a codified language and which contain a set of social conventions.

On the outside it is adorned with metal studs that design symbolic elements and signs of cultural codes of belonging to the family.
Such as the Star of David in houses inhabited by Jews, or the *khamsa*, a Muslim symbol that protects from wicked events, or the hump of the dromedary or the palm symbols of wealth.
The three iron knockers, in addition to the variety of shapes and sizes, are characterized by the sound they reproduce, the intensity of which is a communication code.
Decorations and carvings are also present in the jambs and architrave. Inside, the frame of the raw wooden boards structures a type of interlocking lock.

Conclusions

The UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage highlights how it is fundamental in maintaining cultural diversity and its understanding helps intercultural dialogue and encourages mutual respect for different ways of life. Furthermore it helps to demonstrate uniqueness and increase awareness of knowledge.
Nowadays, the cultural and natural heritage in the Maghreb is in danger, first of all due to the evolution of social and economic life which attacks the heritage with phenomena of destruction and little care, also as a result of speculation in the service of mass tourism. Climate change is also having serious consequences on the resistance of a fragile and easily perishable heritage.
This work is based on knowledge of the territory and architecture of which the intangible heritage represents an inseparable part. Its main goal was to safeguard a heritage that has now become a ruin in the pre-desert landscape.
Safeguarding the memory of the common good with the awareness that heritage education and its use appear to be the correct methods for enhancing the identity heritage of evolving communities.
Studying traditional architectures and systems does not only mean knowing the techniques for resolving construction episodes but implies knowledge of relationships between society, culture and the economy, closely linked to a conception of the world based on careful management of resources. locals.

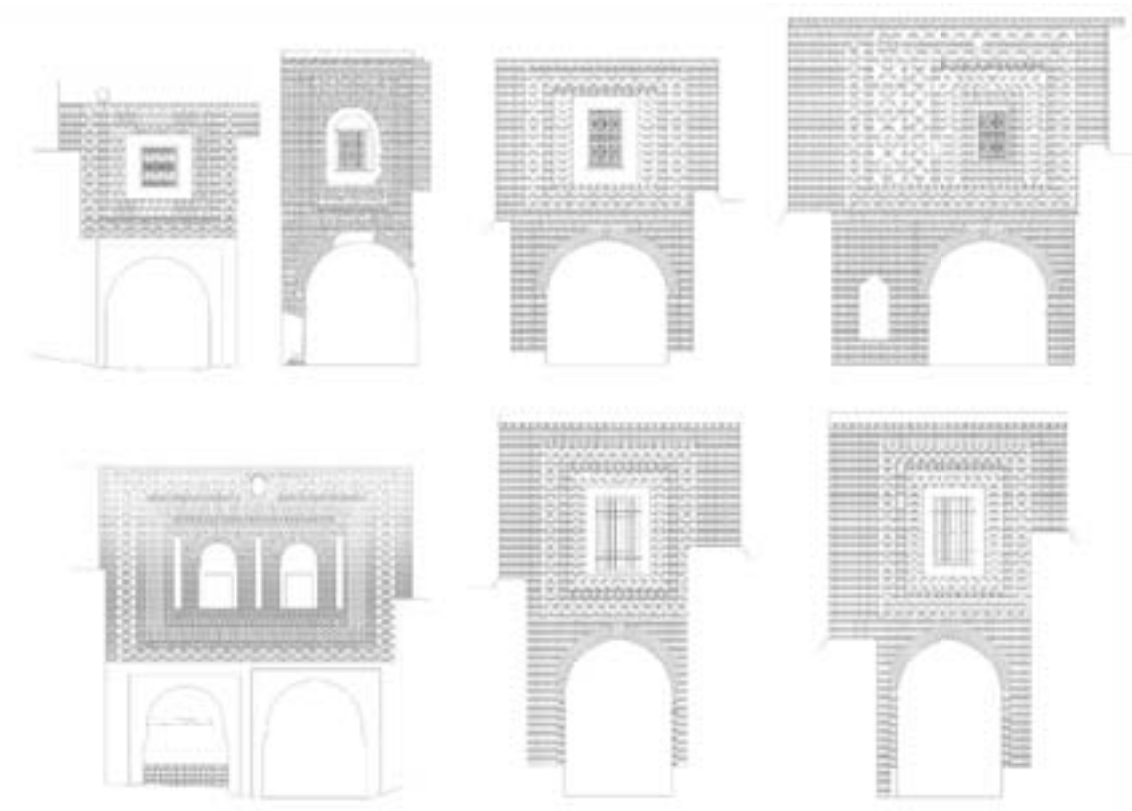

Fig. 5: Patterns on the urban portals.

The construction of dwelling, villages and oases, for example, imply relationships between social ethics and the way of living and arise from the rules with which a social group organizes its space. The technical-environmental process of balanced exploitation of local resources gives an aesthetic value that transforms the artefact into a monument intended as an asset to be protected.
The intangible value of the decorations of the oasis city of Nefta lies in the strong symbolic meaning it represents for the community and in the power that keeps it in close relationship with the surrounding environment. The aesthetic dimension of architecture takes on social value when it allows the

community to develop a sense of social and cultural belonging. Furthermore, they have the strong value of promoting respect for cultural diversity and human creativity.

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Nicola Orlacchio Priorities for Safeguarding Africa's Intangible Cultural Heritage: An Analysis of the Implementation of the 2003 UNESCO Convention.

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Abstract
This article examines the importance of prioritising the preservation of intangible cultural heritage in Africa, with a focus on the 2003 UNESCO Convention. We explore the challenges and opportunities arising from the implementation of this treaty in one of the world's most culturally rich regions, Africa.

Keywords: Intangible Cultural Heritage, Africa UNESCO Convention 2003, Safeguarding, Cultural Traditions

1. Introduction
Africa, one of the world's richest and most culturally diverse regions, has long turned its attention to the preservation of its intangible cultural heritage (ICP), unique and culturally one of the most diverse continents in the world. Intangible cultural heritage' refers to the practices, representations, expressions, knowledge, skills, tools, objects, artefacts and associated cultural spaces that communities, groups and, in some cases, individuals recognise as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity. For the purposes of this Convention, only intangible cultural heritage compatible with existing international human rights instruments will be considered. This article examines the importance of prioritising the protection of PCI in Africa, with a focus on the 2003 UNESCO Convention, adopted at the 32nd session of the UNESCO General Conference in Paris. The 2003 Convention paved the way for a more effective protection and promotion of ICP worldwide, recognising the importance of oral traditions, artistic expressions, ritual practices and traditional knowledge. In Africa, the implementation of this Convention has been particularly significant, given the richness and diversity of its cultural traditions.

Fig. 1: Member States of the Convention for the Safeguarding of the Intangible Cultural Heritage

1.2 The African Context and the 2003 UNESCO Convention

Africa is a cradle of ancient and diverse cultures, with a rich tradition of music, dance, oral storytelling, crafts and ritual practices. However, many of these cultural expressions were at risk of extinction due to globalisation, urbanisation and other social and economic changes. The 2003 UNESCO Convention offered a crucial tool to address these challenges.

The Convention's articulation defines PCI as 'practices, representations, expressions, knowledge and skills, as well as the tools, objects, artefacts and cultural sites associated with them, that communities, groups and, in some cases, individuals recognise as part of their cultural heritage'. This broad spectrum includes oral traditions, ritual ceremonies, performing arts and much more.

Fig. 2: Isukuti dancers perform a traditional dance

2. The Implementation of the UNESCO Convention in Africa

In Africa, the implementation of the 2003 Convention has been a priority for many countries. Many African nations have ratified the treaty and worked to identify and document their CIP, involving local communities in this process. The Convention also promoted intercultural dialogue and experience-

sharing between African countries, helping to preserve and promote the continent's cultural diversity. A 'Fund for the Safeguarding of the Intangible Cultural Heritage' was established. The resources of this fund for the concrete implementation of the Convention consist of: (a) contributions made by States Parties; (b) funds allocated for this purpose by the UNESCO General Conference; (c) contributions, donations or bequests that may be made by: (i) other States; (ii) organizations and programmes of the United Nations system, in particular the United Nations Development Programme, as well as other international organizations; (iii) public or private bodies or entities; (d) any interest due on the resources of the Fund; (e) funds collected through collections and receipts from events organized for the benefit of the Fund; (f) any other resources authorized by the rules of the Fund, as prepared by the Committee. One of the most significant aspects of the implementation of the Convention in Africa has been the activity of registering National Intangible Cultural Heritage Lists (ICPs), which officially recognises cultural expressions of inestimable value within each country. This initiative helped raise awareness of the importance of the ICP and prompted the adoption of concrete measures for its protection.

3. Challenges and Opportunities

Despite significant progress, the implementation of the UNESCO Convention in Africa faces some challenges. Lack of financial resources, pressure on tradition caused by modernisation and insufficient involvement of local communities are just some of the issues to be addressed.

However, there are also unique opportunities. Africa's cultural diversity offers a rich reservoir of knowledge and practices to be protected and promoted. Cultural tourism, education and international cooperation can play a key role in supporting preservation efforts.

4. Conclusions

The implementation of the 2003 UNESCO Convention has placed a crucial priority on the preservation of intangible cultural heritage in Africa. This treaty has helped to recognise and protect the richness of African traditions, while promoting intercultural dialogue and the preservation of cultural diversity. Despite the challenges, efforts to protect the ICP in Africa remain essential to preserve the unique cultural heritage of this continent and to promote its global understanding and appreciation.

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Johnathan Djabarouti Constructing 'Slow Events': Integrating Tangible and Intangible Heritage Perspectives

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Abstract
This contribution explores the relationship between tangible and intangible heritage, offering a renewed perspective on how buildings can reflect living traditions and memories of societies that use them. The study navigates through various facets of this relationship, from dynamics between tangible and intangible elements, to temporalities of heritage, and relationships with society. By reinterpreting buildings as 'slow events', it establishes a framework for understanding the interplay between structures and the community practices that interact with them. Findings propose the implementation of five key criteria: 1) reconceptualizing time in heritage; 2) understanding buildings as living organisms; 3) integrating tangible and intangible domains; 4) enhancing the communal role of heritage; 5) prioritizing a holistic conservation ethos – presenting a fresh narrative on how society can foster a deeper appreciation of cultural capital.

Keywords: Architectural Heritage, Intangible Cultural Heritage, Conservation, Building Temporality

1. Context: significance and 'slow events'
The dichotomy between tangible and intangible heritage is a key debatem, with the dualistic nature of heritage a complex issue [1, p. 220]. Scholars believe treating domains of heritage in isolation reduces their interconnectness [2–4]. In contemporary literature the question of whether the tangible reality of a building can be conceptually separated from the cultural narratives it represents has become increasingly charged [5, pp. 394–395]. The Burra Charter [6] suggests values are shaped primarily by cultural beliefs, with different cultures developing unique methods for addressing the conservation of values. Consequently, the distinction between the values of heritage and its embodiment plays a pivotal role [7].

2. Buildings as 'slow events'
Kirshenblatt-Gimblett [3] notes how tangible heritage resembles 'things' and intangible heritage is akin to 'events'. Which begs the question, what if we perceived a building not as a static entity, but as a constantly evolving event – albeit at a slower pace? Moving deeper into this analogy, they suggest that a 'thing' can be viewed as a slow event, contingent on our perceptual recognition of its change over time [3, p. 59]. For instance, when we look at a building post-construction, we see a static entity. This perception stems from the building's lifespan – akin to or longer than ours – which obscures the smaller and more incremental changes that an old building can often undergo [8]. However, if time were to be accelerated, an organic metamorphosis of a building would be visually revealed – expansions, contractions, accretions, added and shedded layers, and so on. Viewing buildings as 'slow events' extends the narrative across time, recognizing every phase in a building's life as an integral chapter in its ongoing story [9]. How might this impact how tangible heritage is evaluated alongisde its more-than-physical qualities?

3. Time, space and memory: tangible heritage safeguarding
Viewing buildings as slow, evolving symbols of time and culture has profound implications for conserving tangible heritage. To apply this in practice, this study outlines five criteria, which work towards the synthesis of tangible and intangible, with the 'slow event' perspective serving as the underlying notion.

3.1 Reconceptualizing Time in Heritage

Conventional approaches towards time in the context of heritage needs re-evaluation. Time does not merely act upon heritage, but coexists with it, continually reshaping our perceptions and understandings of tangible heritage assets. This challenges the static and linear temporalities traditionally associated with architectural heritage. By recognizing structures as entities in constant flux, it is possible to appreciate the layers of stories and memories they represent. A concern for practitioners should be understanding how these changes inform their broader socio-cultural setting. Such a viewpoint necessitates a shift in heritage conservation and interpretation strategies, emphasizing the importance of conserving not just the structure but also the myriad temporal narratives those structures can embody.

3.2 Understanding Buildings as Living Organisms

Buildings are akin to living organisms. This understanding advances perspectives on tangible heritage and has the capacity to influence methodologies applied in conservation. Thus, buildings, like living organisms, have life cycles. They are conceived (constructed), mature, adapt, and sometimes die (demolished), or are rejuvenated (restored). Buildings also influence their surroundings, shaping behaviours and narratives. Walls, hallways, and architectural details can narrate tales of a multiplicity of times – whether that be related to individuals who designed it, artisans who crafted it, or communities who engage it. Such an understanding requires conservation strategies that ensure stories are safeguarding as much as materials.

3.3 Integrating Tangible and Intangible Domains

The tangible provides a context that makes the intangible palpable. Recognizing a structure's design intricacies, for instance, becomes profoundly richer when the local lore that has influenced design decisions is understood. Equally, understanding the intangible practices of a community becomes more grounded and accessible when the spaces where these practices have been performed for generations can be experienced in an experientially authentic sense. This integrated approach positions society to better grasp the multi-layered richness of heritage sites, informing more inclusive and comprehensive conservation and transmission strategies.

Mariateresa Petino Sustainability and Heritage: towards a shared future

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Abstract
In the modern era, sustainability has become a central term in our understanding of the development and conservation of the planet. The United Nations 2030 Agenda for Sustainable Development is a clear example of how sustainability is at the center of global concerns. In this context, it is interesting to explore how the concept of sustainability is intertwined with the concept of "living heritage" enshrined in the 2003 Convention for the Safeguarding of Intangible Cultural Heritage. Furthermore, it is worth considering how sustainable architecture can contribute to promoting this notion of sustainability in the context of intangible cultural heritage.

Keywords: Sustainability, sustainable architecture, environmental impact, cultural identity, cultural conservation

1. Introduction
The 2030 Agenda for Sustainable Development is a global plan to address challenges such as poverty, hunger, health, gender equality, education, clean water, affordable energy, economic growth, employment, innovation and environmental conservation. Sustainability, as defined in this agenda, requires balance between the economic, social and environmental aspects of development.
The 2003 Convention for the Protection of Intangible Cultural Heritage promotes the protection of cultural traditions, such as stories, songs, dances, crafts and ritual practices, which are essential to the identity of communities. The notion of "living heritage" emphasizes the dynamism of cultural traditions and their ongoing role in the life of communities. The Convention emphasizes the need to pass on this heritage to future generations.

1.2 Convergence between Sustainability and Living Heritage
Agenda 2030 and the 2003 Convention share a common vision: to preserve and promote cultural and natural heritage for the benefit of current and future generations. Both initiatives recognize that our well-being is intrinsically linked to the natural and cultural environment in which we live. Environmental, social and economic sustainability are three necessary and inseparable dimensions to accelerate the transition towards a more virtuous future. For this reason they must be increasingly integrated into the strategies of institutions and companies.

1.3 Dimensions of sustainability
- Environmental Sustainability: This aspect requires the conservation and responsible management of natural resources, the reduction of greenhouse gas emissions and the promotion of eco-compatible agricultural and industrial practices.
- Social Sustainability: Social sustainability is about eradicating poverty, promoting gender equality, access to education and health services, creating inclusive communities and respecting human rights.
- Economic Sustainability: This aspect emphasizes the promotion of stable and inclusive economies, the creation of decent work and the promotion of economic innovation. The dimensions of sustainability are interconnected. For example, environmental sustainability is crucial for long-term

economic sustainability, while social sustainability is essential for the well-being of communities and, therefore, economic success.

1.4 Sustainable architecture as an expression of sustainability and living heritage

Sustainable architecture embraces the principles of sustainability and living heritage. This discipline is based on the creation of buildings and environments that respect the natural environment, incorporating ecological technologies and using local materials. Furthermore, sustainable architecture often draws inspiration from local architectural traditions, integrating cultural elements into designs.
Sustainable buildings are designed to reduce energy consumption through thermal insulation, the use of low energy impact materials and the adoption of efficient heating and cooling systems. Furthermore, sustainable architecture encourages the use of renewable energy sources, such as solar and wind, to power buildings, thus reducing dependence on fossil fuels and mitigating environmental impact.

1.5 Sustainable materials and the life cycle of buildings

The use of sustainable materials is a central element of sustainable architecture. These materials are chosen for their low ecological footprint and their ability to be recycled or reused. Furthermore, attention is placed on the life cycle of buildings, considering not only the construction phase, but also the use and demolition phase. This approach promotes waste reduction and extending the life of buildings. Another key principle of sustainable architecture is context-oriented design. This means that the buildings are designed in harmony with the surrounding environment, considering the natural and cultural characteristics of the area. A building that reflects these characteristics, in Italy, is the Mario Cucinella nursery school in Guastalla: Mario Cucinella's project was designed to stimulate the child's interaction with the surrounding space according to a pedagogical vision: from the distribution of the teaching spaces to the construction choice of materials, up to the integration between internal and external environments. (Fig. 1)
Sustainable architecture is not only a response to contemporary environmental challenges, but can also be seen as a form of living heritage. This perspective is based on several considerations:

- *Preserve architectural traditions:* this may include the use of traditional materials, centuries-old construction techniques or architectural styles typical of the region. This approach not only honors cultural heritage, but can also help preserve it through the continued use of such elements;
- *Innovation through adaptation:* Similar to cultural traditions, sustainable architecture is constantly evolving.
- *Community involvement:* Communities often actively participate in the design and construction of sustainable buildings, helping to shape the environment according to their needs and desires.

Fig. 1: Cucinella's kindergarten in Guastalla

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Marcella Zanchetta Cultural Heritage: between wars and natural disaster

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Abstract
Cultural heritage represents the identity, history, and culture of a country. It's at risk due to wars and natural disasters. It's important to protect it as its destruction represents the loss of a part of ourselves. International legal instruments have been adopted to protect it during armed conflicts; natural disasters also pose a serious threat to its preservation. It's crucial for governments, international organizations, and citizens to work together to protect it. The protection of cultural heritage is a responsibility towards future generations.

Keywords: Heritage, Emergencies, Safeguard

1. Introduction
Cultural heritage is the collection of tangible and intangible, artificial and natural assets, a treasure that goes beyond economic value and represents the identity, history, and culture of a country. It includes artworks, landscapes, monuments, as well as traditions and customs. Its destruction or loss represents the disappearance of a part of ourselves, our history, and our values.
It is impossible not to consider that our cultural heritage is at risk because of wars and natural disasters. If we just consider our country, Italy, we can understand how it is constantly in danger: floods, avalanches, seismic events, landslides, etc. threaten the existence of numerous cultural assets. And even though there are numerous ongoing wars in the world, we cannot disregard similar events in Europe; just look at the ongoing war in Ukraine, which is destroying numerous national and international sites of interest (as well as civilians' homes). Wars are a serious threat to cultural heritage. During armed conflicts, numerous historical and cultural sites are deliberately destroyed as part of a war strategy, with the intention of erasing a people's history and identity. The destruction of monuments, museums, and artworks is an irreparable loss for humanity.
So why is it so important to prevent this from happening? As previously stated, cultural heritage is a symbol of our culture, our history, our country, and our identity. Without it, a part of ourselves and our existence would be missing.

1.1 War and Cultural Heritage
For centuries, these two forces, wars and natural disasters, have threatened cultural assets. Many interventions have been made to protect cultural heritage. In order to protect it from natural disasters, measures have been taken to ensure its safety. It is important that this action happens before the disaster and not after when the only option would be to repair the irreparable. Prior to the 1980s and 1990s, destruction during conflicts was commonly seen as a "collateral effect" of war, often justified by the principle of military necessity. However, in recent decades, especially when destruction is intentionally carried out, it is now considered a crime aimed at erasing all traces of the enemy. Today, the international community is aware of this form of destruction and has adopted laws and conventions to punish those responsible for war crimes and crimes against humanity.
To protect cultural heritage from wars, in fact, after the Second World War, a legal instrument for universal protection was established with the Convention for the Protection of Cultural Property in the Event of Armed Conflict adopted in 1954 in the Aia under the auspices of UNESCO. This convention aims to protect monuments, architectural works, archaeological sites, artwork, manuscripts, books, and

other objects of artistic, historical, or archaeological interest, as well as scientific collections of any kind, regardless of their origin or ownership, in order to preserve them from destruction, theft, or looting. But when it comes to architecture, how can it be best protected from an attack? Certainly, there will be various sanctions imposed on the attacking country, but nothing can bring back that particular asset, representative of a specific period and a particular history of the country in question.

1.2 Natural Disaster and Cultural Heritage

Natural disasters also represent a serious threat to the preservation of this heritage, as they can destroy artworks, historical buildings, and other culturally valuable assets. In these situations, what is left to do but preserve the memory of what has been lost? It is therefore important that cultural assets are constantly protected and valued, in order to at least preserve in our memory what once represented our history and identity. Adequate protection of cultural heritage not only involves implementing appropriate conservation measures but also involves community involvement in its safeguarding.
But emergencies are not always caused solely by natural events. Sometimes human interventions also prove detrimental to culture and the environment. Mining and heavy industry, for example, can cause serious environmental damage, destroying natural habitats and endangering biodiversity. In many cases, the exploitation of natural resources occurs without considering the long-term consequences, putting at serious risk the communities that depend on these resources for their survival and cultural identity. The protection of living cultural heritage thus also implies protecting the natural environment in which it is immersed. Awareness of the dangers that threaten cultural and environmental heritage should drive us towards seeking sustainable and environmentally respectful solutions. It is necessary to promote development practices that can harmonize human needs with the protection of cultural and natural treasures, ensuring better resource management.

To protect our cultural heritage, it is fundamental that everyone, from governments to international organizations to citizens, work together. It is necessary to develop conservation policies and sustainable management, invest in specialized training and the creation of disaster-resistant infrastructures. Furthermore, it is crucial to raise public awareness about the importance of preserving cultural and natural heritage and actively involve them in its protection. The protection of cultural heritage is a responsibility towards future generations. We must be aware of the importance of preserving our history and culture as witnesses to humanity's evolution. Only through collective commitment can we hope to protect our living heritage and ensure that future generations can enjoy its richness and diversity.

Fig. 1: Attack on the Mariupol Teather, Ukraine, 2022 (photo: Rai News)

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Laura Ricci, Carmela Mariano Cultural heritage and urban regeneration strategies

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Abstract
The article focuses on the new urban question through a public government strategy for environmental regeneration, social revitalization, and cultural and economic enhancement of the city, combining the characteristics of the urban dimension, with those of social inclusion and economic development, assuming the public city as a physical structural reference of the new welfare as a network of networks.

Keywords: cultural heritage, urban regeneration, welfare, urban planning, history and identity

1. Cultural heritage and urban regeneration. For long-term cross-sectoral and inter-institutional convergence

The connotation of generalised socio-economic, urban and cultural marginality, social inequality and poverty [1] connected to the new urban issue, the increase in world population, climate change, territorial imbalances, and the depletion of ecological and energy resources, highlight today, more than ever before, an aggravation of the structural deficiencies and genetic anomalies that have characterised the development of Italian cities since the early 20th century [2].

Fig. 1: The marginality of metropolitan suburbs

This scenario recalls the urgency of a unitary public governance strategy for the environmental regeneration, social revitalisation, and cultural and economic enhancement of the contemporary city; a strategy that combines the characteristics of an urban planning dimension with those of social inclusion and local economic development [3], assuming the public city as the structural physical reference of a new welfare, a network of material and immaterial, interactive and integrated networks [4]; an expression of historical-cultural and social identity, and a means for recomposing the link between physical continuity and social integration, between formal specificity and cultural heritage, between community representation and self-representation [5]; an engine for sustainable development and ecological reconnection [6].
In the framework of European policies and the new EU programming, this strategy constitutes the reference for the 12 thematic priorities of the European Urban Agenda (EU, 2016) for the elaboration of common solutions for the regeneration of urban areas and the implementation of best practices and also finds operational references in the Green new deal (2019), the Just Transition Fund (2021) and the Horizon Europe Programme (2021/2027).
In this framework, the NRP (2021) has identified, in particular in Mission 1. Digitisation, Innovation, Competitiveness, Culture and Tourism, the possibility of contributing to improving the quality of life by leveraging cultural heritage and identity places for urban communities "as key factors in urban regeneration processes" that "actively contribute to the promotion of inclusion and well-being as well as sustainable economic development". This is also through funding, in the implementation of Mission 4. Education and Research, of extended partnerships, i.e. diffuse networks of universities, public research bodies, and other public and private entities engaged in research activities, recognised as highly qualified, on strategic themes including, precisely, the one related to "Humanistic culture and cultural heritage as laboratories of innovation and creativity" about Extended Partnership No. 5 [7].
In doing so, it takes up some of the strategic lines defined by the PNR 2021/2027, which in the Thematic Area (At) 2 Humanistic Culture, Creativity, Social Transformation, Inclusive Society, identifies, among its 12 lines of research, that specifically referring to 'Strategies and tools for urban regeneration and land governance'.

Fig. 2: Urban regeneration of cultural heritage: Lx Factory, Lisboa

On the other hand, the European Union, just starting from the awareness of the deep link between the enhancement of the historical-cultural identity, quality and sustainability of urban contexts and opportunities for socio-economic development, puts the Cultural heritage at the centre of the Agenda of all the member Countries, through policies that combine actions for the protection and enhancement of tangible and intangible assets with those for education, environment, climate change, regional and digital policies, both through targeted funding programmes (Horizon Europe, Structural Funds) and by outlining a use of heritage as a strategic lever for the regeneration of those parts of the contemporary city affected by physical, structural, socio-economic marginalisation, stimulating development, innovation, activation of new economies and improvement of the quality of life of the inhabitants.

2. Cultural heritage and urban regeneration. For a comprehensive and polysemous conception

Such a context of programmatic, cultural and disciplinary reference, in coherence with the character of integration and comprehensiveness of urban regeneration, solicits, therefore, a reflection that brings to the attention of research and experimentation the need for a cross-sectoral and inter-institutional convergence among all the policies that pertain to the government of the territory, from urban planning policies to those relating to cultural heritage, environmental, building and social policies, giving priority to the valorisation and networking of common identity assets, on which to refound the structure of the public city, the quality of the urban environment and the very meaning of the collective use of spaces [8].

Convergence from which to derive an integration of paradigms, legislative and regulatory apparatuses; programmes, forms and contents of instruments, implementation mechanisms, parameters and performance indicators; levels of governance, for a sustainable and resilient regeneration of contemporary cities and territories, at supra-municipal, municipal and local scales.

Hence, a long-term and not conjunctural convergence, pursuing democratisation and urban welfare objectives, both in the sense of improving the living conditions of local communities and strengthening collective enjoyment, as an implementation of the constitutional principle of equality.

This reflection, in promoting interaction between urban regeneration and cultural heritage, recalls and substantiates, in particular, a comprehensive and polysemic concept of heritage:

- extended in geographical-territorial terms, potentially including parts of the city and contemporary territories in their entirety, from individual tissues to the entire municipal area;
- extended in terms of time, up to modern and contemporary, free of unambiguous references to this or that phase of historical stratification;
- integrated in disciplinary terms, synthesising the different knowledge and cultural forms of contemporaneity, no longer the prerogative of a limited and sectorial number of competencies.

A conception that attributes a cultural character and structuring value even to "the most labile traces, in isolated singularities [...]; not only of remote foundation and implantation [...]but also of more recent formation, yet characterised [...] by an evolutionary capacity in continuity (from a physical, symbolic, memory and use point of view) that allows us to identify in them unquestionable historical and cultural values to be safeguarded and enhanced" [9] so that they can actively contribute to the regeneration processes of the city and the more peripheral and marginal territory to be restructured and transformed.

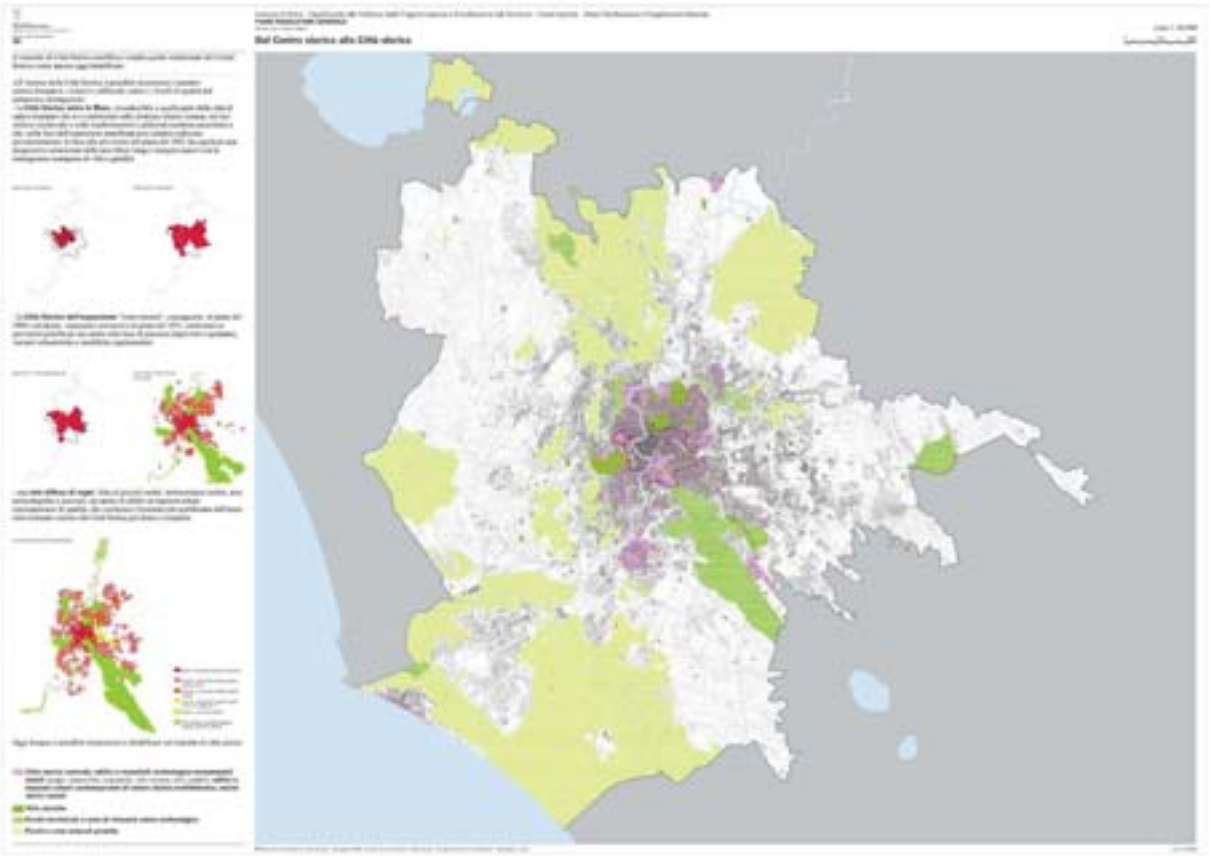

Fig. 3: Municipality of Rome, Nprg (2003), Descriptive elaborate D6 'From the historical centre to the historical city'.

Recalling, in this, the need for an interpretative capacity of the historical and cultural, as well as naturalistic and environmental structuring of the territory, in all its articulations and peculiarities, "an

ability to read wider and more diffuse urban parts in the traditionally 'peripheral' territory and to select, even within more recent urbanisation processes, those urban fabrics and individual materials that express a cultural value" [9] and that represent an important, wide and ramified part of the city and territory.
A conception that reaffirms the centrality and transversal nature of the design dimension in protection and enhancement, attributing "a structuring value [...] capable of stimulating a design that is more aware of the history of places and attentive to the values of contexts", "aimed at recovery, enhancement, and above all fruition" [9], giving priority to the protection and enhancement of common identity assets, on which to refound the structure of the public city, the quality of the urban environment and the very sense of the collective use of spaces.

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Daniele Colistra The art of Calabrian ceramics and the representation of popular myths

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Abstract
The paper summarizes research aimed at enhancing and safeguarding ceramic art in Calabria, particularly the depiction of myths and figures of popular culture. It is a cultural expression that concerns two prevalent sectors among those defined by the *Convention*: "oral traditions and expressions" and "traditional craftsmanship". The research highlights the historical, artistic, and ethno-anthropological value of narration through representation and relates it to similar expressions of the immaterial culture of other regions of the world.

Keywords: Engobed ceramic, popular myths, apotropaic masks, intangible heritage, oral culture.

1. Introduction
The *Convention for the Safeguarding of the Intangible Cultural Heritage*, adopted by UNESCO in October 2003, identifies five main areas in which intangible heritage manifests itself and must be protected (art. 2, paragraph 1). In particular, the first area ("oral traditions and expressions, including language as a vehicle of the intangible cultural heritage") and the fifth ("traditional craftsmanship") are both present in ceramics that represent events, beliefs, characters: divinities, apotropaic masks, metaphysical elements present in stories passed down orally. These clay representations have accompanied the evolution of the human species since ancient times and still survive today - albeit to a limited extent - in various expressions of popular culture.

2. The tradition of ceramics and the representation of the myth in southern Italy
In southern Italy, the sumptuous tradition of Magna Graecia and Roman ceramics branched out, during the early Middle Ages, into countless technical and expressive streams, almost always attributable to local traditions. In some cases, these local schools have become extinct; in others, on the contrary, they have been able to renew themselves. Ariano Irpino and the Amalfi area in Campania, Caltagirone and Santo Stefano di Camastra in Sicily, Grottaglie and Laterza in Puglia, Squillace and Seminara in Calabria are just some of the territories where the art of hand-modelled clay has remained alive despite the development of new systems to produce ceramic products.
In the Reggio area, especially in Seminara, this art (the "know-how to do") is closely intertwined with an oral tradition (the "know-how to tell") which refers to a magical and supernatural world. From this union were born the famous apotropaic grotesque masks, the *babbaluti* (anthropomorphic flasks), the fish-shaped water bottles, the hedgehog-shaped jars and the caricatures of characters hated by the people because of their arrogance: anthropomorphic, phytomorphic and zoomorphic figures which keep alive a world that has almost disappeared in the collective imagination and which, therefore, risks disappearing.

3. Art as an expression of collective identity
An artist who for several decades has managed to keep alive this heritage linked to knowing how to do and knowing how to tell is Nicola Tripodi. His laboratory in Reggio Calabria, called *Arghillà-Arte delle terre*, is a real *Wunderkammer* populated with characters that refer both to ancestral figures and to contemporary popular life. His representations refer to the time “when even things were known to possess a soul”, but they are also elements that have always been present in the earth, in the sky and

in the sea. Tripodi summarizes his poetics in one sentence: “With my hands I shape the clay of my land, seeking signs of the past, symbols of a culture, of an identity, of Calabria”.
The technique used by Tripodi to finish and color his works is engobe, an ocher mixture of clay and water with which the still raw and not completely dried model is covered, with the aim of improving the roughness of the surface and its waterproofness. The raw earth, once covered with engobe, can be further colored with pigments dissolved in water. It is then left to dry perfectly, then fired in a kiln so that the clay, which has now become ceramic, takes on its definitive colour.

4. The research project and the principles of the Convention

The research project we present has the objective of identifying and communicating in a scientific (measurable, verifiable, and implementable) way the representation of myth through ceramic art in Calabria. This art is studied not so much for its intrinsic value, but rather as a paradigm of a heritage of expression and knowledge that has been handed down for generations and which risks being forgotten. Through the research project, the representation of popular myths through engobed ceramics can be communicated and compared with similar expressions of human diversity and creativity. This can encourage intercultural dialogue and mutual respect for different ways of life, strengthening the sense of social and cultural belonging to their land on the part of those who have inherited this great cultural heritage.
The project is divided into two phases. The first is aimed at cataloging the works created by Nicola Tripodi; the second, which reproduces the logical structure of the first, is intended for the vast collective imagination depicted in the tradition of Calabrian ceramics.
The first phase is based on the following actions:
- photographic filing and cataloguing;
- photogrammetric survey;
- restitution of the survey in 2D and 3D, with the construction of interactive three-dimensional models that can be explored in real time;
- synopsis of the events described and the psycho-somatic characteristics of the protagonists;
- technical filing of the production phases of the works, from the choice of materials to the preparation of pigments, from modeling and coloring techniques to the firing phases;
- construction of an open-access digital platform for the communication of the research carried out and for subsequent inclusion in the inventory of the intangible cultural heritage present in the State, as indicated in articles 11 and 12 of the Convention.

5. Conclusions

The research presented contributes to guaranteeing visibility to the art of Calabrian ceramics, highlighting its historical, artistic, and ethno-anthropological value, and allowing comparison with similar creative expressions characteristic of the material culture of other regions of the world. Protection and promotion are based on communication actions to increase awareness of the value of this tradition and the consequent collective loss in the event of extinction. The choice to have given a scientific character to the analysis and cataloging work favors the transmission of the studied heritage and the possibility of continuing its practice. Despite its limited extension, the research contributes to the coordination of efforts to safeguard intangible cultural heritage at a regional and sub-regional level, and can serve as a model for further similar safeguarding activities, as indicated by the Convention which, in art. 2 paragraph 3, suggests actions aimed at guaranteeing its vitality, “including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education”. A further safeguard measure, indicated in the art. 13, consists in encouraging the creation or strengthening of training institutions for the management of intangible cultural heritage and the transmission of this cultural heritage in the context of "forums" and spaces designated for its representation or expression.

Fig. 1: Nicola Tripodi, *Re*, engobed ceramic, cm 20x9x23

Fig. 2: Nicola Tripodi, *Bucaletta bifronte*, engobed ceramic, cm 10x14,8x18

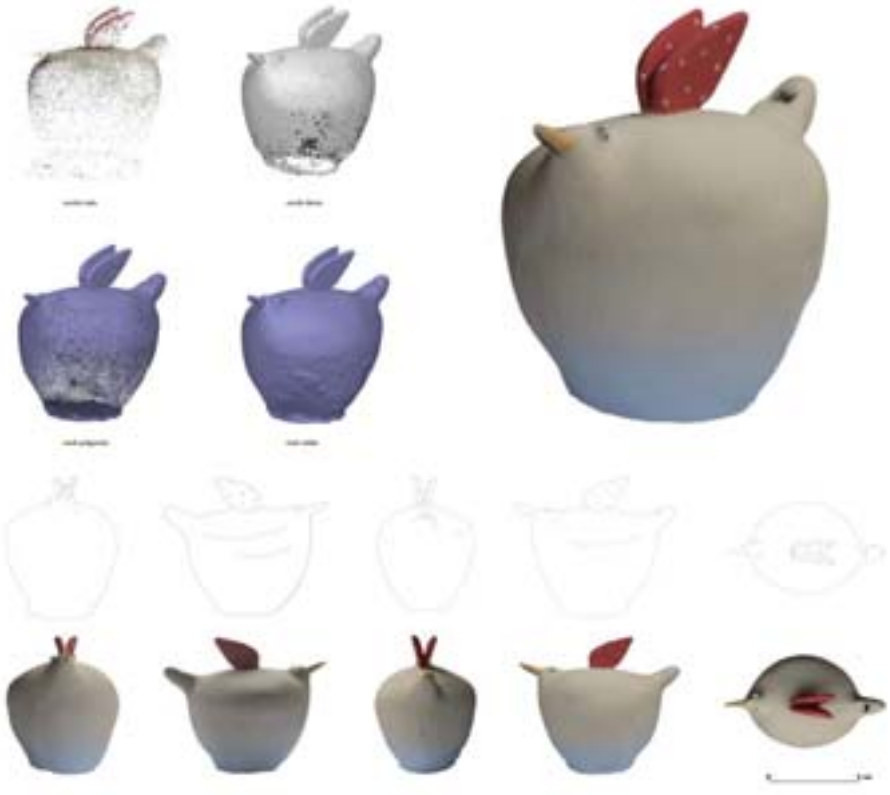

Fig. 3: Nicola Tripodi, *Uccello canterino*, engobed ceramic, cm 8x6,5x12

Fig. 4: Nicola Tripodi, *Ninuzzu*, engobed ceramic, cm 25x12x50

Fig. 5: Nicola Tripodi, *Maria Pizzi*, engobed ceramic, cm 33x20x44

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Ryu Hyunguk, Ishihara Yasushi, Yokoi Takahiro Changes in the environment and support system for Deaf people and sign language in North Korea

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Abstract
There have been limited studies on the support for Deaf people and sign language in North Korea, nationally and globally. This study aims to investigate the changes in the environment and systems surrounding Deaf people and sign language in North Korea to understand the history of support in the country. The study focuses on North Korea's disability welfare policies, social systems, and support programs, with a particular emphasis on the establishment and standardization of Korean Sign Language (also known as "Sonmal"), the training of sign language interpreters, the provision of sign language interpretation in multimedia content, and the development of sign language learning software. Despite the limited and insufficient information, this study is the first step in uncovering the history of support for Deaf people and sign language in North Korea.

Keywords: North Korea, Deaf people, Korean sign language, Support system, Historical Changes

1. Introduction
The Democratic People's Republic of Korea (DPRK), also known as North Korea, is often associated with words like "poverty," "danger," and "secrecy" by Western countries. It is believed to be a country with limited social change. Some Western countries and South Korean media claim that disabled individuals are not allowed to reside in Pyongyang, the capital city open to the public, and are hidden elsewhere. They also report that it would be surprising to see someone in a wheelchair in Pyongyang. However, North Korean society is complex, and despite facing extreme poverty and isolation, some aspects align with international standards in terms of policies and social systems. Nevertheless, there is a lack of research focusing on policies and social procedures supporting Deaf people in North Korea.

2. Research Objective and Approach
The North Korean authorities enacted the "Law on the Protection of Persons with Disabilities" on June 18, 2003, through Decree No. 3835 of the Standing Committee of the Supreme People's Assembly. This law established the first legal framework to protect the rights of disabled individuals. Subsequently, the First Amendment was made on November 21, 2013. There is a significant shift in interest towards policies and systems related to disability welfare in North Korea. However, no previous studies have extensively covered the policies and social procedures surrounding Deaf people in North Korea and the establishment and standardization process of Korean Sign Language.
Based on an awareness of this issue, this study aims to examine and organize the current state of disability welfare policies, social systems, and support programs in North Korea. The objective is to clarify the process of establishing and standardizing Korean Sign Language and developing subsequent sign language interpreter training programs, automatic translation programs for Korean Sign Language, sign language electronic dictionaries, and sign language learning software.
Therefore, he conducted literature research on books, academic papers, newspaper articles, and Internet articles to investigate the history of welfare for deaf people in North Korea since the Korean War. This article focuses on the process of establishing "Korean Sonmal," vocational education for sign language education and training of sign language interpreters, subtitles business, trends in developing Korean sign language programs, and multimedia teaching materials.

Fig. 1: Class Scenery of Pyongyang School for the Blind: Speech education (left), Braille education for the blind (middle), sign language education (right) (Source: Hall Rosetta Sherwood, 1910)
Fig. 2: Korean Sign Language Class Landscape at Wonsan School for the Deaf(Source: Blue sky, 2019.9.10)

3. Research Objective and Approach

The "Labor Law for North Korean Workers and Clerks," issued on June 24, 1946, immediately after the liberation, outlines a system of assistance for individuals who cannot work due to disabilities or diseases caused by labor. In December of the same year, the Interim People's Committee of North Korea implemented the Social Insurance Act, which prioritized providing life security for disabled individuals. Although this law was not explicitly enacted to regulate the rights of disabled people, it did include specific welfare-related provisions that have remained unchanged for over 60 years, serving as the foundation for the North Korean government's official policy on disability. The lack of revisions and new legislation in this area can be attributed to the limited efforts made by the North Korean authorities to promote welfare for disabled individuals. Consequently, the "Disability Protection Act," enacted in 2003, can be considered the first legislation directly addressing the rights of disabled people by North Korean authorities since the division of South and North Korea.

Additionally, in February 1948, the Central Committee of the North Korean Alliance for the Blind was established, and the Pyongyang School for the Blind, the first educational institution for blind people and the Deaf, was founded. During the 6.25 War (Korean War = War of Liberation of the Fatherland, 1950.6.25 – 1953.7.27), a cabinet established and operated a disabled military school, providing vocational-technical education to those who had bravely fought for their country and people. In April 1953, the Disabled Military Production Cooperative Association was formed [1].

According to North Korea's "Chosun Education History" (1961), Pyongyang School for the Blind was divided into a school for blind students and a school for deaf students in 1954 and continued until the establishment of Seongcheon School in 1992.

Since September 1959, three schools for blind students (Hamheung, Bongseong, Daedong), eight schools for deaf students (Sambong, Hamheung, Wonsan, Sijeong, Eunjung, Songchon, Bongsan, Bongcheon), disabled soldiers' recreation centers and health centers have been established in North Korea White Paper page 386.

In June 1962, the government began to fully support the lives of disabled people with no relatives, and it was reflected in the socialist constitution (1972.12) and socialist labor law (1978.4).

In June 2003, the "Democratic People's Republic of Korea Act on the Protection of Persons with Disabilities" was adopted, which systematically guarantees the rights of persons with disabilities in various fields of social life according to actual demands. The Disability Protection Act consists of 54 classes in 6 chapters, including "Basic of the Disability Protection Act," "Recovery Treatment for Persons with Disabilities," "Education for the Disabled," "Cultural Life for Persons with Disabilities," "Labor for Persons with Disabilities"[2].

North Korea signed the United Nations Convention on the Rights of Persons with Disabilities on July 3, 2013, and ratified it on December 6, 2016. As a result, the Convention entered into force in North Korea on January 6, 2017. In December 2018, the first report on implementing the Convention on the Rights of Persons with Disabilities was submitted to the UN Commission. The report acknowledges that North Korea's rights to disabled people are insufficient in the following two points, which are unusual for North Korea.

One is the accessibility issue described in paragraph 76, and many improvements exist considering the UN Convention on the Rights of Persons with Disabilities, an international standard. On June 18, 2003, "sign language education and teaching materials" were described in Article 15 of the Disabled Protection Act and Article 23 below, "Chapter 3 Education for Persons with Disabilities." The government's policy is to provide daily assistance to disabled people, such as strengthening Braille or sign language research projects and writing and publishing-related textbooks (Article 21) and simple braille and sign language (Article 23) [3].

Table1: Major History Related to Disability Welfare in North Korea

1948 February: Central Committee of the Korean Alliance for the Blind Formed
1951 May: Construction of orthopedic appliance factory
1959 September: Establishment of 8 schools for the deaf and mute and 3 for the blind
1998 February: Establishment of the Korean Association for the Support of Persons with Disabilities
2003 June: Enactment of the Law on the Protection of Persons with Disabilities in the Democratic People's Republic of Korea
2003 February: Renamed to the Korean Association for the Support of Persons with Disabilities
2006 July: Expanded and reorganized as the Central Committee of the Korean Association for the Protection of Persons with Disabilities
2011 January: Establishment of the Korean Association for Disabled Sports
2011 September: Organization of the Ethnic Disabled Olympics Committee
2012 December: First participation in the Paralympics (in London)
2013 March: Opening of the Pyongyang Mun Su Rehabilitation Center
2013 July: Signing of the United Nations Convention on the Rights of Persons with Disabilities
2013 February: Establishment of the Korean Association for Disabled Arts
2013 October: Start of the Korean Deaf and Mute Soccer Team (in Pyongyang)
2013 October: Participation in the 3rd Asian Youth Para Games.
2013 November: Joined the International Paralympic Committee (IPC)
2013 November: Amendment of the Law on the Protection of Disabled Persons in the Democratic People's Republic of Korea
2013 December: 4th World Disabled Day Commemoration Ceremony
2013 December: Establishment of the Korean Association of Deaf People
2014 March: Establishment of the Korean Association of Blind People
2014 March: Establishment of the Korean Disabled Children Rehabilitation Center
2014 June: 2014 Korea Disabled Day Yongfan Meeting
2014 October: Participation in the Incheon Asian Para Games
2018 August: International Forum for Promoting Disability Rights held (in Pyongyang)
2019 July: Publication of the "Korean Sign Language Dictionary"
2019 December: Signing of the construction agreement for the Deaf-Blind Vocational Service Center (in Pyongyang)

Source: Reorganized based on "Unification News" (October 20, 2014) and "Chosun Shinbo" (December 17, 2014)

4. Establishment and activities of the Korean Federation for the Protection of Persons with Disabilities

The Korean Foundation for Disabled and Orphans (KFDO) founded the Korean Association for Supporting Disabled (KASD) on July 29, 1998. To carry out the project as a nationwide and unified protection project for people with disabilities, it was promoted to the Central Committee of the Korean Federation of Disabled Persons (CDPF) on July 27, 2005.

The committee's purpose is to "protect and represent all rights and interests of the disabled in North Korea, and to help them recover their mental and physical functions, establish a disabled environment, and secure their social status through various notes[4].

The committee is comprised of about 20 full-time workers, 4,000 volunteers, and affiliated committees established in each province, city, and county. The associations, which have various organizations, are engaged in activities to ensure the recovery of the health, social activities, and cultural life of disabled people and to improve their rights[5].

The committee's main activities include setting "Disability Day" (June 18) and "International Day of the Disabled" (December 3), establishing close cooperation with international support organizations such as HI (Handicap International) and ICRC (International Committee of the Red Cross), and publishing quarterly information magazines. Information magazines are published in Korean and English; English versions are also sent to international organizations supporting disabled people [6].

The activities of North Korean organizations supporting disabled people began as a means for the state to receive foreign aid. However, the North Korean Ministry of Health pays the organization's operating expenses and staff salaries. The organization promotes projects to support disabled people in cooperation with national organizations such as the Ministry of Health, Education, and Urban Management. It also conducts joint activities with international organizations and European allies [7].

4.1. Establishment and Activities of the Korean Sign Language Interpreters Association

On March 22, 2014, the Korean Sign Language Interpreters Association (KSLIA) was established under the KFDO umbrella. KSLIA aims to enhance the professional skills of sign language interpreters and promote quality interpretation services to the deaf community. KSLIA provides regular training programs and workshops for its members and endeavors to maintain high standards of professionalism and ethical practice. Membership is open to all qualified interpreters and professionals interested in sign language interpretation.

Establishment and Activities of the Korean Sign Language Interpreters Association. On March 22, 2014, KSLIA was established under the KFDO umbrella. The primary objective of this association is to ensure Deaf people have equal opportunities to participate fully in social activities and the international community while promoting linguistic accessibility and communication through sign language across all spheres of politics, economy, and culture. We aim to accurately express the intentions and demands of

the deaf community and guarantee their information security through sign language interpreting, ensuring their wishes and needs are fully realized.
The Association strives to ensure access to information by providing sign language interpreting services. Additionally, they aim to standardize Korean Sign Language by granting sign language interpreting services for TV, multimedia content, and other popular press. The Association also seeks to develop educational programs for deaf people and to enhance cooperation with sign language interpreter associations across different countries.
From May to July of 2014, KFDO organized Korean Sign Language courses at deaf schools in Mukden, Bongsan, Dangdang, and Sungcheon, which drew more than 130 attendees from student, parent, and resident groups. Attendees gained a deeper understanding of sign language as an essential communication tool for deaf people and recommended the scheduling of recurring seminars. Thirty experts in otolaryngology and audiology attended the conference. The event offered a chance to acquire fresh insights into diagnosing hearing problems and rehabilitating hearing conditions [8].

Fig. 3: Review of new sign language at the Korean Sign Language Deliberation Committee (Source: Yeo-myeon)

4.2. Results of the Survey of the Disabled

According to the Korean Association for the Support of the Disabled's (KASD) 1999 survey, the population of disabilities in North Korea amounted to 763,237, accounting for 3.41% of the total population. By disability type, individuals with physical disabilities comprised the highest number with 296,518 cases (38.8%), followed by those with hearing disabilities at 168,141, visual disabilities at 165,880, and severe mental and physical disabilities and mental disabilities at 68,997 and 37,780, respectively. The gender distribution was approximately 57% male (435,545) and 43% female [9].
KASD conducted a survey sampling six regions and identified that Biseong-gun, South Hwanghae Province, had the highest percentage of people with disabilities at 5.14%, followed by Tongcheon in Gangwon Province at 3.92% and Pyeongwon-gun in South Pyeongan Province at 3%. 82% of residents without disabilities were found in cities in North Korea, including Wonsan City in Gangwon Province (3.09%) and Pyeongseong City in South Pyeongan Province (2.98%). However, the results also indicated that disabled people make up around 1.75% of the population in Pyongyang, which was thought to have no disabled residents [10].
More disabled people lived in urban areas (64%) than rural areas (35.4%). By age, 22.7% of the population with disabilities were aged 60 or above, followed by 21.4% in their 50s, 19.1% in their 40s, 15.3% in their 30s, 11.9% in their 20s, 6.6% in their teens, and 3% below nine years of age, suggesting a correlation between age and decreased disability prevalence. In terms of occupation, institutionalized residents accounted for the most significant proportion at 30.5%, followed by workers at 23.8%, intellectuals at 9.4%, farmers at 7.8%, and students at 1.9%[11].
By cause, illness was the most common factor, accounting for 39.7% of cases, followed by congenital conditions at 15.6%, accidents at 19%, trauma at 15.1%, and drug poisoning at 1.2%. Most caregivers (50.2%) were spouses, with parents accounting for 18.1%, son and wife accounting for 8.6%, and daughter and her husband accounting for 3.8% [12].
In recent years, data released by North Korea's Central Bureau of Statistics in 2017 showed that 5.5% of the total population in North Korea is disabled. In other words, about 1.375 million out of the total population of 25.52 million as of 2017 were disabled [13]. As for the types of disabilities, 2.5% were physically and mentally disabled, 1.3% were hearing impaired, 1.2% were visual impairment, 0.4% were mental impairment and 0.3%.As for gender, contrary to the 1999 KASD survey, the proportion of women with disabilities accounted for 5.9% of the total population, exceeding that of men with disabilities by 5.1%.By age group, the proportion of disabled people in their 60s and older was about 17% of all disabled people. Graduating from a six-year middle school accounted for 64% of the total disabled, and the employment rate of all disabled was approximately 58%[14].

Fig. 4: Left "Learning Sign Language" (2005), right "Sign Language Dictionary" (1958) (Source: Yeo-myeon)
Fig. 5: "Korean Sign Language (character alphabet)" (Source: Yeo-myeon)

5. Compilation of Korean Sign Language Dictionary, Standardization of Korean Sign Language, and Training of Sign Language Interpreters

5.1. Formation and Activities of the Korean Sign Language Advisory Committee

In North Korea, social interest in supporting the Deaf is increasing daily, and on May 11, 2016, the Korean Sign Language Advisory Committee was organized. The primary mission of this committee was to determine and standardize new signs for new languages and eliminate regional differences in sign languages. The committee promoted the compilation of a Korean sign language dictionary as part of its activities.

At the first meeting of the Korean Sign Language Deliberative Committee, the Vice-Chairman of the Central Committee of the Federation for the Protection of the Disabled chaired the committee and explained the significance and importance of the deliberations and that the reviews would be held quarterly. In addition, videos of sign language expressions corresponding to more than 120 new words widely used in newspapers and broadcasts were shown, and their appropriateness was discussed.

At the second meeting, the committee compiled books and videos on the new signs discussed at the previous session, and the Korean Deaf-Blind Economic and Cultural Exchange Corporation oversaw sending the books and videos to relevant organizations.

At the 3rd meeting, the committee discussed the project to finalize and film the signs for compiling a Korean Sign Language dictionary with 3,000 words.

The fourth committee meeting was held from June 21 to 23, 2017, at the Korean Deaf-Blind Economic and Cultural Exchange Company. The meeting was attended by the administrative staff in charge, members of the Sign Language Deliberative Committee, and sign language teachers from various metropolitan schools, and deliberated on the 450-plus sign language vocabulary items to be included in the new teaching materials to be compiled for the 12-year compulsory education system for deaf people.

At the 5th meeting of the committee, approximately 450 new signs were selected, and at the 6th meeting, the committee discussed about 400 more.

At the 7th committee meeting, the committee finalized, filmed, and edited signs for 12 specialized fields, including politics, economics, culture, sports, and information technology [15].

5.2. Standardization of Korean Sign Language by the Korean Deaf Association

The Korean Sign Language Dictionary is said to have originated from "Sign Language Study" (1958), a learning material for schools for deaf students in North Korea. This textbook contained detailed sign language illustrations and was the foundation for learning Korean Sign Language.

The "Sign Language Dictionary," published on June 20, 2005, is a "standard sign language dictionary" with approximately 3,000 vocabulary entries [16]. "Sign Language Study" (Kim Eun-hee, Federation for the Protection of the Disabled of North Korea), published on August 10, 2005, is a sign language education book containing 533 frequently used words in daily life [17]. The book begins with "Points to keep in mind about sign language," "How to interact with the Deaf," and "Posture when interacting with the Deaf," followed by "Names of parts of the hand," "Finger alphabet and sign language words," etc. The book includes vocabulary related to military and political affairs. Military and political vocabulary accounts for about 20% of the vocabulary. Comparing the contents of this book with the "DPRK Sign Language 1-10" series published in 2009, 2015, and 2017, some words with the same meaning have different sign language expressions. It can be inferred that the sign language of North Korea is also constantly changing [18].

In 2019, the Korean Sign Language Association and the Korean Sign Language Interpreters Association finalized the signs corresponding to approximately 4,000 new words. They published a "Sign Language Dictionary," including them to standardize and promote Korean Sign Language. This book contained

signed expressions of terms related to 13 fields (economy, education, information, national defence, construction, agriculture, environment, literature, art, physical education, health, commerce, and law). It was distributed to schools for the deaf, educational and research institutions, and the reading room for disabled people of the Science and Technology Hall of Records.

Since then, the Korean Association of the Deaf has continued to promote the project of compiling field-specific sign language dictionaries, such as determining 4,000 sign language expressions corresponding to terms widely used in various aspects of social life, including politics, economy, science and technology, and sports.

In 2016, the Korean Association for the Deaf started a project to produce multimedia content for more than 500 new words discussed by the non-permanent Korean Sign Language Deliberative Committee and to disseminate them nationwide. It also published " DPRK Sign Language" (Volumes 1-5), launched a sign language learning project for children by the Early Sign Language Training Group, and started a project to build a reading room for disabled people in North Korea's science and technology center [19]. Currently, the Korean Association for the Deaf is engaged in a preparatory project to create and disseminate multimedia content containing educational videos with sign language interpretation and subtitles and signed expressions of new languages to schools for the deaf and related institutions nationwide. This project is being carried out with the active and direct participation of the Deaf.

Fig. 6: An example of the contents of the Korean Sign Language Dictionary It contains sign language expressions of related terms by 13 disciplines (Source: Yeo-myeon)

Fig. 7: Development of sign language learning program "My Friend 1.0"(Source: KFPD)

5.3. Operation of the Sign Language Interpreter Training Office and the Early Sign Language Training Group

The Korean Deaf-Blind Economic and Cultural Exchange Company under the Korean Federation for the Protection of the Disabled was organized on December 14, 2012, with the approval of the DPRK government to improve the economic and cultural activities of the visually and Deaf and to encourage their active participation in social activities. On March 11, 2015, the Organization organized the Building Materials Factory for the Deaf to support production and enjoy material wealth by the Deaf as producers. It also provides massage services for the visually impaired, volunteer work, and education in electronic information technology.

In addition, with the government's interest in supporting the Deaf increasing day by day, the Sign Language Interpreter Training Office has been in operation since its inception, and the office has been promoting sign language songs and poems and other activities that are not limited to the old-fashioned way of doing things.

Since April 1, 2016, the Early Sign Language Training Group for teaching Korean Sign Language to children has been active, helping children with hearing disabilities to have a smooth education at school. In addition, a project to improve classes in school education is underway to help teachers improve the content and methods of classes according to the characteristics of children with hearing impairments.

The Korean Association of Arts for the Disabled created and presented a sign language dance work on the International Day of Persons with Disabilities on December 3, 2017. The dance piece, in which Deaf dancers performed rhythmic movements to the North Korean song "Don't Be Envious of the World" while expressing the lyrics in sign language, won the audience's hearts with its unprecedented form of expression [20].

6. Sign Language Learning Program and Multimedia Contents

6.1. Development of the " Woo-ri-dong-mu 1.0" Sign Language Learning Program.

According to reports from "The Labor Newspaper," the organ of the Central Committee of the Workers' Party of Korea, and the DPRK's official website "DPRK Today," the Central Institute for Information Technology Quality of the State Information Technology Bureau, in collaboration with the Korean Deaf-Blind Economic and Cultural Exchange Company and other organizations, has created a sign language learning program, " Woo-ri-dong-mu (Our Friend) 1.0," for individuals with hearing impairments. The program is accessible in Japanese, English, and three Korean versions. Additionally, the institute developed a manual to educate doctors on the characteristics of individuals with disabilities. The manual was distributed electronically to doctors in charge of disabled individuals in various regions, and a nationwide registration program for this demographic was implemented.

The Labor newspaper reported that the swift advancement of information technology has positively affected the intellectual growth of individuals with hearing impairments. Furthermore, computers and other technological devices have significantly enhanced the expressiveness and standardization of sign language, the primary language of the deaf community. However, the newspaper also acknowledged that, like the phenomenon of dialect use among hearing individuals, the deaf population also exhibits a diversity of languages. However, due to the different dialects people use, Deaf people from other regions may face difficulty communicating due to differences in their respective languages.

In response, the National Bureau of Information Technology's Central Institute for Information Technology Quality developed " Woo-ri-dong-mu 1.0," a sign language learning program designed to assist those with hearing impairments maximize their abilities and engage actively [21].

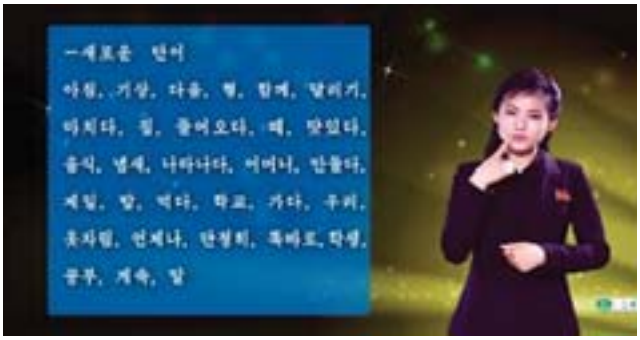

Fig.8: Development of Sign Language Electronic Dictionary 1.0 (Source: Korean Central News Agency, December 23, 2021)

Fig.9: An example of "manbang" content (source: Yeomyeong)

6.2. Multimedia Contents Production Project for Sign Language Education

In recent years, the Korean Society for the Deaf and Blind Economic and Cultural Exchange has been promoting a project to produce multimedia content for sign language education, which is expected to be useful not only for sign language standardization and educational projects at schools for the Deaf but also for the public who are interested in sign languages. In addition, the Korean Association of Sign Language Interpreters is promoting projects to establish a training program for sign language interpreters and a certification system for sign language interpreters.

Once these projects are completed, a high standard of sign language interpreting services is expected to be developed, which will significantly help improve social accessibility. To this end, the Korean Sign Language Association is promoting projects to standardize and disseminate sign language expressions used in various areas of social life, such as politics, economy, and culture.

The Korean Deaf-Blind Economic and Cultural Exchange Company is also profoundly interested in producing multimedia content with sign language and subtitles and improving the technical level of sign language announcers. The "Man Bang" (a multimedia terminal for viewing North Korean Internet TV broadcasts) offers more than 60 content with sign language interpretation and subtitles.

The introduction of sign language interpretation and subtitling is a significant project to improve the accessibility of TV programs for the Deaf so that they can obtain a variety of information in society, participate in social activities without any problems, and raise public interest in support for disabled people [22] For this reason, while continuing to produce multimedia content with sign language interpretation and subtitles, the Korean Association for the Deaf and the Blind is collecting the opinions of the Deaf, exploring ways to meet their demands, and cooperating with the Korean Association for the Deaf and the Blind in implementing projects to meet those demands [22].

6.3. Automating subtitling for signed language broadcasts; Introducing 3DCG Sign Language Interpretation.

The Korean Deaf-Blind Economic and Cultural Exchange Corporation has implemented cutting-edge technology for creating real-time subtitles for audio during sign language broadcasts. This technological breakthrough provides sign language to its audience and offers instantaneous access to information through subtitles without significant delay.
The Korean Artists' Association teaches Deaf people how to use the 3DCG production tool "Maya" to incorporate sign language interpretation images into video content. This development could significantly advance information security if 3DCG sign language interpreting images becomes widely produced.
In June 2020, a virtual conference organized by the "Korean Association for the Deaf" gathered teachers from eight different schools for deaf students. The conference aimed to discuss developing a real-time Korean Sign Language automatic translation program capable of recognizing Korean Sign Language and automatically generating subtitles. They also analyzed the way Korean Sign Language treats three main components, namely "hand shape," "hand position," and "hand movement," as well as some minor ones like "palm direction" and "fingertip direction" as syllable components. In addition, the Korean Deaf-Blind Economic and Cultural Exchange Corporation is promoting a project involving collaboration with the practical department to introduce an automatic translation program for Korean Sign Language. Researchers from "Kim IL Sung University" and "Kim Chaek Institute of Technology" are also involved in these endeavors [23].
Suppose the introduction of the Korean Sign Language automatic translation program is implemented in sign language education. In that case, it is anticipated to significantly enhance the educational quality in schools for deaf students.

Fig. 10: Example of Automatic Subtitle Generation from Sign Language Video (Left) Automatic Korean Sign Language Translation Program under development (right) (Source: Yeomyeon)
Fig. 11: Development of "Korean Sign Language 2.0" (Source: Yeomyeong)

6.4. "Korean Sign Language 2.0 Development Project

The sign language learning program "Korean Sign Language 2.0" and the book "Sign Language Dictionary" developed by the Korean Deaf and Blind Economic and Cultural Exchange Company were exhibited at the "National Exhibition of Informatization Results - 2019" held at Pyongyang Gymnasium from November 1 to 7, 2019. In the development of Korean Sign Language 2.0, the Korean Association for the Deaf and the Blind conducted projects to improve the completeness of the program, such as exploring the components of sign language, investigating the lack of vocabulary, and ensuring the correctness of sign language expressions, by the 2019 Activity Plan for Realizing the Standardization of Korean Sign Language. At the same time, the Korean Federation for the Deaf and the Blind is also working on a preparatory project for the introduction of "Korean Sign Language 2.0". It plans to compile a multilingual sign language dictionary and is researching the signs of six countries, including China and Russia [24].

7. Conclusion

As a case study of the development of support for the Deaf in a country, this study has taken up the changes in the environment and institutions surrounding the deaf and sign language in North Korea.
The people of North Korea have suffered from social problems stemming from poverty, discriminatory practices, and isolation from the international community, which have become prominent concerns in guaranteeing healthcare, education, and employment. In addition, the system of support for persons with disabilities, including information security, accessibility, and social participation, is still in its infancy, and it is assumed that persons with disabilities living in North Korea face many difficulties in their social lives.
However, in recent years, North Korea has been working to reduce its isolation from the international community, and one of its efforts has been to guarantee the rights of persons with disabilities and establish support systems for persons with disabilities by international standards. North Korea's signing of the UN Convention on the Rights of Persons with Disabilities in 2013 is a prime example.

Subsequently, North Korea ratified the Convention in 2016 and is now at the stage where laws and social systems should be developed considering international standards.
Turning to support for the Deaf today, steady changes have been observed in the mechanisms for information security, sign language learning, and sign language education through the latest technologies, such as the spread of multimedia content and the introduction of computer graphics, and further development is expected in the future.
No materials have been compiled on the changes in the environment and systems surrounding the deaf and the sign language in North Korea, and few previous studies have dealt with this issue in detail. This study is expected to be the first step in clarifying the history of support for the deaf and sign language in North Korea as an example of the development of support for deaf people in a country.

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Chiara Simoncini The color of soda. The garden city of Rosignano Solvay, a heritage to be saved.

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Abstract
The photographer Massimo Vitali captures Rosignano Solvay in a singular hue: white. This choice reflects the deep-rooted connection of the town to the caustic soda industry. Beyond the colossal industrial apparatus, the urban layout reveals itself, meticulously arranged in accordance with the visionary principles of the 'garden city'. The legacy of Solvay is intricately woven into Italy's historical tapestry, where it seamlessly integrated into the landscape of Italian advancements in science, technology, and society. Thus, it becomes imperative to highlight a project that stands as a testament to the 20th-century era, skillfully transformed into a heritage that warrants acknowledgment and safeguarding.

Keywords: Caustic soda, Garden city, Rosignano Solvay, Massimo Vitali

1. The colors of Rosignano Solvay
In Rosignano, every element is bathed in white: the water, the sandy shores, the land, and even the sky, veiled by wisps of smoke rising from the chimneys along the waterfront horizon. The landscape takes on a translucent quality, exquisitely captured by the acclaimed photographer Massimo Vitali during a photo session for the September 2021 issue of Vogue Italia.
Through Vitali's precise lens, we reencounter the rich history of this region, intricately linked with the caustic soda industry established by Belgian entrepreneur Ernest Solvay in the early 20th century. The inauguration of the Livorno-Vada railway segment in the early 20th century signaled the rise of major industries in the Tuscan region. One prominent player making its national debut during this period was the Belgian industrial complex, famously recognized as 'Solvay'. The Solvay Company [2], founded in Belgium in 1863, constructed a facility in Rosignano dedicated to soda ash production, employing the method devised and perfected by its founders, the Solvay brothers. Specifically, the Belgian industrialist and philanthropist Ernest Solvay (1838-1922) spearheaded the creation of soda ash through the ammonia process, fundamentally shifting its production from artisanal to industrial scale. By early 1913, the Solvay factory consolidated into a single production site, yielding two primary products: caustic soda, also known as sodium hydroxide, and soda ash proper, or sodium carbonate. The strategic location of this facility, in proximity to raw material sources and within the economic and trade networks of the production center, elevated its influence on a European scale. This transformation elevated the once-small farming village into a veritable city focused on the industrial complex. Its lasting significance is echoed in the place names that still evoke the legacy of the Solvay world. Beyond the imposing industrial machinery, as depicted in Massimo Vitali's photographs, one can discern the intricacies of the entire urban settlement meticulously planned and overseen by Ernest Solvay. His vision encompassed the establishment of an urban center adjacent to his factory, designed with specific architectural typologies that would immediately convey the social hierarchy defining the entire community revolving around the industrial complex.

Nearly two decades later, Massimo Vitali's lens captures a scene aiming to convey the same aspect of industrial life portrayed in an earlier photograph. It continues to illuminate the hierarchical structure and urban layout that characterized the urban landscape. This prompts reflections on the pursuit of urban utopias, often intertwined with the challenging economic and social dynamics of the industrial city. This

is notably connected to the concept of 'progressive pre-urbanism'[1], a pivotal aspect of the burgeoning wave of utopian socialism of the time. Consequently, the prevalent residential typology shifted towards detached single houses, each accompanied by gardens and vegetable plots. This layout served as a means of instilling notions of individualism and familial seclusion within the working class. As a result, social hierarchies were not only preserved but also further emphasized, superimposed onto the existing organizational structure of the factory. This emphasis on social stratification extended to the very layout of the village. These planned communities were devised to facilitate the spatial segregation of distinct social strata, aligning with their respective roles within the industrial framework. This division was reflected in separate neighborhoods and diverse housing styles, tailored to specific occupational functions within the industrial context. In Vitali's photography, while white initially commands the viewer's attention, it is promptly juxtaposed with the presence of green, forming a contrasting backdrop that enhances the prominence of the white elements. Indeed, it was green that emerged as the second defining hue of the urban landscape. Here, the concept of mankind's connection to the earth was pivotal, ensuring the conditions for an autonomous and tranquil existence within industrial society. These principles culminated in Ebenezer Howard's concept of the garden city, where green spaces were seen as the embodiment of decorum. This encompassed not only a utilitarian vegetable garden for self-sufficiency and a connection to the land, but also a flower garden that contributed to a well-defined urban aesthetic. This represented an improved iteration of the initial concept of cultivated land.

1.2 The architectural project

The creation of this residential complex on the outskirts of the urban area was an endeavor aimed at tackling one of the numerous economic and social challenges arising from the industrial revolution. It stood as a cornerstone of the Solvay Group's international industrial strategy in the Livorno region, characterized by centralized planning and a distinctive Nordic architectural style envisioned by the Belgian architect Jules Brunfaut.

The facades showcased exposed bricks, while the roofs were adorned with Marseille tiles, featuring steep angles and imposing chimneys. These elements emerged as the defining characteristics of the 199 buildings designated for private residences. This encompassed a total of 655 dwellings, with 33 designated for engineers and executives, 90 for managers, 104 for clerks and foremen, and 396 for workers, amounting to 22 different types of accommodations.

Although the construction of the village did not take place simultaneously, the architectural styles corresponding to the clearly outlined corporate hierarchy remained uniform throughout the various phases of development. The social structure of industrial villages, as illustrated in this instance, is influenced by the intention to cater to a population primarily engaged in industrial pursuits. Simultaneously, the type and placement of residences mirror the hierarchical and functional framework of the company, resulting in a notable degree of social stratification. This implies that the company's hierarchical relationships find reflection in the social dynamics of the community.

2 New prospective

The architecture of a given period often mirrors the society of that time. In the case of Rosignano Solvay's garden city, it stands as a highly successful architectural experiment that maintains a functional urban layout in keeping with the era of industrialization. Rather than diminishing its significance, this distinctive trait enriches its narrative and underscores its pivotal role in the evolution of urban planning. Thus, it warrants acknowledgment as a noteworthy architectural prototype, offering a testament to a past era. When we draw parallels with the Olivetti Complex in Ivrea, an industrial town designated as a UNESCO World Heritage Site in 2018, we can see how both, though in different ways, exemplify how paternalistic ideals can influence urban planning that harmonizes industry, nature, and community. Rosignano Solvay serves as a clear illustration of an industrial town that continues to function today, preserving its unique characteristics as captured in the images by Massimo Vitali.

Fig. 1: #0081 Rosignano sea 3, 1998, Rosignano spiaggia bianca. Massimo Vitali Archive;

Fig. 2: Aerial view of the industrial plant and village at the end of the 1970s. Photographic archive of Solvay company.

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Andrea Boito ***Ghebbi*: an African unit of living**

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Abstract

This article focuses on the socioeconomic and cultural relevance of the topological expression *ghebbi* as part of a broader cultural landscape, playing a role in safeguarding, transmitting, and promoting various intangible cultural elements. When it comes to define the true meaning of dwelling on space, the ghebbi model aims to rebuild ancient knowledge to respond to a site's requirements without just proposing a solution but rather by creating goals in line with the needs determined from within.

Keywords: Africa, Ethiopia, Compound, Boundary, Community.

1 The Laboratory of the Future

Contemporary Africa has been exploited for centuries by colonial power and systematically deprived of indigenous cultural patterns by Global North imposing methodologies[1]. Although it brought to the continent principles of climate-responsive design, the so-called Tropical Modernism employed its typical tabula rasa ideologies which led to the suppression of ethnic diversity and local context values in place of new national identities, especially in the most divided post-colonial nations[2].

The repairing of this broad damage has been on its main agenda since the constitution of the African Conservation Effort (ACE), which has been developing the All-Africa Protoport (AAP) programme as advanced networks of renewable energy and green technologies by applying Indigenous knowledge systems.

This year's International Architecture Exhibition at La Biennale di Venezia has identified the African territories as 'The Laboratory of the Future' par excellence, showcasing a 'gorgeous kaleidoscope of ideas, contexts, aspirations, and meaning'[3], where architecture embraces a plural scenario of endeavours, including both material and immaterial ontologies.

This article focuses on the socioeconomic and cultural relevance of the topological expression ghebbi as part of a broader cultural landscape, playing a role in safeguarding, transmitting, and promoting various intangible cultural elements, ensuring that these traditions and practices continue to thrive and evolve within the context of a changing world.

Fig. 1: The most well-known ghebbis are found in the city of Harar, which is located in eastern Ethiopia. Harar, often referred to as the 'City of Saints', is famous for its historic old town Jugol, a UNESCO World Heritage Site. Photo by Itpow.

Fig. 2: A view of the ghebbis' colourful walls in Harar.
Photo by Fiona Dunlop.

2 Ghebbi: a system of intertwined voids and boundaries

2.1 Spatial arrangement

Typically associated with Ethiopian architecture and urban planning, the Amharic word *ghebbi* refers to a specific type of traditional neighbourhood or residential urban compound. It connotes a territory surrounded by a wall or fence; a zone of rest and secureness resulting from an errant and restless city. Ghebbis contain houses, schools, gardens, religious buildings and spaces of worship and commerce.
The heart of a ghebbi is a central courtyard, which often serves as a communal space for residents to gather for various activities, social interactions, and even religious or cultural events. This central void acts as a catalyst for interaction and cooperation, promoting a tight-knit neighbourhood community. Ghebbis' boundaries are made of high walls, which both provide privacy and security alongside protection against the elements.
The typical single entry gate leading into the compound often features intricate designs and is a focal point of the spatial system, which also comprises a network of narrow, winding alleyways that connect the different living spaces. These alleys often create a labyrinthine layout, contributing to the security and sense of community.

2.2 Cultural significance

Ghebbis host traditional ceremonies, religious rituals, and social events, which are an integral part of Ethiopian culture. The proximity of residents and the communal nature foster a sense of belonging to the community and facilitate mutual assistance and collaboration. They are also economically efficient, allowing for shared resources and cost-splitting among residents. Their architecture made of intricate woodwork, mud or stone construction, together with the spatial layout, represents the traditional building knowledge and skills, also utilizing local building materials and sustainable design principles. They also function as live oral archives, whose related knowledge is passed down from generation to generation, using stories, songs, dance, and poetry to preserve the collective memory of the community.
Like in the eighteenth-century Asante Traditional House as a unit of living, they blend indoor and outdoor living, with internal compounds that interconnect organically into urban passages and streets.
The Ghebbi's boundary reveals literal and metaphorical depth; it is not a line on a map, but a flexible zone of contestation modified by changes in politics, culture, and economy. A variety of materials are used to fence in the plots: eucalyptus trunks, corrugated sheets, tarpaulin, metal grills, stone, and masonry[4]. There are no individual architects to be awarded the merit of the design, but just communities of architect-builders.

3 Future modernity and negotiated criteria

A new and critical analysis of African architecture shows a dynamic process of transferable knowledge implying either the prevalence of locality and vernacular over pseudo-universality, or the form and the materiality originated from the connectedness between people. In particular, by reflecting on the peculiarity of place-bound cultural practice to produce local identities, each ghebbi relies on the principles of interconnectivity between all human things and the natural realm, spatial centrality as the foundation for fostering community and coexistence, and ultimately, graduality of reconfiguration due to the uncertainty of the internal and external conditions.
Professor Edgar Pieterse, director of the African Centre for Cities (ACC) at the University of Cape Town, discourages designers' healthy obsession with African cities and street reformation around the pursuit of 'grounded excellence', which deeply ignores the real dynamics of self-built neighbourhood units like the ghebbis, markets and local urban forces. He calls instead for the following principles based on performance criteria negotiated between designers and residents[5]:

- Cultural resonance: sensitivity to history and memory to engage with cultural values.
- Economic vitality: promotion of circular economic links and sources of income rooted in an understanding of interdependencies between formal, informal and illicit arrangements.
- Ecological embedding: enhancement of access to nature by improving energy saving, biodiversity, air quality, health and culture initiatives.
- Safety: protection of minorities and vulnerable groups together with fighting against gender-based violence and discrimination.

When it comes to defining the true meaning of dwelling on space, the ghebbi model aims to rebuild ancient knowledge to respond to a site's requirements without just proposing a solution but rather by creating goals in line with the needs determined from within. The continued use and maintenance of ghebbis for cultural and community purposes contribute to culture preservation, making them living repositories of intangible cultural heritage.
In the search for modernity without losing contact with the origins[6], the future of African architecture relies on engaging our past and understanding the environment, culture and context that ultimately inform design.

Fig. 3: Ghebbi Installation by AD—WO at the 18th Venice Biennale. A deteriorating brick wall of the Arsenale clad with scaffolding and lined with a tarpaulin and ropes reminds the scaffolding in Addis Ababa and the ongoing deletion of the Ghebbi.
Photo by Tsion Haleselassie.

Fig. 4: Ghebbi Installation by AD—WO at the 18th Venice Biennale. Two corrugated panels are suspended from the rafters and two monumental tapestries recreate the immersive space of Ghebbi.
Photo by Tsion Haleselassie.

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Jeannette Sordi Microscapes. Micro Tactical Gardens for the temporary activation of of the UNESCO Industrial Landscape Heritage Site Fray Bentos, in Uruguay.

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Abstract
This article presents the methodology and results of the Microscapes international design competition, organized by the Municipality of Rio Negro and the Inter-American Development Bank in Uruguay to activate the Fray Bentos UNESCO Industrial Landscape Heritage Site. The site, a former meatpacking plant on the shores of the Uruguay River, is currently being restored and converted into a multifunctional center that includes a museum and a university campus, following a strategic plan that will be completed over the next decade. The competition called for design interventions to activate the site while the process of restoration is ongoing; the winning proposal was installed in December 2022 to welcome tourists, residents, and students that are already visiting the site.

Keywords: temporary installation, tactical urbanism, industrial landscape, industrial heritage, design competition

1 Microscapes, a call to activate a World Heritage Site under restoration

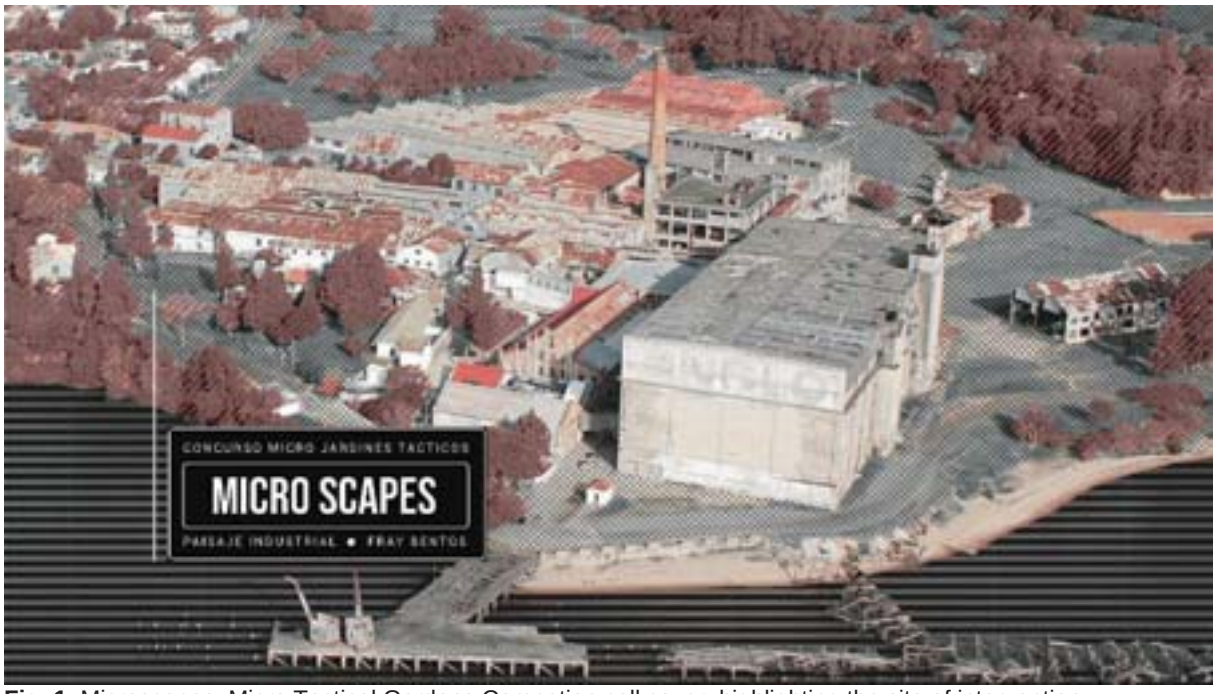

Fig. 1: Microscapes, Micro Tactical Gardens Competion call cover, highlighting the site of intervention.

Microscapes, Micro Tactical Gardens is the title of an international call that was organized by the Inter-American Development Bank and the Municipality of Rio Negro, Uruguay to build a temporary

installation in the Fray Bentos Industrial Landscape World Heritage site, an ex-meatpacking plant registered by UNESCO in 2015. The objective of the competition was to activate an open space within the industrial complex to enhance its historical, cultural and touristic value. The call invited architects, designers, landscapers, craftsmen, citizens, businessmen, to propose an ephemeral installation for one of the central spaces of the area; a tactical project that could offer a place of encounter, rest, contemplation, recreation, for the residents and visitors of Fray Bentos while the process of restoration is ongoing.

1.1 The Site

Fray Bentos Industrial Landscape is an industrial residential complex funded in 1863 as Fray Bentos Giebert el Compagnie. In 1865, it was renamed Liebig's Extract of Meat Company (LEMCO), specializing in the production and export of meat products. For more than a century the factory has represented one of the world's best known Uruguayan meat factory, greatly innovating both production and marketing. From 1960, the refrigerator went through several stages of crisis, until in 1971 the English owners left the establishment and the residential quarters to the Uruguayan State. The refrigerator was operated by the State under the name Frigorífico Fray Bentos, with some interruptions, until it was closed in 1979 [1]. In 1987, the complex was declared a National Historical Monument and, in 2015, the Ex-frigorifico Anglo was listed as UNESCO World Heritage, reversing a process of abandonment and decline that had lasted for thirty years. At the same time, the government is supporting the re-functionalization of the industrial area as an Educational Technological Hub through the installation of several national higher education institutions, including UDELAR, and research organizations. Both circumstances represent a new scenario for the city, with new demands for associated services, which will foreseeably be accompanied by an increase in the number of residents and visitors, consolidating the process of recovery and valorization of the area. In 2019, the Municipality of Rio Negro, presented the Strategic Plan [3] that, over the next decade, will direct the transformation of the area into a touristic site and an innovation center, completing the restoration of the main buildings of the industrial landscape UNESCO World Heritage Site.

Fig. 2: Fray Bentos Industrial Landscape, World Heritage Site. Photo G. Arts & Culture.

1.2. The Challenge

Fray Bentos Industrial Landscape has represented the excellence of the Uruguayan industry for over a century. The current plans, the designation of the area as UNESCO World Heritage Site in 2015 and the development of the University innovation hub are bringing back this legacy. The Microscapes competition was organized to contribute to this long-term project with a small tactical installation designed for the users of the site, starting from the assumption that students, young professionals, tourists, and Fraybentinos who visit and live in the area are playing an active part in the regeneration process. The call invited designers to propose an ephemeral installation for an open space located within the complex, behind the University headquarters and steps away from the Uruguay River. As

described in the competition brief, the proposal was going to be installed in April 2020 (postponed to December 2022 because of the global COVID Pandemic) and remain open to the public for three months. The proposal had to demonstrate the reversibility of the intervention, leaving no marks on the ground once uninstalled. Participants were invited to use recycled materials or indicate how the work or materials used can be reinstalled or reused in other places and ways. The construction needed to use safe and sustainable materials and not require specific maintenance or supervision during the three months following the installation, unless a plan for maintenance was included. The competition winner would receive a monetary prize of 5,000 USD plus a 5,000 USD for materials and other installation expenses and 2,000 USD for travel expenses. Proposals could include artistic works, landscaping interventions, street furniture, or temporary installations designed to enhance the experience of the site, valorize the present conditions, and enable a dialogue between past and future [4].

Fig. 3: Microscapes, Micro Tactical Gardens, area of intervention within the Fray Bentos Industrial Landscape UNESCO World Heritage Site.

1.3 Results

Fifty-five proposals from fifteen different countries were received and evaluated by an international scientific committee and a local multi-disciplinary jury (see members below). The first prize was awarded to the team led by architect Pablo Carballo, with Giuliana Franco Gargiulo, Nahuel Garcia Pastor, German Diego Silvera Gomez, from Cordoba, Argentina. The jury praised the ability of the winning project to articulate a variety of possible encounters between users while establishing a dialogue with the historical industrial architecture of the site and the environmental values of riverside landscape. The design consisted of a horizontal element, a multifunctional path and seating area made of pine boards supported by a metal frame, and a horizontal tower, a new temporary landmark resembling the main chimney of the Fray Bentos Industrial Landscape World Heritage Site, made of a metal frame and mesh. The intervention was built in December 2022, and remained open to the public until February 2023, offering a multiplicity of spatial experiences and performances.

Fig. 4 and 5: Opening of the installation, competition winning proposal designed by Arq. Pablo Carballo, Giuliana Franco Gargiulo, Nahuel Garcia Pastor, German Diego Silvera Gomez. Picture: Rio Negro Gobierno Departamental, December 2022.

Competition organizers: Jeannette Sordi (Director), Veronica Adler (Inter-american Development Bank), Carolina Fiorelli, Andrea Castillo, Andrea Schunk, Fabiana Villalba, Mauro Delgrosso, Horacio Rodriguez (Municipality of Rio Negro). Graphic design: Maura Mantelli. Competition Jury: Guillermo Levratto (Architect and UNESCO Site Manager), Edgardo Canepa (Local Artist), Verónica Adler (Senior Specialist Inter-American Development Bank), Fernando Cuenin, Head of Operations Inter-American Development Bank. Competition Scientific Committee: Mathilde Marengo (IAAC, Barcelona), Rodrigo Tisi (Adolfo Ibáñez University, Santiago), Mariagrazia Muscatello (Artishock, Chile University, Santiago), Mosè Ricci (UNITN, Trento), Belinda Tato (Ecosistema Urbano, Madrid), Alexandros Tsamis (CASE-RPI, Nueva York).

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Maria Carolina Campone-Saverio Carillo The "Hagiopolitan" liturgy: Intangible Cultural Heritage and Conservation of early Christian Architecture

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Abstract
The "Hagiopolitan" liturgy - the oldest of the Christian church - survives today in a few centers of Asia Minor. Its protection allows us to better understand some aspects of ancient Christian architecture - such as the *bema* - and, at the same time, to protect an element of the intangible heritage, threatened by war events and local conflicts.

Keywords: "Hagiopolitan" rite; *bema*; early Christian Architecture; Syria; Mesopotamia.

1 Introduction
In the context of the 'intangible cultural heritage' that UNESCO intended to protect with the specific Convention, approved in 2003 and implemented by Italy in 2007, the 'Hagiopolitan' liturgy of the Holy City deserves particular attention, due to the influence it has had on medieval and modern iconography, architecture and culture.
This liturgy, recognized as the mother of all Christian rites, both Eastern and Western, still exists within the rites of Syrian- Eastern Christianity, originating from the fusion of Judeo-Christian and Assyrian, Babylonian and Iranian cultures. It is a markedly Semitic rite in its basic characteristics, having preserved many Jewish liturgical traditions, as well as having brought with it the religious and cultural traditions of the ancient peoples of Mesopotamia.
Despite being a *unicum* of the Christian tradition, due to war, cultural and political events, it risks disappearing, making it very difficult for scholars of architecture and art history, as well as those of religion, to identify the reasons for particular choices of the buildings in the area. [M.C.C.]

1.2 The "Hagiopolitan" liturgy
Historians consider Edessa and Seleucia-Ctesiphon as the creators of the "Persian" rites of Mesopotamia, since their communities have preserved the liturgy of the origins.
The only historical-literary relic of the ancient Syrian-Eastern rite is the anaphora of the Apostles, also called "anaphora of the Christians of Edessa", whose structure was developed in the 4th-5th century in Seleucia, but which was soon modified by the Antiochian rite, while the most evident influence of the Hagiopolite liturgy is the recitation of the evening psalms (n. 140 and 141) with the lighting of the lamps around the *bema*, as happened in Jerusalem, according to the account of the pilgrim Egeria [*Itinerarium*, 24, 1-6].

Fig. 1: Graphic rendering of the *bema* in Rusafa Basilica A (Syria).

Likewise, the Easter vigil in the East Syrian cathedral follows that in the *Anastasis* of Jerusalem described by Egeria (5th century), aimed at commemorating the saints who bear the aromas, with the replacement of the *Anastasis*-cross route with that from the bema to the sanctuary, attested already in the 7th century.
The rite of Edessa and that of Antioch had mutual influences, which in any case determined the survival of the Hagiopolitan liturgy, also given the geographical proximity of Antioch to Jerusalem.
However, Tamerlane's conquests at the end of the 15th century hit these flourishing churches and their rite hard, preserved today only in a few communities scattered across Iraq, Iran, Turkey, Cyprus and India. [M.C.C.]

1.3 *Bema* and liturgy

- Among the most important characteristics of eastern Mediterranean religious buildings, the *bema*, a raised platform located in the centre of the nave, occupies a prominent place. It was the place where the officiant spoke during the celebration to proclaim the readings or simply to address the faithful. Already in the first centuries, however, it was used in the Eastern Church and especially in that of the Hagiopolitan rite, in reference to the area of the building reserved for the clergy, ending up being equivalent to the presbytery of Western churches.
- In particular in Syria, it takes on such importance that it is delimited by a fence in the heart of the central nave, in which it expands to circumscribe a very large space, as happens in Basilica A of Rusafa, in that of Qalb-Loze, in the churches of Kharâb Shems and Kalôta.
- The Syriac bema is therefore also a physically closed structure, which definitively excludes the faithful from viewing the passages of the liturgy; within this area the celebrants sat facing the apse and the altar, with their backs to the community gathered behind them.
- Already in the past the reasons for such a solution have been identified in an unidentified liturgical specificity, which, in light of the comparison between the liturgical documents (5th-7th century) and Egeria's journey, is precisely the Hagiopolitan rite.
- As for the churches of Mesopotamia, Monneret de Villard's investigations have shown that they constitute a unique example in Christian architecture, since they tend to repeat models widespread in the sacred and profane buildings of the region. However, some churches, especially in the Tur Abdin region, present characteristics that presuppose the same liturgical motivations.
- These churches, in fact, although deriving from local prototypes, carried out the central parts of the rite around the bema, which tended to reproduce the Hagiopolitan one. While the original written reference to a bema in southern Mesopotamia is a rather practical indication of its use in the early fifth century *Synodicon Orientale,* the spiritual implications can be seen in later sources. Further, both the architectural and written evidence explain the physical and thus spiritual connection between the sanctuary and the *bema*. [S.C.]

1.2 The “Hagiopolitan” liturgy and Jewish religion

The importance of the Hagiopolitan rite is also highlighted by recent studies into the links between the apparent solar motion and the ichnographic geometries of some proto-Byzantine Syriac churches (4th-6th century) wich suggest the pre-eminent symbolic role of their bema, its continuity with the Jewish

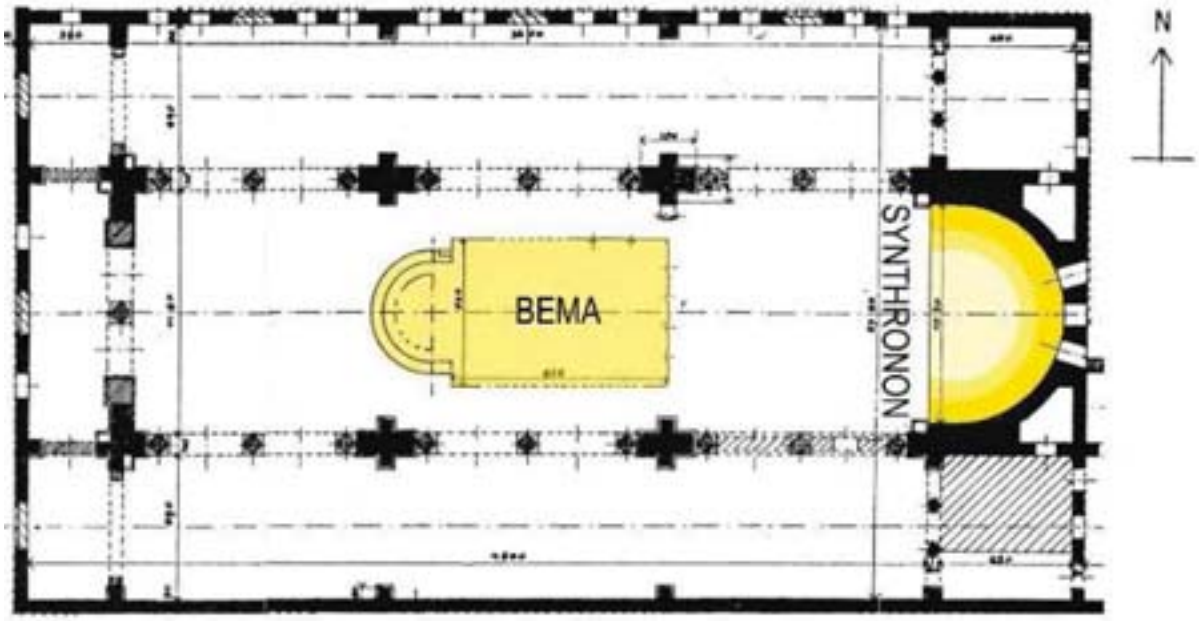

Fig. 2: St. Sergius' Basilica in Rusafa (Syria). Architectural plan (Lassus 1947).

liturgy and especially with the iconography of Ark of Testimony and the archetype of the "Throne of Moses" inherent in it. The bema, as a typical component of Eastern Christian cult architecture, becomes a particularly identifying element in the proto-Byzantine tradition of the current northern territories of Syria and Iraq, responding to the socio-cultural context of the milestone "united" Church of Antioch, i.e. set of those first Christian communities that arose to the east and west of the Upper Mesopotamian Euphrates. [M.C.C.]

Conclusions

The architectural importance of the *bema* and its liturgical relevance constitute material proof of the centrality of a rite that has almost disappeared today, but is central to the development of Western and Eastern culture.

The presence of the *bema*, of which few traces remain in Middle Eastern buildings, allows us to reconstruct the presence and development of a ritual that has almost disappeared today, but is still alive in communities and groups whose survival is also at risk. Protecting the Hagiopolitan rite allows communities, groups as well as individuals to dynamically develop a sense of social and cultural belonging; promote respect for cultural diversity and human creativity; spread the observance of respect for human rights and the sustainability of the development of each country. [S.C.]

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Natalina Carrà The communities guardians of the intangible heritage of places

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Abstract

Communities can be considered as guardians of the natural and cultural heritage, both tangible and intangible, of the places to which they belong.
By attributing value to particular and identifying features of the cultural heritage that they consider relevant, they undertake to support and transmit the contents and expressions of the heritage to future generations.
Over time, this has led, communities, to strengthen their definition of identity, so much so that they have become increasingly present as main actors in the development of projects and interpretations of their territory and resources.

Keywords: Sustainable Development, Intangible cultural heritage, Community, Inner Areas

1. Community and intangible heritage

The different gradients of the meaning of the verb “to guard” are joined by a red thread: supervise something carefully so that it does not suffer damage; take care; protect from danger; to protect; to preserve.
Guarding something or someone means above all being aware that that something is important, that it has value, and that it therefore deserves care, attention, and protection.
Guarding therefore implies taking on a responsibility; the more valuable what is preserved, the more careful care will be necessary [1].
This assumption of responsibility move through the concept of safeguarding, which does not mean conserving or protecting monumental, landscape or cultural heritages in order to protect it from transformation by protecting its original or authentic characteristics. But contributing to the construction of contexts favorable to the transmission and vitality of living heritages [2].
By “safeguarding”, as stated in article 2.3, of the 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage: “*Safeguarding means measures aimed at ensuring the viability of the intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage*”.
The principles expressed by this, and other International Conventions postulate a process based on the conscious construction of one’s own cultural heritage, noting the need to encourage awareness: recognizing the right of communities to express their own heritage project and invoking the duty of institutions and governments to take this right into account.
But why focus attention on the role of the community? Because, while talking about cultural heritage and natural heritage, after the 1972 UNESCO Convention, introduced the notion of the *common heritage of humanity*, it has become customary over the years; talking about intangible cultural heritage and how this can be safeguarded raises a series of other problems and questions that are still little explained and/or resolved [3].
These are living cultures from which it is impossible to dissociate communities; intangible goods, such as cultural, ethnic and artisanal traditions, represent the expression and values of groups or communities. That is, the meaning of intangible cultural heritage implicitly challenges, the traditional

ideas of State sovereignty over cultural heritage, approaching communities and the human dimension of heritage.
The 2003 UNESCO Convention places the *sense of identity and continuity*, the recognition of what is identified as cultural heritage by the communities themselves and/or groups and individuals as actors, protagonists and producers of culture at the foundation of the heritage processes.
Thus, the attribution and identification of cultural heritage is today brought back to social actors, custodians and bearers of knowledge, skills and practices. These changes in the value attribution process guide towards social meanings and bring to the fore the question of methodologies for identifying 'heritage communities' and cultural resources, from a perspective of participation, cultural citizenship and sustainable development [4].
The notion of "sustainability" contained in the 2030 Agenda recalls the concept of *living heritage* contained in the 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage. A fundamental heritage in maintaining cultural diversity in the face of globalization, whose importance does not lie in the cultural event itself, but in the wealth of knowledge and skills that are transmitted from generation to generation and recreated by communities in response to their environment, interaction with nature and their history [5].
This, requires actions aimed at guaranteeing the vitality and transmission of living heritage, assigning a key role to the communities, groups and individuals who practice and safeguard it. The concept of *living heritage* is dynamic and constantly evolving; communities live and practice it, thus helping to keep it alive and current; it contains locally rooted knowledge and practices that provide a source of resilience against unsuitable changes and transformations. Therefore, a principle considered central in terms of sustainable development concerns the involvement of communities [6].

1.2 The custodian communities

The *villages*, small settlements in the internal areas, with their cultural landscape context, represent a unique heritage, characterized by historical and symbolic values that are of fundamental importance for the communities they belong to [7].
A valuable heritage, testimony to the past and at the same time a source of potential future development. Protecting and preserving them does not only mean preserving the historical built heritage, but the actions must also extend to the landscape and communities [8].
Valuing the places of internal areas therefore means preserving cultural identity and building a sustainable future for generations to come, since they possess the best knowledge and are living spaces in which real communities live. Communities, therefore, can consider themselves the custodians of the natural and cultural heritage, both material and immaterial, of the places to which they belong and can arrive through a path aimed at recognizing this heritage and everything that concerns identity, historical traditions and knowledge (the intangible) to substantiate their sense of belonging to the territory; that is, arriving at the specific role to be attributed to heritage, in particular the widespread and intangible one as an activator of territorial and social development, in a logic of identity and values. You need to have a deep knowledge of the places to avoid damaging them with irreversible actions [9]. By opening up to communities the processes of identifying of goods of cultural interest, we favor both the acquisition of goods and resources that otherwise might never have this recognition by the authorities, and the management of *common* cultural resources. This last satisfy fundamental rights of the person and guide towards governance regimes that are independent of the ownership regime, as well as starting a process of collective responsibility regarding the conservation of cultural resources and the contribution to their management.


Fig. 1, 2: The rites and places of the community **(**Precacore - Reggio Calabria- 2023, author's photo**)**

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Antonio Conte, Marianna Calia, Roberto Pedone, Rossella Laera The reconstruction of human memories between Art and Design in the small Lucanian towns on Matera hills.

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Abstract
In 1980 the devastating earthquake in Irpinia, caused a complete disruption of the everyday life order in small towns, leaving only fragments of memories standing that stagger in the minds of those who have suffered a loss. Hence, the desire to collect, pass on and disseminate the memory of these places in the silence of these landscapes, imagining a possible cultural reconstruction, through artistic expressions of identity that endure over time.

Keywords: inner areas, public art, human memory, tradition, cultural reconstruction

1. Context and fragility
Since the tragic earthquake in Irpinia in 1980, over forty years later, the small Lucanian towns have been at the center of research and interest of the University of Basilicata, which was established with the law of 14 May 1981, as part of the extraordinary measures to deal with emergencies and guarantee the protection and safeguarding of the most fragile heritage. In Basilicata region, in 27 out of 131 municipalities the inhabitants are less than a thousand; some of these runs towards complete emptying before others in the space of a few decades. The research mission intertwines the events of local development to the point of generating an open dialogue between universities and local authorities, to recover the historical and cultural memory of these territories, counting on the involvement of stakeholders and, in particular, of a new and conscious participation of the inhabitants. For this reason, inhabitants and institutions, in a synergistic manner, react to the strong demographic decline by proposing initiatives with a strong cultural value, to guarantee the survival of the small towns and imagine a tale of stories and memories, otherwise forgotten.

2. The representation of Montagna Materana living heritage
The national policies and forms of inter-municipal aggregation suggested by the “National Strategy for Inner Areas - SNAI” have opened debates and rebirth plans for small municipalities, as in the case of the inner Lucanian area Montagna Materana, protagonist of the design experiments and activities carried out by the University research group [1]. The aims of the research therefore lie in the relaunch of culture, arts and contemporary creativity as tools of urban and human regeneration. The knowledge conducted so far has generated continuous reflections; from reading the city system to contemporary needs. A very clear picture emerges, but for many it is hidden in the folds of erased or crystallized memories; intangible heritage as the most intimate soul and expression of the legacy of knowledge and techniques specific to buildings. The constructive and expressive reality are very close in these small towns, as the traditions, habits and customs can be found in the way of creating, building and living in these places. The urban frescoes, the most recent mural techniques, the creations on ceramic support, represent in these villages, even today, the most widespread art and technique for telling and passing on.

Fig. 1: Photo and section. Craco Vecchia longitudinal profile, Rossella Laera, 2022.

Some creative reflections possess sign messages closely linked to events, tensions and memories that have found inspiration and social motivations in extraordinary representations and artistic productions. From Stigliano to Craco, public and private bodies, academies, professionals, local, national and international artists act as a driving force for new cultural forms of narration of the living heritage, through creative works and representations that take place in the squares, in the alleys and on the facades of small often abandoned housing units, satellites of local art and crafts. The youth cultural associations make their living heritage the support to build the story of little-known and partly lost memories, creating an open-air imaging laboratory of visions for the future as well as current affairs for these small Lucanian municipalities.

2.1 Art and built heritage as a palimpsest of human memories

Starting from the contingency and emergencies that characterize contemporaneity, these small centers as “landscape-towns” (Sichenze, 2000, p.9) perched between clay mountains, have allowed us to escape the fury of consumerism, allowing its most faithful inhabitants to preserve the traditions of places as sacred and identity elements. The painter Constantin Udroiu (Bucharest 1930 - Rome 2014) was the first artist to create the first mural in the history of Satriano di Lucania, in the Melandro valley; after his, hundreds followed, transforming the town into one of the most painted villages in the South. The post-earthquake, the reconstruction phase and the social and economic emergencies of the Lucanian towns pushed groups of painters, ceramists and sculptors to mobilize for a cultural reconstruction, so that the history and traditions of the place did not disappear. For this reason, the territory was invaded by hundreds of wall paintings, making the building a palimpsest of residential memories, as a desire for redemption for a cultural relaunch. Today's involvement of university research, intertwining art, associations and urban policies, imagines a new future of living heritage, starting from the constant presence in the area of a garrison of young minds, researchers and professionals who, across multiple sectors, can collaborate for a new Renaissance. In this sense, the cultural events organized in the historical centers, accompanied by artistic dissemination phenomena narrating stories of places and memories, have attracted widespread participation, initiating continuous planning phases for the relaunch of these territories; framework program agreements, thematic meetings on topics relating to the care and health of Lucanian heritage, planning of innovative and cultural services. Living Heritage is found in the values, beliefs and ways of life that we inherit from past generations and that we still use to understand the present and make choices for the future.

Fig. 2: Photo. Zia Vincenzina, Duoamazonas. Galdo degli alburni (SA) @Associazione Appartengo ETS, 2021.

Fig. 3: Photo. Giulia and Filomena, Bifido. Stigliano (MT) @Associazione Appartengo ETS, 2021.

3. Conclusions

The historical-artistic representation of scenes and memories appears to be the expressive means of the community, which begins to recognize itself and feel part of a regenerative process, resulting in noble feelings, such as welcome and hospitality. These steps demonstrate the will of an entire community which, with courage, entrusts its history to the young generations who, using new communicative languages, attempt to re-signify memories and traditions. Montagna Materana, like many other inner contexts, feel the need to belong to the no longer "cities" destroyed by calamitous events, which forced the displaced inhabitants into small precarious and emergency housing units (such as the case of Craco Vecchia and the current town of Peschiera). The contribution of the research is the implementation of effective ideas for the protection of living heritage and innovative methodologies [3] for the collection and transmission of tangible and intangible cultural heritage. Small towns become hotbeds of ideas, permanent creative laboratories: a mature cultural project, the result of time capable of culturally and humanly enriching the entire territory (Giacomelli, Calcagni. 2022).

Fig. 4: Orthophoto. Craco Peschiera, Google Maps, 2022.

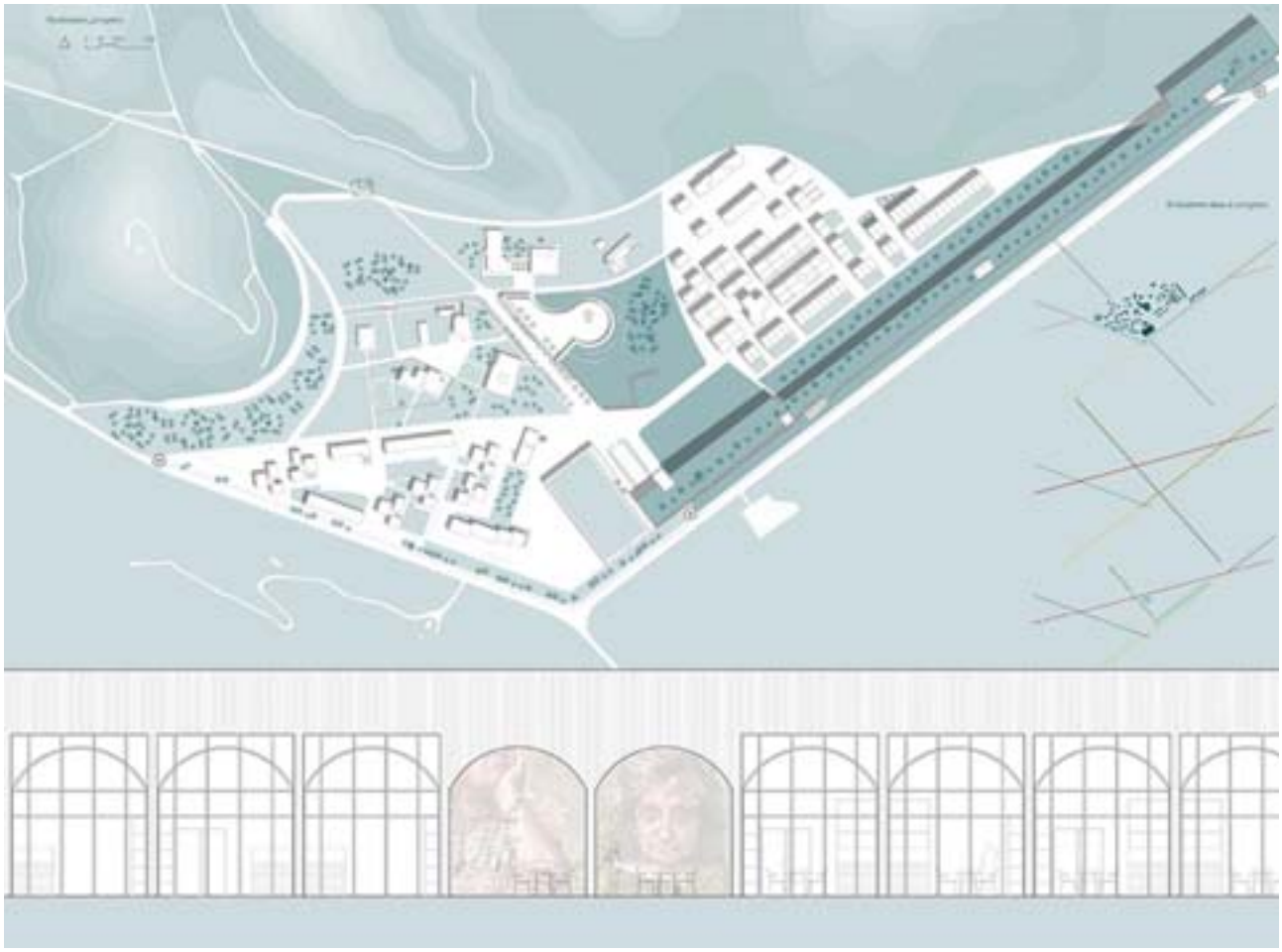

Fig. 5: Project volume plan and section. Craco Peschiera, with identification of the thematic axes and cultural services, 2022.

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[1] The research currently being tested, born from the project financed by the Extract Plan 'Research and innovation 2015-2017' of the Fund for Development and Cohesion (FSC), concerns the Lucanian territory of “Montagna Materana” area, comprising eight municipalities - Accettura, Aliano, Cirigliano, Craco, Gorgoglione, Oliveto Lucano, San Mauro Forte, Stigliano (leader) - with a total resident population of 9,916 (ISTAT 2023).

[2] Craco Vecchia, a small medieval village near Matera, was completely abandoned in the 1960s following a hydrogeological instability and subsequent landslide in the town. Its complex landscape makes it a ghost town, around which a sort of "sacredness of time" is perceived, among the ruins and rocky conformations of the gullies.

[3] Digital collection of traces and memories regarding the dispersed material and immaterial heritage (through collaboration with “Basilicata Creativa” cluster of cultural and creative industries in Basilicata, in the development of community maps and Open Data identified as new cultural processes).

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Valeria Minucciani, Michela Benente Nilufer Saglar Onay **Dwelling in historical atmospheres**

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Abstract
The practice of converting existing buildings from one use to another is almost as old as building itself as their structure tends to outlive their function. Our living environments are composed of different spatial scales and levels and among these interiors are much more subject to change as they are closely linked to ways of living. On the other hand interiors hold the most important clues to maintain the aura of the original functions and characteristics of heritage buildings. This paper aims to draw attention to the relation between the interior, function and memory.

Keywords: Adaptive Reuse, interior atmosphere, cultural meaning, function, significance

1. Adaptive reuse and the question of what will remain what will change
Adaptive reuse is one of the most impactful ways of achieving environmental and social sustainability as it can propose ways to create a meaningful and timely link between society and living environments. “Reuse” is defined as “making suitable for new requirements through modifications” [1]. According to the Venice Charter of 1964 the conservation of buildings is always facilitated by making use of them for some socially useful purpose but only modifications demanded by a change of function is permitted [2]. The Venice Charter proposes 4 main requirements to be taken to account for conservation and restoration of historic buildings, which can be summarized as authenticity, reversibility, compatibility and retreatability. These requirements necessitate a holistic approach of intervention and adaptation that covers all environmental scales. According to the Burra Charter [5], formulated to adapt the philosophy and concepts of the Venice Charter to a different cultural context and evidence from the West, it introduces the concept of diversity of values (Article 5). A new approach to heritage conservation based on the identification of a broader range of values and stakeholders that also influence its integrated conservation and thus the adaptation means changing a place to suit the existing use or a proposed use. At this point what remains and what changes, emerges as an important question. It requires a deep understanding of spatial aspects that contribute to the cultural significance of buildings that are subject to changes so that they can encompass and thus retain all values, tangible and intangible. In this respect, interiors rise as key elements as they are closely linked to ways of living. They embrace human experience in many different levels. So, if correctly evaluated, historic interiors can communicate all values of cultural significance making them part of spatial experience.

2 Interior space, functions’ rituals and cultural memory
Today especially in adaptive reuse practice, the continuity of interior features is sometimes considered less important than the overall architectural features but in fact authenticity necessitates evaluating all layers that contribute to the building’s identity. There is a difference between buildings that are conserved and those that simply remain. Interiors are always functional, because it is precisely in interiors that the requirements of use must be fulfilled. And, as Carlos Martì Arìs explained so lucidly, the consolidation of functional rituals has generated and continues to generate different types of spaces [4]. Therefore, when the intended use changes, the rituals originally associated with the interior spaces that were designed for them also change. Moreover, and consequently, conservation is also a question of spatial atmosphere, a concept recently deepened by Elisabetta Canepa [5] . It’s important to define appropriate uses and appropriate interventions that respect cultural significance: interior spaces

maintain the “aura” of their original function, that’s culturally as important as their physical features of space. The new functions associated with space in fact play a vital role in the continuity of the memory line of the building and it is only through interiors, this continuity can be maintained. If the new functions are not consistent with the interior environment, this might cause an important loss for the continuity of both tangible and intangible heritage. The most important concern is to increase awareness about the values of heritage buildings in collective memory and public life.

Considering historic churches, intrinsically tied to functional rituals, intangible meanings and profound values, it must be acknowledged that as long as they were used for religious rituals, their interiors, while perfectly preserving their architectural envelope, were adapted to respect the evolution of a living faith in transformation. But when, reflecting a seemingly unstoppable trend, churches are subtracted from their original use due to a reduction in the number of worshippers and their preservation must necessarily pass through a change of use. Precisely for their strong significance, atmosphere and interior elements, their adaptive reuse is always controversial. From one hand, it could touch the faithful sensitivities if the new function being established is too different from the original one (e.g. a five-star hotel or a discotheque), on the other hand, in a highly secularized society, a radical change of function and the total destruction of the original atmosphere takes away the memory value of their intangible cultural content.(Figure1)

Fig. 1: Left. My fair Market, in the deconsecrated church of St. Mark in London: after spending 30 years on England’s Historic Heritage Risk Register, it has been restored in its historic (tangible) features and transformed in a “sustainable, authentic food” hub. Right St Dunstan, a Church used as a garden, London. Built in the early 12th century, but drastically modified in the 19th, it was completely gutted during the Second World War and in 1971 a garden incorporating the ruins was opened to the public. Today the gardens and the church ruins are protected from any further development, and cannot be destroyed.

3 Conclusion

Intangible values are conveyed, in historic buildings, not so much by the architectural envelope but by easily destructible elements mostly associate by the elements of the interior and their multi-sensory and extremely fragile atmosphere. In the My fair Market case, the multisensorial (visual, acoustic and olfactory) atmosphere is completely different from the original (intangible) one. Viceversa, as the actual “atmosphere” is not at odds with silence and prayer, occasional open-air services are still held in the St. Dunstan garden. Reuse of buildings can ensure tangible conservation, but it is important that strategies are devised to prevent intangible, cultural contents from being lost forever. The debate on the role of the interior atmosphere for conservation is wide open.

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Rosa Indellicato Environmental heritage, an asset of which we are custodians and which we must responsibly pass on to future generations

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Abstract

This contribution intends to offer educators and the new generations a reflection for an alternative vision to the dominant one of unlimited growth and environmental degradation, which is increasingly endangering the integrity and healthiness of the living environmental heritage. What is needed more than ever is an educational proposal to orient the transformations underway towards more humanising, sustainable and democratic goals, in the hope of awakening the conscience of civil society.

Keywords: living heritage, sustainable development, unesco convention

In recent years, since the 1960s[1], the concept of the environment has been increasingly re-evaluated and its meaning has been deepened in different and complementary cultural spheres. This interest and need for cultural initiative has been countered worldwide by the emergence of events that, by highlighting the damage and contrasts revealed by environmental degradation, have increasingly raised the cultural consciousness and ethical responsibility of the community.
Violence against nature is perhaps the most serious problem facing humanity today because from this violence springs the threat of an impossible future for the survival of all species. It is therefore increasingly necessary to raise the awareness of young people through continuous cultural action inspired by an ever better definition of the man-nature relationship.
The environment, 'the common home' to use an expression dear to Pope Francis, the entire social place of our existence, is the collective archive of our species, of all species, and of theintangible cultural heritage that allows us to know the way, a way that began long before us, and that must continue well beyond us. Barry Commoner's words resonate powerfully: 'the great lesson of ecology is that everyone is related to everyone else and that everything is related to everything else'[2]. These words must be read not only as an admonition to grasp horizontally the bond of interaction between everything that constitutes the universe and the whole, but also as an indication of vertical relationships, of cause and effect, as the discoveryof a before and an after, which give more meaning to things, to events and to human existenceitself.
As is well known, for a long time after the tragic period of the Second World War, the main objective of economic policy was growth without any limits. In other words, the aim was to increase output, which was essentially quantified by an increase in Gross Domestic Product (GDP).
Currently, the meaning of growth refers to a quantitative increase in the goods produced by the economic system, while the idea of development refers to an increase in both quantity andquality of production. At the same time, with the worsening of environmental problems, the idea of sustainability has developed, and therefore sustainable development as development that is able to last[3].The conclusions of the WCDE Report were implemented by UN Resolution 44/228 of 1989, which emphasised the close link between human development and the environment [4]. It is necessary today to advance the idea of sustainable development by making the need to broaden the horizon of action and intervention with respect to its economic growth, with an essential reference also to the evaluation of important qualitative aspects, such as social, redistributive aspects, respect for and valorisation of the cultural and intangible heritage, as underlined by the UNESCO Convention signed on 17 October 2003 in Paris.Over the last thirty years there have been international interventions, starting in 1992, that

offerfood for thought and criticism to rethink the economy by basing it, first and foremost, on the dignity of the person, and that aim to revisit the man-nature[5] relationship due to an ecosystem that is increasingly undermining our possibility of a future, the survival of the human species and the entire living world on Earth. It is appropriate that the economic and ethical-pedagogicalfoundations of the concept of sustainable development be considered and deepened by emphasising the concept of intragenerational and intergenerational equity in order to identify a development model that takes into account, on the one hand, needs and, on the other, the limits[6] that may change as the socio-economic system evolves, as new knowledge is acquired and as technological progress itself progresses.
Sustainable development as a horizon of truth allows us not to evade any question of meaningin the face of the protection of the environmental heritage, it allows us to think of ecologically and ethically oriented educational processes, and therefore to conceive of the environmental issue as a cultural fact, fundamental and priority for the liveability of the person and the entire planet. The search for an «ecological conceptual background constitutes the necessary presupposition for the implementation of educational paths capable of nourishing a differentiated and polyphonic way of thinking about nature, which constitutes one of the essential points for the generation of a new cultural attitude» [7].

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Andrea Montanari For an autonomous legal consideration of cultural expressions

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Abstract
The essay moves from the notion of «cultural good», whose necessary materiality threatens its identity value with respect to the greater cultural complexity of contemporary society, marked by the relevance of interest in intangible-type manifestations. The need for historicization of the concept of cultural good and the peculiarities of intangible expressions lead, therefore, to the proposal of a homogeneous special discipline that would give it autonomous legal status.

Keywords: cultural good – cultural heritage – intangible expression – history – civilization

1. The cultural good

The 20th anniversary of the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (ratified in Italy by L. no. 19/2007) prompts reflection on the notion of «cultural good» contemplated by the Italian legal system, to address the growing diffusion of cultural interest in intangible expressions, with a view to the preparation of their homogeneous regulation.
The syntagma «cultural good» was first used in Italy, in the wake of the 1954 Hague Convention, by the so-called Franceschini Commission [1], established to draw up proposals to reform legislation on the protection of cultural heritage (L. no. 310/1964) [2]. This historical reference signals not only a lexical novelty, but also a change in approach in the sense of overcoming the merely aesthetic conception of cultural good to embrace a historical one. Originally, in fact, the protection of «artistic things» was linked to their particular beauty. This perspective transpires from Laws no. 1089/1939 and no. 1497/1939 instigated by Minister Bottai, which protected «artistic things» because of their «uncommon beauty» (L. no. 1497/1939). The legal consideration of these things was purely static, as no attention was paid at all to their interaction with their social context of reference. Instead, the Franceschini Commission marked the emancipation of «cultural interest» from the aesthetic value of the property. And this is clearly reflected in the Commission's statement no. 1, which hooks the definition of cultural heritage to «goods having reference to the history of civilization» and constituting «material testimony having value of civilization». The term *civilization* places cultural property in the perspective of the material, social and spiritual life of a people, and the reference to the *history of civilization* implies that the content of that notion is formed through reference to disciplines other than law [3]. Again, that term should be linked to the attribute of «cultural» good, which reveals the diachronic character of the notion in question, capable of embracing the history of peoples of any era [4].
The concept of «cultural good» therefore unfolds from the material thing, giving relevance to the interest it is able to satisfy and to its ability to bear witness to the history of a people [5]. This conception has found its way into the current regulation of cultural heritage (Legislative Decree 42/2004, hereinafter the "**Code**"), which offers a confirmation of it, identifying these goods with «things» - a term that refers to materiality - «immovable and movable» that are considered by the law as «testimonies having value of civilization» (Article 2, co. 2). Further confirmation, then, of the necessary reference of the concept in question to material *res* is offered by Article *7-bis,* which, in transposing the Convention celebrated here, has attributed protection only to expressions of collective cultural identity «represented by material testimonies».

2. Necessary historicization of cultural good

The notion of cultural good now referred to must be placed in the light of the cultural change that characterizes contemporary society [6]. From the artistic perspective, the past century has witnessed the spread of the interest of consociates towards artistic currents characterized by the overcoming of

the biunivocal nexus between the work of art and the material object: think of conceptual art or performance art, just to name a few. On the legislative front, there has been a proliferation of normative texts that assign relevance to cultural expressions of an intangible nature, and this has been done both at the supranational level, with the 2003 UNESCO Convention and the 2005 Faro Convention (ratified in Italy by L. no. 133/2020), and in Italian regional legislation, where relevance is given to cultural expressions such as, for example, dances, popular music, and dialects [7]. Finally, case law has shown the need to extend the binding protection beyond the thing to also encompass the cultural use to which the thing itself is put (Italian Council of State, ad. pl., no. 5/2023; Italian Constitutional Court, no. 118/1990).
It is, therefore, a cultural change that belongs to the history of society, which involves the partial disconnection of the concept of cultural good from its social context of reference, thus undermining the identity scope that traditionally belongs to it.

3. For a special discipline of cultural expressions

Contemporaneity compels the legal consideration of the greater cultural complexity referred to in the preceding paragraph [8]. And, nevertheless, the regulation of intangible cultural expressions cannot be entrusted entirely to the current legislation on cultural heritage, in which the identification of cultural good with material *res* stands out. Methodological rigor induces the elaboration of a special legislation that departs from the cultural change referred to above to arrive at the homogeneous regulation of «cultural expressions»: a syntagm that seems the most suitable to juridicize the intangible nature of such manifestations, distinguishing them from «cultural goods», connoted by materiality. This would favor: *i)* the incorporation into the system of the 2005 Faro Convention, avoiding the stigmatized lexical confusion produced by the ratification law, which risks blurring the concept of cultural heritage [9]; *ii)* the autonomous legal consideration of expressions of cultural identity envisaged by Article *7-bis* of the Code; *iii)* the provision of protections appropriate to the intangibility of the expressions at issue.
In the horizon of elaboration of the proposal under consideration, it would be necessary to identify, first, the constituent elements of the «cultural expressions» case, which inherit many of the concepts contained in the notion of cultural good, whose value substratum makes them adaptable to those expressions as well. Then the protection would require the delicate balancing with the fundamental freedoms inevitably involved: think, for example, of the placing of a cultural restriction on an economic activity. The intangible character should lead, moreover, to emphasize the dynamic profiles of promotion and valorization, in order to foster the acquisition and sedimentation of knowledge of the values underlying such expressions: by way of example, the collaboration between public and private institutions in charge of teaching and research; the information conveyed by theatrical and literary works; the creation of specific sections in libraries. All this appears in accordance with the constitutional principle of safeguarding the memory of the community to ensure its enjoyment and intergenerational transmission (Article 9).
Finally, on the socio-cultural level, such a proposal, through increasing in the members of the community awareness of their own cultural identity, would increase respect and recognition of differences with other cultures.

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Teresa Cilona, Maria Ala **Mediterranean landscapes to live and re-inhabit.**
An innovative project to be safeguarded, enjoyed and enhanced.

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Abstract
The Mediterranean is endowed with a great variety of natural and cultural landscapes. This interdisciplinary approach study examines the redevelopment project of the magical Sicilian landscape of the Kolymbethra Garden, within the Archaeological and Landscape Park of the Valley of the Temples in Agrigento, a UNESCO world heritage site. A *best practice* - realised by FAI - that has succeeded in combining the relationship between man and nature, the built environment, and individual, social and cultural well-being. The aim is to '*re-inhabit*' an enchanted place that, in the past, was abandoned and used as a landfill. Today it is an important example of '*living heritage*', to be enjoyed and passed on.

Keywords: landscape, heritage, well-being

1. Introduction
The Kolymbethra Garden is one of Sicily's - tangible and intangible - most beautiful and enchanting heritages. Incorporated in the area of the Archaeological and Landscape Park of the Valley of the Temples in Agrigento (winner of the 2017 Landscape Prize), it is now firmly established in a key role in the cultural, tourist and economic development of the city, and has more than 80,000 visitors every year. With traditional crops, starting with almond and olive trees, it presents an exceptionally rare, almost unique landscape of irrigated arboriculture. The Kolymbethra is a garden of approximately six hectares at the western end of the Hill of Temples, between the Temple of the Dioscuri and the Temple of Vulcan (fig. 1). Originally identified as a water reservoir or *'Pool of the Gods'* for the city of Akragas during Greek rule in the 5th century BC, it was formerly fed by the ancient "*Aqueducts of the Feaci*", some of which are still visible and active today. Throughout history, it is a place found in historical-literary sources, in the iconography of *Grand Tour* travellers, and in other stories and pictorial images. In more recent times, the area has remained unused for many decades, agriculturally abandoned and used as a waste dump (fig. 2). This study aims to rediscover the values and variety of this landscape, stimulating in users (current and future) that attraction, interest, thirst for knowledge for an asset that seemed lost and which, since 2001, has been rediscovered and valorised [1-2].

2. The redevelopment project: a *best practice* to be handed down
The Kolymbethra Garden risked disappearing due to neglect and degradation, until in 1998 the FAI (Italian Environment Fund) obtained use of the area for 25 years, offering in exchange the necessary environmental restoration and landscape, aimed at conserving the use of the territory and the Mediterranean scrub, together with the protection of ancient varieties and traditional agricultural techniques. The Garden is open to the public with the aim of restoring to visitors an invaluable agricultural and cultural landscape, a vast green area - a place of peace and serenity (atarassico) - that summarises the agrarian and natural landscape of the Valley of the Temples (fig. 3). Here, immersed and inebriated by the scents of nature, it is possible to admire, together with the archaeological finds, the extraordinary biodiversity of citrus fruits and other fruit trees, the traditional landscape of irrigated arboriculture, the vegetable garden, the underground caves (fig. 4) or hypogee (water system of refined hydraulic engineering, excavated in the rock, for the outflow of rainwater and groundwater, conveyed for irrigation and drinking use). Accessibility to the site is guaranteed by a convenient network of dirt

paths, which can be traveled on foot or by bicycle, reconstructed thanks to the historical memory of the older farmers and the identification of the original traces in the ground. The paths are part of the planning of the environmental itineraries recently created by the Archaeological Park of the Temples, called "*Environmental Routes*" and "*Green Ways*". These are connected to different parts of the garden and lead the visitor to scenic or culturally significant places (hypogea, monumental trees, archaeological remains). Additionally, with the idea to make better use of the Kolymbethra landscape, and to better promote tourism and socio-cultural events, the antique railroad line between Agrigento and Porto Empedocle has been reactivated, which crosses the southwestern part of the Archaeological Park - with stops at the Temple of Vulcan - with the possibility to arrive directly inside the Valley with the historic train [3].

3. A Heritage to "live, listen, and taste."

Kolymbethra presents a constantly evolving landscape, allowing visitors to interact and dialogue with the surrounding area, as well as enjoy the beauty of a place that changes during the various seasons. It is a place where it is possible to listen to the sounds of nature, taste agricultural products, experience a sense of *psycho-physical well-being*, witness traditional agricultural activities - which guarantee their maintenance and conservation, participate in cultural events that take place at different times of the year [1, 2, 3]. There are numerous initiatives to recover and enhance the Garden and the buildings present, as for example, the project for the restoration of '*Casa Montana*' - an old *peasant house* - purchased by the FAI in March 2019, to be used as a museum of rural history and cultural centre (fig. 5). The end of the work is scheduled for 2025 on the occasion of Agrigento *Italian Capital of Culture*. Furthermore, among the activities that take place at Kolymbethra, we remember:

- Sensory experiences to rediscover the ancient peasant culture, the of many species, and the classic myths linked to cultivated plants, archaeological finds, and those linked to the ancient irrigation system;
- Exploration of the underground networks dug by Carthaginian prisoners (Ipogei)
- Pomological exhibitions;
- Scientific works to spread knowledge about biodiversity;
- Painting experiences *"En Plein air"*, clay modeling, simulated archaeological excavations, visits in typical costumes, botanical laboratories;
- Production, transformation and sale of citrus fruits into jams and sweet products;
- Literary aperitifs and presentation of books;
- Musical and cultural events;
- Creation of educational paths.

4. Conclusion

This paper describes an exemplary environmental and cultural redevelopment project, aimed at producing *physical* and *psychological well-being* for visitors and contributing to the economic development of the city of Agrigento. It is a multifunctional model of '*active*' conservation of an area of the Sicilian territory, allowing for a harmonious interaction between nature and culture through the protection of the landscape. This is why the Kolymbethra Garden constitutes an important part of the Sicilian landscape and cultural mosaic to be safeguarded, enjoyed and enhanced.

Fig. 1: The Kolymbethra Garden within the Valley of the Temples Archaeological and Landscape Park. In red the borders of the Garden.

Fig. 2: The Garden during the period of degradation turned into a landfill.

Fig. 3: The Garden after the redevelopment work.

Fig. 4: Entrance to the hypogea

Fig. 5: Casa Montana - The recovery project plans to use the building as a museum of peasant culture.

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Ferdinando Trapani Cibo, salute e stili di vita per l'apprendimento del benessere come prevenzione primaria*

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Abstract
Mediterranean Diet is based on its traditional food composition and on products that for centuries have been inextricably linked to his specific agricultural and marine landscapes. Today it is the abandonment of the indigenous tradition and the choice of a "Western", high-calorie and hyperlipidic diet, with a consequent increase in obesity and degenerative pathologies. It is necessary to develop regional training programmes to implement primary prevention strategies for high prevalence non-communicable chronic diseases through behavioural and nutritional education.

Keywords: Regional Regeneration – Agricolture – Mediterranean Diet – Healthy Training Policies

1. Introduction
The Mediterranean diet is based on its traditional food composition and on products that for centuries have been inextricably linked to the agricultural and marine landscapes of the Mediterranean, with their ecological, cultural, social and economic dimensions of biodiversity. The symbolic value of food and its identification and differentiation has led to the creation of strong and direct links between local food and heritage and local identity and the creation of systems modelled on the geographical indication of origin. Today we see two important socio-economic and health problems. On the one hand, coastal urban concentration [1] together with overtourism [2] have led to the development of large cities, resulting in territorial erosion and desertification of inland geographical areas, which are increasingly deprived of their economies and identities [3. On the other hand, already in the countries where the diet was born [4] and in North Africa the Middle East [5] we experience a strong change of lifestyle causing: overweight, obesity and major non-communicable chronic diseases (cardiovascular, neurodegenerative, respiratory, diabetes and cancer). In this scenario we must take up the challenge to revitalize the Mediterranean diet and save its historical, geographical, anthropological, socio-economic and ethical heritage through two main pillars, education and production, which are considered to be two health determinants [6].

2. Mediterranean diet and place based development by using training processes
As is well known, the scientific definition of the Mediterranean diet [7] which led to the creation of the food pyramid [8] at the basis of which sociality and adequate lifestyle are envisaged, concerns the study of the eating habits of men and women in the village of Nicotera in Calabria, where, in the 1950s, the population had a very low prevalence of cardiovascular diseases. Among the conclusions reached by the study was defined the Mediterranean diet (MD) as: "the typical dietary model of many regions of the Mediterranean in the early 1960s". It seems more appropriate to define the MD as a way of living the territory that keeps alive the awareness of historical origins and values of enjoyment and existence of the environmental and cultural heritage that history has sedimented in the cultures of the Mediterranean basin. The relationship between the Mediterranean diet (DM), the lifestyle and the territory, can be summarized with a brief analysis of the changes that in recent decades have affected the habits of life and consumption in developed countries [9]. In terms of food pleasantness: through the search for traditional products - the tastes of the past are attributed to the foods and recipes rooted in a tradition and a specific place. In terms of healthiness: foods from organic farming, from areas of particular environmental value – natural parks – and accompanied by certifications relating to food safety are preferred. There is also a deterioration in the quality of urban life due to phenomena related to overcrowding, traffic, poor services and loss of human relations and the relationship with the rural and environmental context. The Mediterranean food systems, started early compared to the rest of the West,

have not undergone substantial changes over the centuries and have maintained the ancient custom due to the close relationship between man and the territory. The high quality obtained, in fact, has encouraged the inhabitants to preserve the biodiversity of their environments [10].
The American Institute of Cancer Research (AICR) and the World Cancer Research Fund (WRF) have helped draw up guidelines for proper nutrition. In addition, FAO and WHO in Rome in 2014 established the pillars for global healthy nutrition policies. In particular, recommendation n. 4 can be considered very close to the dissemination of information on the Mediterranean diet: “improve the availability, quality, quantity, coverage and management of multisectoral information systems related to food and nutrition for improved policy development and accountability”.
In Italy we recall the document of the Guidelines for a healthy Italian diet in 2019 edited by CREA (Centro di ricerca in agricoltura e l’analisi dell’economia agraria). The guidelines, drawn up over several decades since 1986, provide the fundamental rules to follow for healthy eating. These recommendations have not been formulated and proposed to the public as an absolute rule to be followed scrupulously but as a suggestion of ways of healthy living. On the occasion of the UN General Assembly of April 2016 which established the Decade of Action on Nutrition (2016-2025) for the promotion of policies of attention on the need to adopt behaviors and lifestyle with reliable diets of healthy eating at all decision-making, economic and social levels. The Italian Government with the action of the Ministry of Health, has committed itself in this sense with the establishment of an “Tavolo Italia per la Decade della Nutrizione”. The aim was to create a reference operational framework for the regions responsible for health with important recommendations geared not only to users but also to economic operators: well-being linked to the territory, economy, social and environment in an integrated way.
In Sicily, a programming based on FED health training has been tested (Formazione, Educazione, Dieta: Training, Education, Diet) [11]. The objective of the FED was to qualify trainers capable of causing a territorial change in behaviors and lifestyles by focusing on primary prevention on the basis of scientific evidence in the literature. On this basis, after a long period of preparation not only scientific but also at the level of comparison between political decision-makers, starting from 2023, a table on sustainable food was launched [12] which takes into account the experiments of healthy food in Sicilian agriculture [13]. Everything seems ready to promote an integrated policy between health policies and sustainable local development policies with particular attention to the quality of local landscapes, combining the protection and enhancement of cultural, landscape and naturalistic heritage with the care of intangible heritage.

3. Conclusion

The need for an exchange of experience between town planning, agriculture and health does not only concern the scope of the necessary training but its strategic role for the future of the qualification of sustainable planning is waiting to become as central as it should be. We must also consider the certainly positive impact that concerns both the training of 'new' doctors and urban planners or rather new groups of experts able to scientifically deepen the contents of environmental sustainability policies with a holistic approach of integral ecology. As an expected result, the effects of policies centered on the enhancement of the Mediterranean Diet will be "tangible" only in the long term, since it will take several years to change the incidence levels of the diseases mentioned above. Today we must pay due attention to the economic and organizational stability of the national and regional health system. The Mediterranean food culture has been characterized since ancient times together with the aggregative value of meals in the sense of relational capital. Since the extraordinary quality of food derives from the no less extraordinary overall quality of the territory, affirming the Mediterranean diet means keeping alive and reproducing, the quality of environment, landscape, history, culture and society.

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Concetta Tavoletta, Maria Gelvi The contemporary relic as a heritage of the future

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Abstract
With the necessary paradigm shift of human actions, it appeared essential to search for new methods and tools to handle the pre-existence and the objectives of the 2030 Agenda have become necessary cultural devices for the anthropized space. One of the possible ways to enhance the sustainability objectives which are now an urgency of the present is the conscious use of Construction and Demolition Waste, European guidelines which, since 2018, have placed some fundamental objectives for the reduction of waste materials at the center of the debate waste in construction. SHArch research focused on the reactivation of confiscated buildings with the aim of re-establishing a relationship with the territory by returning a heritage to the community through zero land consumption and zero demolition.

Keywords: recycle, demolition, climate change, heritage, confiscation

1. The contemporary relic: SHArch case study
«It is the hypothesis of a possible beauty, it seems to you like a musical instrument, an immense zither from which you can draw enchantments: and even when the external walls are raised and the perimeter voids are left for the windows everything is still beautiful; it is still a house that you can dream of as beautiful, it is still a hope: and if you turn inside the building at this point, in its undivided perimeters, you see, read beautiful things, air, space, sky, sun that enter from the large window portals, and the stairs that play between floor and floor: you see everything" (PONTI,1957).
In the famous book *Amate l'architettura* Gio' Ponti describes the moment of construction of architecture as a magical action in which it is possible to observe the becoming, a body that takes shape and which has a potential strength yet to be explored. What makes contemporary wrecks magnificent is precisely their possibility of being transformed into something else beyond what we know. The contemporary relic, those "infamous architectures", is nothing more than the new framework on which it is necessary to give a new vision in which the theme of sustainability becomes the underlying theme of the city of tomorrow.
The research project "SHArch-Secon-Hand Architecture for confiscated property" set itself the objective of transforming buildings that were not only abandoned due to neglect or no longer used, working on structures which, in addition to all this, contained within themselves the original sin of having been confiscated by the state.
The infamy of incompleteness, together with the scarlet letter that identifies confiscated properties, has become part of the design method itself. The project presented is part of the territory of Villa Literno in the province of Caserta and is concentrated in the former industrial settlement of IPAM, a sugar factory

that has been very active since the 1980s and 1990s. Various design hypotheses were examined specifically focused on the possibility of returning its value as a multifunctional space to the community. A structure that contains within itself a cooking school, a covered market, and spaces available to the entire community. The exterior was also designed as a vibrant body to live in relationship with the activities taking place inside. For this reason, the neighbouring fields are used to grow the products sold in the new social spaces designed as a meeting place for an extended community. The silos, true landmarks of the area, emphasize the power of the settlement and are reinterpreted as relics of the history of the place. Their iconic strength is used as an expressive tool not without a necessary function, that of vertical connection between the two soils, one on the ground and the other artificial from which to admire the unique scenery of the Campania plain.
In concrete terms, the SHArch research project stands as the first pilot example of a "policy of doing" which seeks to improve and enhance the scenarios of a complex reality with "best practices", necessary to deal with emergencies of contemporary reality. An even more significant work if we consider the nature of a context that has always been marked by the traumas of the underworld.

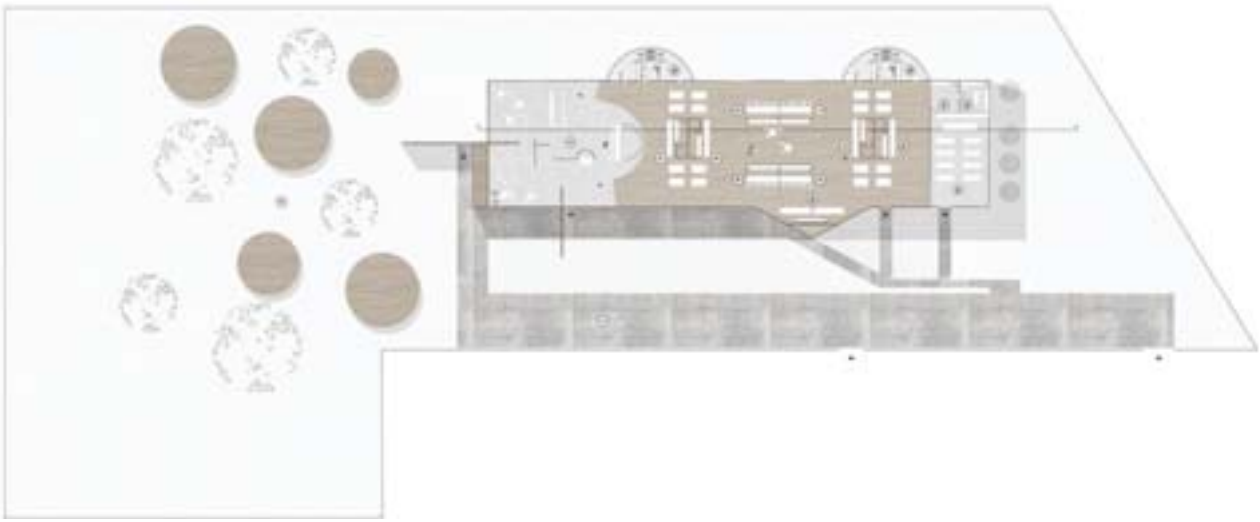

Fig. 1: Plan of the project hypothesis, 2023, by Giovanni Loffredo, Sabato Malangone and Mariapia Verde

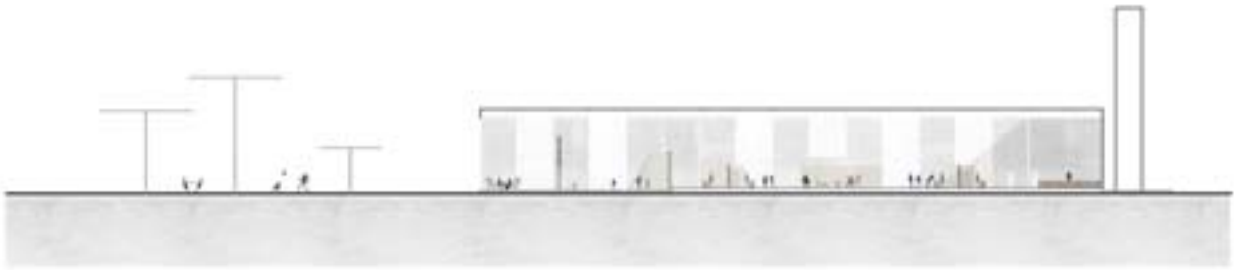

Fig. 2: Section of the project hypothesis, 2023, by Giovanni Loffredo, Sabato Malangone and Mariapia Verde

Fig. 3: Façade of the project hypothesis, 2023, by Giovanni Loffredo, Sabato Malangone and Mariapia Verde

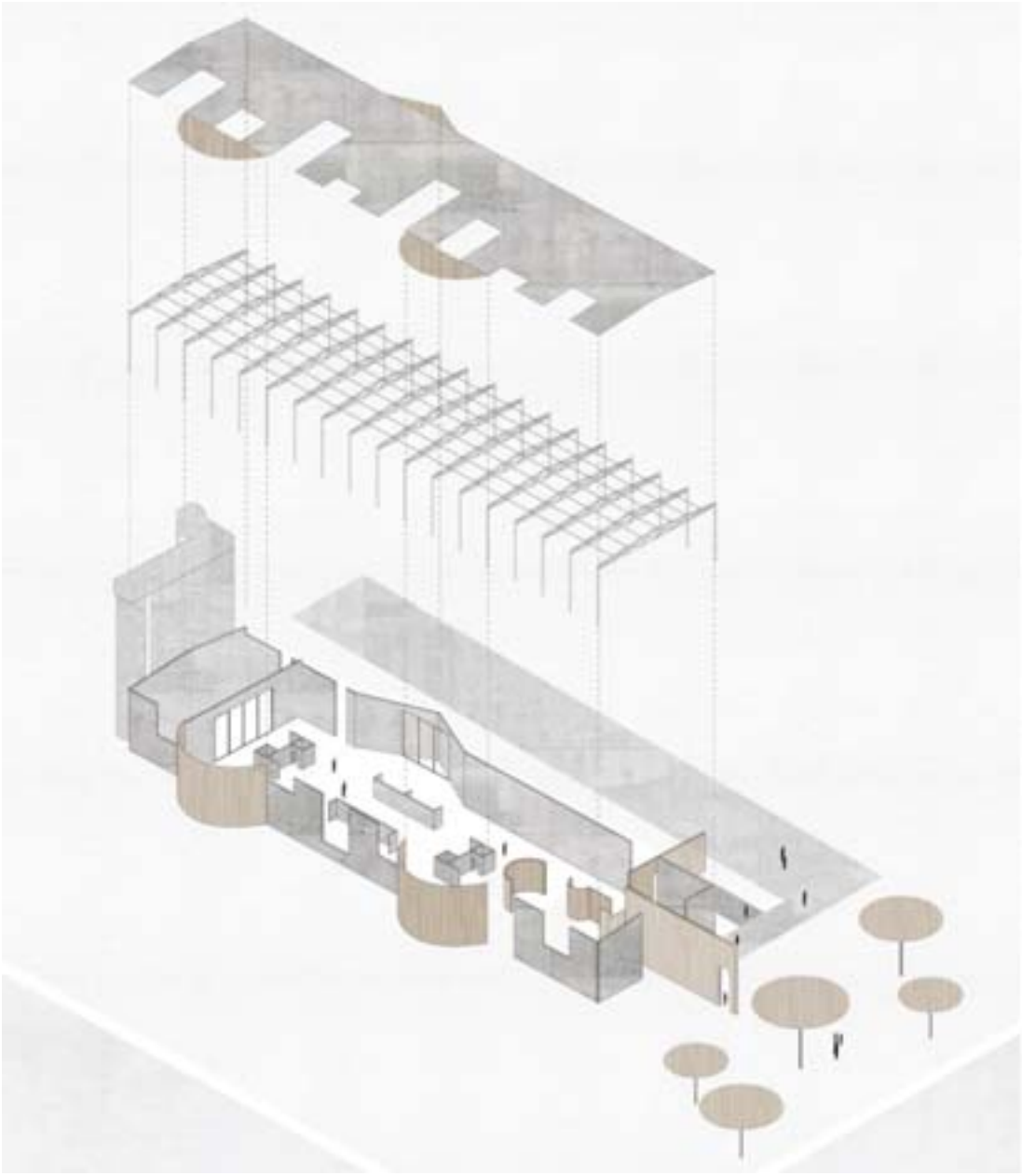

Fig. 4: Axonometric view of the project hypothesis, 2023, by Giovanni Loffredo, Sabato Malangone and Mariapia Verde

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Giuseppe Di Gregorio, Gabriele Liuzzo Between Real and Virtual, from the museum of Opera dei Pupi in Sortino to the museum of Immaginario Verghiano

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Abstract
The region's funding for the 3DLab-Sicilia project – aimed at studies and research for the dissemination of new advanced visualization models trough VR and AR – was an opportunity to develop about 33 models of cultural heritage located in different town. Cultural Heritage from the protohistoric period – with the Pantalica's necropolis, evidence of the Byzantine, Medieval, Baroque, Bourbon periods – to industrial archaeology and to get to the craters of Etna volcano.
Among them, the museum of Opera dei Pupi in Sortino (SR) plays a particular role in being part of the Intangible Cultural Heritage list of UNESCO. The Village of Cunziria in Vizzini (CT) is the unspoilt setting of Giovanni Verga's literary park.

Keywords: digital survey, laser scanner, SFM, VR/AR, digital twins

Fig. 1: The museum of Opera dei Pupi in Sortino, 3D view – elaboration by the Matterport Pro2 system.

1. Introduction
As a part of the 3DLab-Sicilia project, the UNESCO VR work package developed some 3D models for the creation of VR/AR/MR experience of cultural heritage which are in four partner towns: Sortino (CT), Militello in Val di Catania (CT), Vizzini (CT), Mussomeli (CL), plus the Etna Park (CT), Taormina (ME), the Cathedrale Square in Acireale (CT), Via Crociferi in Catania and the Villa Romana del Casale in

Piazza Armerina (EN). The surveyed objects range from the prehistoric period to nowadays, from the Necropolis of Pantalica to the Santa Maria la Vetere's church in Militello (CT), the castle of Mussomeli (CL), the former Bourbon prison in Vizzini, the industrial archaeology Village of Cunziria and others. Three museums are in the project: the museum of sacred art in San Nicolò's church in Militello, the medieval antiquarium and the museum of Opera dei Pupi both in Sortino. The Opera dei Pupi is part of an especial type of puppet theatre typical of southern Italy and particularly of Sicily in the 1800s. The stories are mainly based on medieval chivalric literature, Italian Renaissance poems, lives of saints and tales of bandits. The main Sicilian puppet schools are Palermo style and Catania ones, often family-run with a production of puppets mounted and painted with traditional methods. Sicilian puppets are characterized by a specific movement mechanical where iron rods are used in addiction to wires[1]. The 'Puparo' (Puppeteer) takes care of show, set design and puppets' realization themselves sometimes. There are two Sicilian puppet schools: Palermo style and Catania ones[2]. The Catanese puppets reach a height of up to 4.3 feet, while the Palermitan puppets rarely exceed 2.6 feet – only Orlando puppet is 3 feet, towering above other puppets[3].

Fig. 2: The museum of Opera dei Pupi in Sortino, elaboration by the Matterport Pro2 system, various stages, in the center representation of the magician 'Malagigi', a powerful character who commanded dragon devils and ferocious beasts – Puppets dating from the mid-19th century.

2. The museum of Opera dei Pupi in Sortino

Since 2008, the Opera dei Pupi has been inscribed on Intangible Cultural Heritage of Humanity list – originally proclaimed in 2001 – the first Italian cultural heritage included on the list. Among Catanese puppet schools – all authoritative – the VR model of the Sortino style was developed in the project described here. In the 1950s, the Cinema Teatro Impero became the venue for the performances of the Opera dei Pupi by Ignazio Puglisi – 'Puparo' for generations and he became a reference point for 'l'opra de' pupi' in Sicily. In 1987, the municipal administration purchased the entire Puglisi collection and in 1996, the Opera dei Pupi Civic Museum was created in Sortino (Fig. 1). Ignazio Puglisi's 'pupara' traditions kept alive today by his nephew Ignazio Manlio Puglisi, who continues to perform[4] in the family tradition. In evolution of the workmanship, tricks and innovations are incorporated that denote all the artistry skill, such as the movement of the jaw simulates the action of speaking or the movement of eyes in the magician Malagigi character (Fig. 2). The museum's activities include disseminating the culture of this vast and special heritage to all levels of schools through performances and guided tours of the puppet-making workshop.

3. The museum of Immaginario Verghiano and the Village of Cunziria in Vizzini

The museum of Immaginario Verghiano in Vizzini (Fig. 3) brings together – through a heterogeneity of objects – the intangible identity of Giovanni Verga's varied personality, including some lesser-known aspects such as his photographic collection. But the spirit' sensation of the time is tangible and pervades visitor when he walks through the museum's rooms with its stage clothes, objects, portraits of the Writer, photographs of his homeland and those of his Milanese period. In the ancient industrial Village of Cunziria, Verga imagined the unfolding of the end of the novella Cavalleria Rusticana with the duel between the two rivals, and it is not a coincidence that the hamlet represents the cultural heritage of the Vizzinese social community's identity at the end of the 19th and beginning of the 20th century. It is a setting for many famous films, it was originally a borough of about forty buildings for tanning hides that took advantage of a steam flows there that was channeled and collected in special tanks. The Village, in its still tangible building consistency, tells us of the intangible period described in Verga's writing and in his photographs, in the transposition of the opera of 'Cavalleria Rusticana' by Pietro Mascagni too.

Fig. 3: The museum of Immaginario Verghiano in Vizzini, elaboration by the Matterport Pro2 system.

4. The survey for VR models

The virtual reality models were rendered by Matterport Pro2 structured light camera, Faro Focus 350+ laser scanner, Autel drone, Matterport Pro3 structured light camera, The Cunziria's model derived by combining the point cloud from laser scanner, structured light camera and drone. The results are available on the 3DLab-Sicilia website[5].

5. Il modello 3D della Cunziria

Data processing is a phase of synthesizing the information obtained from the survey where an attempt is made to create a three-dimensional model with the most realistic graphics possible. The choice of a software and its settings depend on the sensitivity and experience of the surveyor that will exploit peculiarity of the most suitable methods. In Cunziria's project integrated different survey methods such as: photogrammetry, LiDAR laser scanner, structured light camera. The raw data from *photogrammetric survey* processed by Zephyr software **(SFM)**, which allowed the images to be aligned (*motion*) and the object's geometry to be reconstructed (*structure*) by different setting for an experimented pipeline involving **sparse cloud point**, **dense cloud point, mesh** and **texture**. The raw data from *3D laser scanner* processed by the proprietary Faro Scene software, which allows cloud point to be checked, recorded and processed, also implementing orientation and merging actions. The merged clouds must be to export in rcp format verifying normal vertex and other information, then exported in e57 format to be compatible with SfM software. The raw data from *structured light camera* managed in the Matterport software in-cloud from which the model was downloaded in e57 format to be compatible with SfM software. This different model from different survey techniques can be to unite with Zephyr software through control points; so, **mesh** and then **texture** were created through different and repeated settings with the aim of obtaining a model valid graphic quality and fluidity of movement aimed at *immersive reality*. The model was then exported in fbx format with metadata aimed at texture. To create the model suitable for the immersive experience, the **Unity 3D** *game engine* software was used, due to its well-known and proven performance and peculiarities, being a multiplatform graphics engine. The first step involved the choice of template '*3D (URP)*' because it was optimized for headset use and all settings foreseen for the headset adopted – in our case the Oculus Quest 2 – to view and navigate the model with fluidity that emulated human beings' movement (*continuous movement*), alternatively through point to be used from time to time (*anchored movement*) appropriately designed. Then, the 3D model was added into Unity to be completed with texture. After verifying settings set in the applications responded to headset's commands, the model was exported in apk format while Android Studio software resolves any errors. The last step was to upload the project to the headset' store dedicated to verifying and then release the app. Another streamlined model was created with the Matterport Pro2 system, then completed with Matterport Pro3 ones[6].

Fig. 4: The Village of Cunziria in VIzzini, elaboration by Matterport Pro2 system.

Fig. 5: The Village of Cunziria in Vizzini, VR model elaborated by Unity 3D for Oculus Quest 2.

6. Conclusions

The dissemination of tangible heritage has already seen increasingly advanced applications of VR/AR for the enjoyment of Cultural Heritage. The next challenge is the dissemination of VR/AR models of intangible heritage, which due to its peculiarities is more difficult to trace back to comprehensible digital model. Hence the full potential of VR/AR digital models for the dissemination of human's heritage as an evolution of civilization. In this case, digital twins and navigable 3D models were created for the tangible dissemination of intangible[7].

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[1] https://www.patrimoniounesco.it/directory-tangibili/listing/opera-dei-pupi/
[2] Catanese puppets have stiff legs, without a knee joint and if they are warriors, they almost always hold the sword in their right hand; instead; Palermitan puppets can articulate their knees and unsheathe and sheath their sword.
[3] In the popular tradition of the Island, the term ‘un pezzo da 90’ derived from this assumption to define the influence of a piece (3 feet/90 centimetres) that stood out from others.
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Nour Zreika, Daniele Fanzini Minor Cultural Heritage, an Approach towards Sustainable Urban Development

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Abstract
This contribution acknowledges minor cultural heritage as a living heritage and proposes its valorization as a means to ensure the sustainable development of cities and territories. It also considers co-design as a tool through which communities and stakeholders can be involved in addressing the challenges of their urban environment. Moreover, this contribution will refer to the "Safely-connected" project, an initiative directly involving the authors, as an on-field application of this approach.

Keywords: Minor cultural heritage; living heritage; sustainable urban development; community participation; co-design.

1. Establishing Minor Cultural Heritage as Living Heritage
In the last decade, communities have become more aware of their living heritage. In fact, this intangible cultural heritage has become a driver of cultural diversity, and its safeguarding for future generations has become a universal concern. For living heritage, the active participation of local communities is crucial for the creation, preservation, promotion, sustenance, and recreation of these cultural practices, a concept reinforced by *the Convention for the Safeguarding of the Intangible Cultural Heritage* [10]. Moreover, in its definition, living heritage is considered community-based; it includes cultural practices, expressions, knowledge, and skills that must be recognized by individuals or groups as part of their heritage [9]. This aligns well with the idea of minor cultural heritage, which is not as widely recognized as major cultural elements but holds intrinsic significance and value to the communities to which it belongs [7], thus firmly establishing itself as living heritage. In this context, minor cultural heritage not only refers to rural heritage areas, small archaeological sites, historic routes and trails, small museums and collections, and sacred shrines, but also cultural expressions in the form of events, festivals, traditional crafts, etc.

2. The Significance of Minor Cultural Heritage in Sustainable Urban Development
As previously mentioned, minor cultural heritage is established as an integral component of living heritage. Similarly, it plays a significant role in supporting efforts for sustainable urban development, a consideration also highlighted in *the Convention for the Safeguarding of the Intangible Cultural Heritage* [10]. As featured in Goal 11 of the UN *Sustainable Development Goals* (SDG), living heritage is considered as an enabler of social, economic, and environmental dimensions of a city [12]. This concept is later reinforced in *the New Urban Agenda* (NUA), where the role of cultural heritage, both tangible and intangible, is highlighted in the rehabilitation and revitalization of urban areas, as well as in the enhancement of social engagement and strengthening of civic participation [11].

Thus, the valorization of minor cultural heritage is essential for realizing a sustainable and more inclusive urban environment. It has the potential to strengthen cultural identity, foster a sense of belonging, improve social cohesion, and encourage community engagement [4], while contributing to economic growth, revitalizing urban spaces, and supporting environmental sustainability [3], all of which are integral to the broader goals of sustainable urban development.

3. Co-Design as a tool for the Valorization of Minor Cultural Heritage

Acknowledging that local communities have the ability to identify their own needs and opportunities is a step closer to sustainable urban development. Therefore, it is necessary to facilitate community involvement in the preservation and governance of their intangible heritage. We refer to the *Historic Urban Landscape* (HUL) approach, which not only advocates for the valorization of living heritage in urban transformation but also recognizes the active involvement of communities in these endeavors – a concept that has gained prominence at both European and international levels [8].

Hence, we will consider co-design as a tool for the valorization of minor cultural heritage. Described as a user-centric approach, co-design can be utilized to address urban challenges by involving communities and stakeholders in the design process [5]. When applied to the valorization of minor cultural heritage, co-design activities empower communities to take part in preserving, promoting, and utilizing this living heritage [7]. Thus, involving individuals and groups in the decision-making ensures the integration of these enhancement efforts in the development strategies of cities and territories. This process can be further developed through the utilization of digital tools and ICT technologies [7].

4. From Theory to Practice: The Case of the "Safely-connected" Project

In this section, we will refer to the "Safely-connected" project, a research endeavor that involved a multidisciplinary research group from Politecnico di Milano, which includes the authors of this contribution. Saint-Germain-en-Laye (SGL) is a small town in Île-de-France, renowned for its historic city center and vibrant commercial district, attracting visitors from surrounding towns. Funded by the European Institute of Innovation and Technology (EIT), the "Safely-connected" project aims to enhance the city center, helping the recovery of its small businesses adversely affected by the COVID pandemic [6].

The "Safely Connected" project suggests the formation of an open-air urban market. By adopting a ***co-design approach***, this project takes into consideration the issues of local citizens and business owners and transforms them into a project for reviving the social life of the city center and the relaunching its commercial activity, facilitated by the use of digital technologies [1]. Thus, the active participation of local citizens and small business owners was encouraged in the development, implementation, assessment, and improvement of the solutions for the urban space and common infrastructure [2]. ***Interviews*** with various actors, including the city mayor, counselors, and municipal staff, local residents, and shopkeepers, allowed the research group to gain insight into the needs and requirements of the city of SGL. Actors were also involved in ***discussions***, ***workshops***, and ***events***. ***Surveys*** were conducted to evaluate the project's success in achieving its main goals and to demonstrate the effectiveness of its implementation in generating social, economic, and environmental benefits for SGL.

5. Conclusion

As a result of the experimentation conducted for the "Safely-connected" project, the effectiveness of co-design as a tool for the valorization of minor cultural heritage can be evaluated, and consequently, its influence on sustainable urban development can be understood. By performing on-field applications, the research group evaluated the effective and collaborative techniques for engaging local citizens and stakeholders. This project yielded a set of methodologies and tools for transforming cities and their historic public spaces into more habitable, healthier, and secure cultural environments.

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Stefano Chiarenza Representation as a didactic communication tool for intangible cultural heritage

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Abstract
This article aims to highlight the role of representation in promoting intangible cultural heritage, recognised by UNESCO in 2003. Digital technologies and the evolution of ICTs have contributed to the global dissemination of this heritage through online platforms and social media. The redefinition of the museum concept has opened new opportunities to communicate tangible and intangible elements of heritage, pushing research towards new scientific paradigms. This article focuses on representation as a tool to convey the intangible cultural heritage of human landscapes within informal educational contexts, using a multidisciplinary approach and digital tools. The digitisation of information expands semantic connections in cultural heritage. The article proposes new strategies for the creation of virtual tours and museum ontologies, aiming to enhance the intangible heritage.

Keywords: landscape, virtual reality, cultural heritage, digitalization, ontology

1. Introduction
The recognition of intangible cultural heritage by UNESCO in 2003 [1] has led, over two decades, to a growing demand for research on the modalities of its transmission in the educational sphere and the development of multiple experiments aimed not only at recognition and preservation but also at ways of conveying its rich and complex value system [2]. The continuous evolution of ICTs has largely contributed to disseminating intangible cultural heritage to a wide audience on a global scale by exploiting, for instance, online platforms, multimedia content and social media [3]. A key role, however, in raising awareness and appreciation of these cultural expressions has been played by representation. Indeed, it makes it possible to record and document the great variety of scenarios, cultural traditions and processes that have led to the determination of intangible heritages. At the same time, it makes it possible to create interactive educational materials capable of teaching intangible cultural practices both in formal contexts, such as schools and universities, and in informal settings such as workshops or museums.
Concerning the latter, the very redefinition of the museum idea elaborated in 2007 by the International Council of Museums (ICOM) [4] has expanded the possibility of communicating and showing both tangible and intangible elements of heritage, paving the way for the search for new scientific paradigms able to cope more adequately with the complex changes related to musealisation in relation also to digital technologies for the creation of active learning processes. The use of technologies, such as virtual or augmented reality, was, therefore, able to generate immersive learning experiences, capable of promoting an understanding of intangible heritage and at the same time enabling its preservation.
In the context of wide and varied experiences, this article aims to highlight the role of representation as a tool for conveying and promoting the intangible cultural heritage of man-made landscapes in informal educational contexts, using digital tools in a multidisciplinary approach. This approach, coupled with the digitisation of information, is crucial because it enables the extension of semantic connections within cultural heritage [5], which is already intrinsically rich in meaning. In addition, some new strategies are presented that find representation as a key element for musealisation processes.

2. Strategies for the communication of intangible heritage: a hypothesis for the construction of virtual paths of knowledge of anthropic rural landscapes

Setting up a protocol for the construction and transmission of knowledge networks relating to intangible cultural heritage today constitutes an important challenge which has found several significant applications in recent years [6]. As part of this theme, an experiment is proposed that places representation processes at the centre and is aimed at anthropic agricultural landscapes which represent, due to their intangible qualities, objects of particular interest. Attention was paid, specifically, to the terraced landscapes of the Amalfi Coast, still today the only cultivated areas of this region. As Laureano states, “The entire Amalfi Coast is a chisel of terraced fields that ascend the landscape, surround the coasts and mark the headlands. The steep orography makes the terrace the true protagonist of the entire spatial organization: hanging garden, design of the wooded spurs, structuring plot of the inhabited centres themselves" [7] (Fig.1).

Fig. 1: Terraces with dry stone walls in Vettica Minore, Amalfi (Salerno), Italy.

For the purposes of the study, these elements appear emblematic since they are characterized not only by a singular morphological conformation, but are also profoundly marked by the influence that human activities have left on it, through the creation of a multiplicity of works (adaptations of slopes, construction of dry stone walls, water disposal works, etc.) recognized, due to their particular nature, as a fundamental part of the intangible heritage. In the analysis and evaluation of the landscape, both the attributes that allow us to identify its typology (physical structure, vegetation, land use) and the value that derives directly from the functions that the landscape can perform in terms of satisfying needs are examined, material or purely perceptual [8].

The choice in the approach of knowledge and communication of the tangible and intangible qualities of this heritage was linked, on the one hand, to the possibility of separating the process of use from the physical object itself and, on the other, to that of providing an understanding complete and an experience of goods that are not always accessible, as they are subject to changes over time and in any case part of an intangible heritage. If the virtual presentation of material cultural goods must necessarily coexist with them, in the case of goods without material consistency, a virtual tour can be completely independent of the object. The only link is the scientific foundation of the graphic model through which the landscapes and works investigated are reconstructed with a good degree of precision.

The developed research hypothesis highlights how, thanks to the use of new technologies, it is possible to identify not only innovative strategies to transmit the investigated landscapes through virtuality, but also to expand the visual and material knowledge of the heritage (Fig. 2). The methods used to organize visit routes using digital resources and dynamic databases are still in a development and research phase. However, the work carried out has highlighted the possibility of creating virtual paths that improve knowledge for the public. These routes leverage a variety of resources, such as historical sources, videos, maps, drawings, filmed testimonies, publications and more (Fig. 3). Furthermore, they are customizable paths that allow you to "reconstruct" what might be difficult to interpret, to contextualize fragmentary, dispersed, isolated or hidden elements, and to restore cultural connections between the analyzed assets [4]. The tools of representation in this context are able to determine a perceptive and

cognitive increase in the cultural asset, allowing digital access to the virtuality of information.

Fig. 2: Virtual tour customization hypotheses.

In parallel, the work was directed more generally towards the creation of a museum ontology through a multidisciplinary approach, capable of integrating a vast range of information and promoting broad interoperability. The main objective is to define, based on the experience gained and recent literature in this field, an excellent practice in designing virtual museum communications using ICT technologies. This approach does not only focus on the management of cultural heritage resources but above all aims to enhance intangible heritage (Fig. 4).

Fig. 3: The image shows the way to use a hypothetic app with which the user can find historical sources for a better knowledge of cultural heritage.

3. Conclusion

The study described intends to highlight new possible strategies for communicating intangible cultural heritage both in educational, training and entertainment contexts and in professional and research fields. On the basis of consolidated experiences, the article focused on the anthropic rural landscapes and the artefacts related to them, present on the Amalfi Coast. Thanks to a multidisciplinary approach it was possible to outline an ontological resource capable of integrating three-dimensional digital models of the territory with a set of further sources to offer customizable virtual knowledge paths.

Fig. 4: Virtual tour: one of the hypotheses of integration between route and sources for understanding the landscapes investigated.

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Alessia D'Errico Historical Heritage: how to safeguard it and make it sustainable through surveying

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Abstract

This contribution focuses on the definition of a multidisciplinary approach for the preservation and requalification of historical buildings, proposing efficient survey methodologies and sustainable tools for performance analysis. The main objective is to ensure the preservation of the historical heritage while making it energy sustainable. This article presents the initial reflections of an ongoing research that uses dynamic survey techniques to establish a fast and sustainable approach to the digitization of historical heritage, crucial for energy analysis and requalification. The use of innovative devices in the field of architecture is of significant interest to the scientific community, as their speed could contribute to achieving goals related to climate change in a short timeframe.

Keywords: sustainability, preservation, rapid mapping, retrofit, heritage.

1. Premise

The built heritage constitutes 40% of the final energy consumption in the European Union, making this sector crucial for energy savings. In line with the 2030 Agenda, goal 11 emphasizes the importance of making cities more sustainable. Many of these buildings are our historical and cultural heritage, an inheritance we must preserve for future generations. These constructions, with high historical and artistic value, are considered Cultural Heritage and are governed by law for their protection. Furthermore, many historical buildings are publicly owned, complicating energy requalification due to complex regulations that combine energy efficiency and the protection of cultural assets.

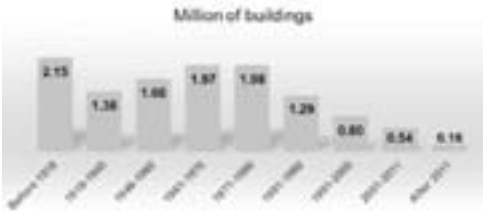

Fig. 1: most of the buildings in Italy represent our historical heritage.

2. Introduction and state of art

Over the years, numerous tools have been developed to collect data necessary to improve the energy efficiency of historical heritage, given the importance of preserving this part of our collective identity and memory. However, Cultural Heritage is exposed to deterioration caused by natural factors such as climate change and anthropogenic factors such as vandalism and war. Architectural survey plays a key role in the creation of three-dimensional information models to understand buildings and monitor their conditions over time. The most used survey methodologies combine image-based and range-based approaches, the latter focusing on the use of lidar (both stationary and dynamic). These tools produce point clouds, three-dimensional representations of survey data, which include location information and sometimes colorimetric data.

Point clouds appear to be an extremely suitable product for energy efficiency approaches, as they are already three-dimensional, queryable and rich in heterogeneous data. In order to formulate concrete

proposals for energy efficiency interventions, which take into account the protection of the property, a precise and in-depth energy diagnosis is necessary in which the functioning of the building-system-context system is identified in detail. An energy model is therefore necessary that summarizes reality well, in some cases enriched with in situ investigations which even involve data extraction through core sampling of both the vertical and horizontal casing.
Given the context just outlined, in the desire to safeguard elements of the historical heritage in a sustainable operational scenario, the research in progress questions itself on the most appropriate procedures for the digitalisation of historical buildings capable of fulfilling the requests for economic and environmental sustainability of operational choices as well as in line with the dictates of energy efficiency actions.

3. From Geometric Model to Energy Model: Methodological Approach

Often the artefact to be detected is located in a historic center and it is not always possible to use stationary laser scanners, which although they return accurate data, are difficult to manage in crowded environments, which is why in recent years we have opted for a dynamic survey, where the instrument moving in an unknown environment builds the map of that environment in "real time".
The use of lidar sensors coupled with SLAM *Simultaneous Localization And Mapping* algorithms allows you to define geometric data quickly but also satisfactorily accurate for some operational and context scenarios.

Fig. 2: To create the photographic campaign, photos were taken of all the elevations both at ground level and in height.

However, the colour data acquired with SLAM is not always suitable for colorimetric analysis, as it is captured with cameras that are not always as performant as a reflex camera. Therefore, other techniques, such as photogrammetry, are integrated. The advantage of integrating these tools lies in maximizing the capabilities of the technologies used to enhance the efficiency of the survey system while minimizing the limitations of individual instruments.

Fig. 3: Photogrammetric point cloud.

From this perspective, it is clear that a valid approach to digitizing historical heritage assets involves the use of rapid mapping techniques that combine with acquisitions photogrammetric snapshots. Furthermore, considering that the point cloud captured via SLAM is registered as a reflection of structured light, an additional advantage of its use is the ability to manipulate reflectance data to extract

information about the material characteristics of the surveyed surfaces, adding informative descriptors to the color data, which can be deduced from the integrated image-based approach. The data extracted from the survey approach described above forms the basis for creating a digital model capable of discretizing reality and characterizing it from an energy perspective. To achieve this, it is essential to gather archival information and essential data such as general building data (use, climatic data, etc.), window and opaque components, user data (devices, electrical equipment, etc.), calculation of useful winter and summer energy, and finally, modeling of the systems.
Only through surveying can all this information be obtained and a sustainable energy model be created, following historical research and the discretization of reality. This can be achieved through point clouds obtained from SLAM and photogrammetry. This approach allows for precise actions without invasive on-site investigations that damage heritage and require lengthy authorization procedures, while also being sustainable from both economic (rapid data acquisition) and environmental perspectives.

Fig. 4: The sequence of the methodology includes: a photogrammetric campaign, a survey using a lidar scanner, the union of the two point clouds to obtain more accurate data, the creation of the energy model, the settings of the casing materials and systems.

4. Conclusion

The methodological framework just outlined constitutes the first phase of ongoing research, which involves testing what has been codified on a real case study. In particular, the research group is proceeding with the study of the Armando Brasini building, headquarters of the 'Banca Nazionale del Lavoro' in Naples, located on the corner of via Toledo and via Diaz. The first recognition and digitization actions have been started with the manipulation of the data recorded thanks to the photogrammetric campaign for the extraction of information useful for energy modeling; a survey will then be carried out using a lidar scanner.
With a view to overcoming the challenges of the millennium, dictated by climate change, the multidisciplinary approach is necessary to obtain reliable results in a short time.
The set of the most innovative resources made available gives the possibility of discretizing the artefact taking into account its historical, artistic and cultural value, proposing project inputs that take into account two aspects: safeguarding the asset and making it sustainable.

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Aldo Accardi The evolution of museographic strategies as the key to communities' comprehensive access to *tangible* and *intangible* heritage, against the backdrop of the evolving concept of heritage itself

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Abstract

The needs for cultural heritage presentation have led toward a varied casuistry of interventions on cultural property, essential bases of new preservation actions, tangible and intangible. The heritage musealization interventions have constituted a kind of "preventive preservation", from which sustainable actions have derived, directed toward a single goal: the general public's enjoyment of the asset and its active participation in enhancement actions. Yet, the choice to involve communities in enhancing the "public" heritage has its roots in the very distant past.

Keywords: Musealisation actions; Enhancement of intangible heritage; Participating communities.

1. The evolving concept of heritage

It is Robert Lumley who states that the term *Heritage* is by definition “undefined” [1]; the extension of the object of *heritology* goes beyond the concept of a tangible site itself to extend to a whole intangible heritage [2] associated with it. This view was taken up by the so-called Krakow Charter of 2000, which notes that heritage cannot be defined in a fixed way, but that its identification is entrusted to the collective memory and awareness of the past, proper to the culture of each community.

Shortly afterwards, Jean-Louis Luxen argues that *le patrimoine physique ne prend pleinement son sens qu'avec l'éclairage des valeurs qu'il sous-entend* [3]. Thus, alongside the classic monumental, historical or archaeological sites, cultural sets and contexts, it is recommended that cultural itineraries, cultural landscapes, associative sites, linked to myths, legends, and finally places of memory linked to historical events, in which the scientific potential of cultural heritage can be considered as an added value and no longer the central subject of attention, be considered as the object of preservation and eventual musealization [4].

In continuity with Luxen's thinking, the 2003 UNESCO Convention, based on the demands of developing countries that had shown concern about the continued loss and erosion of their intangible heritage, also extended the concept of heritage to those elements related to orality and tradition, which for communities represented the main dimension of cultural and natural heritage.

Just as in the spirit of the 2003 Convention, current musealization actions now aim to transmit and enhance an "intangible cultural heritage," that is, to keep alive the memory of oral traditions and expressions, which are the basis of a community's history, and which restore a sense of identity and continuity. The importance of the role of communities is placed at the center, since intangible cultural heritage arises precisely from the communities that create and nurture it, but at the same time communities with it preserve their identity.

The likelihood that the close bond between a community and its territory might gradually fade was feared well in advance in the second half of the Nineteenth Century [5], at a time in history during which even museum institutions were overwhelmed and caught up in economic development and the industrial revolution. At that time, Arthur Immanuel Hazelius, led a "museum reaction" to the impending globalization by contrasting connection to tradition through the creation of the Skansen Open-Air Museum.

Motivated by the aspiration to reinforce the Swedish people's sense of self-identification, he focused his attention on the aspects of an open-air musealisation that would involve every perceptive aspect and be capable of entertaining, but fostering an active involvement of the communities, offering employment to the local people as interpretive actors of the traditional life of those regions.

Fig. 1: Skansen Open-Air Museum - Stockholm. View of a group of rural buildings, that come to life with the involvement of local communities, engaged in traditional rural activities (photo: www.NicoleJoosPhotography.com).

Thus was born the Skansen open-air museum, a true forerunner in implementing strategies to enhance specific areas of Swedish everyday-life, quite similar to those defined by the "Convention for the Safeguarding of the Intangible Cultural Heritage" (2003), which are:

- ***oral traditions and expressions, including language as a vehicle of the intangible cultural heritage;***
- ***performing arts;***
- ***social practices, rituals and festive events;***
- ***knowledge and practices concerning nature and the universe;***
- ***traditional craftsmanship.***

Even today, the musealization of heritage stems from the need to attract primarily an "indigenous" public, that is, those rooted in the places of tradition, but also from the desire to induce the recovery of a people's identity and to convey an interest in heritage, an indispensable tool for interpreting past human events, thus for self-discovery.

2. The evolution of museographic strategies

It seems clear, then, that more than a century of evolution of the meaning of "heritage," has led toward the extension of the "category," including in it all tangible and intangible "things". There is thus a shift in focus from objects to the contexts from which they themselves originated. Thus, museography becomes documentation, interpretation and presentation of "cultural contexts" and establishes an ideal continuity between the communities of the past and contemporary ones, to which all musealisation actions must first address. Parallel to the evolution of the concept of heritage, museographic strategies have also gone through precise evolutionary stages, which can be summarized by taking the "relationship between objects and context" as the criterion for evaluation, which has allowed the evolution of heritage musealization to be traced back to three fundamental stages [6]:

- Objects without Context

In this first phase, which we imagine to be representative of the condition of postwar museums, the cultural message to be conveyed is still tied to a type of "linear" narrative, whose cognitive path is entrusted to so-called "progressive galleries" and where the seriality of the exhibits, sometimes extraordinary, produces a fruitless sense of abstraction from the past that is instead intended to be communicated [7]. We are still in a "museum landscape," indoor and outdoor, in which the contemplation of objects and their exceptionality prevails, where an obsolete museological and elitist project disregards the public's demands. The "museum context," with its collections separated from the context of origin, use, and discovery, takes center stage, along with the ineffectiveness of sterilely captioned communication.

- Objects with Context

In deciding to present a cultural heritage, it cannot be expected to narrate itself, so an intermediary is needed to narrate for it. However, the simple act of exhibiting, whether outdoors or indoors, implies the dual exchange of lost meanings and newly acquired meanings, and it is at this moment that the expographic strategy rushes in so that the action of musealization bridges as much as possible the losses of meaning, to which the heritage is inevitably subjected. The museography, in this second "evolutionary step," has from time to time supplanted the object-based display with the concept-based one, favoring the dissemination of a cultural message that affirms the continuity of humankind, the representation of everyday life, reinvigorating the feeling of recovery of the identity of a people in relation to the territory to which it belongs.

- Context with Objects

We have so far expressed how current heritage mise-en-scène operations require the use of a mediation capable of extrapolating, from the objects themselves, all that informational apparatus that refers to their context of origin. Instead, the museographic perspective of the future proposes to provoke rather than instruct, to go beyond the centrality of informational aspects [8]. It is no longer a matter of contextualizing objects, but of showcasing contexts in which objects act as witnesses to "cultural landscapes" placed at the center of the exhibition scene. The focus of the exhibition is no longer the collection, but a new idea of "context" that prefers communities, people, the stories of individuals and specific vicissitudes. In this vision, the museum and exhibits become "interpretive centers," in which the public, caught up in a feeling of identification, participates in and teaches the museum through its own vision and a heightened awareness of the value of its heritage.

Conclusions

Community history embraces all kinds of subjects, as long as they are representative of daily life and appeal to the interests of all members of a community, whatever they may be. In fact, interest can be directed as much to monuments and sites of historical-monumental interest as to architecture, still in use or in a state of disrepair, and archaeological ruins, the entire landscape, customs and traditions, traditions and legends, and so on [9]. Museology and museographic practice come into play with their specific supports, so that heritage, together with the surrounding "cultural landscape", become documents capable of conveying a cultural framework, of being, that is, the real vehicles for the complete reconstruction of past human experiences [10].

Fig. 2: *Objects without context* - Royal Palace of Turin, Archaeological Gallery of "Roman Sculptures" (2023). An example of the so-called "progressive gallery" in which exhibits are placed according to the arrangements of a linear narrative (photo: © Musei Reali Torino).

Fig. 3: *Objects with context* - Musée de la Romanité de Nîmes (2023). The reconstruction of a Gallic house, in wood, deckhouse and stone, composed of two rooms, including around thirty vases and dolia, but also a fireplace (foto: Aldo R. D. Accardi).

Fig. 4: *Context with objects* - Haltern-am-See, Westfälisches Römermuseum, exhibition “Triumph ohne Sieg” (2017). An example of a replacement exhibit for the enhancement of a *Lieu de Mémoire* with which, in the absence of artifacts or material pre-existence, the graphic effects, projections, and lighting system, promote understanding of the narrated events and contextualization of the objects. (foto: LWL/T. Arendt).

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Alberto Loffari Living Heritage in Emergencies: experiments with paper composite elements in Shigeru Ban

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Abstract
Inhabiting the emergency space is an international topic due to continuous natural disasters, also caused by the anthropization of the territories. While it is important to try to prevent these disasters with greater responsibility for behavior, it is also important to start experimenting with the management of emergency contexts to ensure respect for people. This short essay highlights Shigeru Ban's work, an architect who, on the international scene, stands out for the use of construction systems with poor materials (paper and cardboard) for temporary emergency housing and semi-temporary service spaces.

Keywords: Emergency space, Sigheru Ban, PTS, paper composite elements, living heritage

1. Introduction
Inhabiting the emergency space is an international topic due to continuous natural disasters, also caused by the anthropization of the territories. While it is important to try to prevent these disasters with greater responsibility for behavior, it is also important to start experimenting with the management of emergency contexts to ensure respect for people. Surely, this entails a reduction in hardship for people and a resource economy.
This short essay highlights Shigeru Ban's work, an architect who, on the international scene, stands out for the use of construction systems with poor materials (paper and cardboard) for temporary emergency housing and semi-temporary service spaces. Japanese architect born in Tokyo in 1957, he studied in the United States at the Southern California Institute of Architecture and the Cooper Union School of Architecture in New York. If in the American period, he is influenced by the poetics of Mies van Der Rohe, which will shine in his later works in terms of transparency and fluidity of spaces, Japanese culture finds space in the use of geometry for the control of spatial configurations and in the development of technologies. Ban was the founder in 1995 of the NGO Voluntary Architects Network (VAN) in support of civil protection actions, which is distinguished by the wide use of innovative materials mainly cardboard and paper [1]. In 2014 he received the Pritzker Architecture Prize the structures that make him known are especially temporary structures for earthquake victims or refugees around the world. Among the countries where its construction systems have been adopted are Rwanda, Haiti, Turkey, Sri Lanka, India, and Italy [2]. He founded Shigeru Ban Architects (SBA) in 1985, famous for its search for innovative structural solutions. From the website SBA also offers itself as a supplier of the control of the building process, from the architectural design, starting the concept of the initial idea to the building management. This feature facilitates the experimentation of research, with ongoing checks and remedies to emerging issues[3].

2. Design strategies: conception, experimentation, and continuous verification
Ban's design strategy starts from a fundamental need, as he himself reiterates in several interviews, the elimination of waste that translates into attention to recycled materials for waste reduction. In the theoretical operational perspective of the reuse of materials, this objective is linked to environmental sustainability.
His experiments on cardboard structures, from the second half of the 1980s, distinguish him for his circular approach. In fact, he began to use recycled materials, such as cardboard tubes.

The first installations are the beginning of a very careful research on paper material, in which he experiences the application flexibility, load-bearing capacity, water repellent, and fireproof. His way of designing is distinguished by compositional rationality, in order to manage functional needs and control cost and time of construction. Between the 1980s and 2000s, Ban showed an interest in practical research by developing the Paper Tube System (PTS) [4] in Japan in 1993. Shigeru Ban drew up some 60 projects that included the use of cardboard as an architectural material. The nature of the projects varies according to their function (furniture, exhibitions, pavilions, educational and cultural buildings, and rescue), life span (temporary and permanent), and the specific materials used in addition to paper and the types of assembly of the elements. Most designs include paper tubes, but sometimes honeycomb panels are also used [2] [5].
If the topic of housing in architects has always been an opportunity for experimentation, it is for Ban himself (Fig.1). Later, among his references in designing the structures is the engineer Frei Otto with whom he will design in 2000 the Japanese Pavilion for the Expo 2000 in Hannover, Germany [2] (Fig.2). Three of the most significant are identified for several reasons:
-the 1995 Paper church in Kobe which was dismantled in 2005 to be reassembled in Taiwan for the large-scale switch-over (Fig. 3).
- the Japanese Pavilion of the Hanover Expo 2000 for the design process and structural experimentation together with the engineers (Fig.2).
-The work in Italy, in 2009, for the reconstruction of the Conservatory of L'Aquila, devastated by the earthquake that struck the city of Abruzzo in April of that year, an example of the architect in our country and therefore of the possibilities of experimentation and research in Italy (Fig. 4).
The works highlight the adaptability of its structures as demonstrated by the development of an improved version of the temporary housing developed to help people affected by the earthquake that occurred in February 2023 in Turkey-Syria [7]. The new prototype represents an update of the paper tube system distributed in the northwest of Turkey after the earthquake of 1999. This new version considers efficiency issues and the need to minimize construction time on site. Ban also provided the Paper Partition System (PPS) [4] to quickly transform existing buildings into emergency evacuation centers to accommodate earthquake victims.

Conclusion

This design is distinguished, in conclusion, by its suitability for situations that require design flexibility, structural lightness, ease of construction and speed of implementation, low cost, and the possibility of reuse. In addition, the example of Shigeru Ban shows that the mechanical strength of elements in cardboard tubes affects, in addition to time, the environmental context[6]. For this reason, a structural approach is essential that case by case, deepens the resistance of the entire structure exposed to different atmospheric agents to ensure stability and safety[4]. The positive aspect, however, is the intelligent management of material life cycles, including recyclability and eco-sustainable disposal and the availability in a short time to meet the need for living environments for people. This aspect defines their field of application in forecasting emergency management.
However, research and development must continue to overcome their limitations and ensure responsible management in the construction sector.

Fig. 1: Paper Loghouse

Fig. 2: Expo 2000 Japan Pavilion, Hannover

Fig. 3: Paper Church

Fig. 4 Aquila Concert Hall

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Lucio Junior Prisco Synergistic Advancements: Unleashing Innovation via Collaborative Endeavors

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Abstract
Social inclusion and collaboration between third sector operators, inspired by the UN Agenda 2030, are key drivers of sustainable development. In Italy, rural communities, facing challenges such as safeguarding intangible cultural heritage, require targeted projects and networks of operators to maximize impact. Social innovations and community-centered design emerge as key to addressing these challenges and making full use of local resources.

Keywords: Social inclusion, sustainable development, third sector, rural communities, social innovation

1. Section
Social inclusion and the creation of networks between third sector operators at a territorial level represent an important driver for development, with significant implications for the realization of the objectives of the United Nations 2030 Agenda [1].
The United Nations Agenda 2030, adopted in 2015, add a series of Sustainable Development Goals (SDGs) aimed at promoting global prosperity, peace and the well-being of people by 2030. Among these, Goal No. 11 which concerns "sustainable communities" and objective no. 17 which focuses on "partnership for goals", both of which are closely linked to social inclusion and collaboration between local actors.

In Italy, rural communities represent a significant part of the national territory. However, these communities often face challenges related to geographical isolation, lack of resources and socioeconomic inequalities and it is precisely in these cases that social inclusion therefore becomes a key element in promoting national well-being and sustainable development.

Third sector organizations play a key role in addressing these challenges and promoting social inclusion. By collaborating with local communities, these organizations can create programs and projects aimed at facilitating the active participation of residents in local policy-making and territorial development planning.

The creation of networks between third sector operators at territorial level is essential to maximize the impact of such initiatives by allowing the exchange of knowledge, resources and best practices, promoting synergies and reducing duplication of efforts, thus creating a support ecosystem for the sustainable development of rural communities.

Social inclusion is a concept that goes far beyond the mere distribution of material resources. It means ensuring that every individual has the opportunity to participate fully in community life, regardless of socioeconomic background, gender, ethnicity or other circumstances.
By working together and with local authorities, these organizations are able to identify specific community needs and develop targeted strategies to address them. For example, referring to the results obtained by the Lisbon Strategy, the European Union has invested large sums in human capital, entrepreneurial activities and the diffusion of technologies aimed at social innovation, understood as a model for strengthening social empowerment [2], also reflected in the most recent document for the National Recovery and Resilience Plan (PNRR) under the umbrella represented by the 5th point [3], which encourages the opening and development of what are defined as social businesses .

One of the definitions given for social innovations [4] comes from the European Community in which social innovation is defined as "the development and implementation of new ideas (products, services and models) to satisfy social needs and to create new social relationships or collaborations. It represents new answers to pressing social questions, which influence the process of social interactions, and is aimed at improving human well-being. Social innovations are innovations that are social in both their ends and their means; these are innovations that are not only good for society, but also improve individuals' ability to act."

On the basis of this definition we see how the reference framework in terms of collaboration is shifted from the usual company producing or processing material for the purpose of creating a product, to those that are considered Social Cooperatives [5] which place the innovative process at the center human capital, reproducing on a small scale what was defined as the "Network Society" [6] in which multiple individuals participate in an exchange, which is initially defined as egalitarian, of information, be it cultural, artistic or social. This methodology of approach to social problems, which cooperatives often take on, derives from the awareness of being able to implement collective learning in which individuals are relied on as main actors and promoters of innovation.

In this case we go into the specifics of what is defined as territorial innovation (Farrel et al., 1999) [7] as we see how the problems of the territories (such as social integration, insertion into the world of work by people coming from vulnerable groups or even the protection of women victims of abuse) find a response from individual local operators, who implement a participatory process which results not only in physical goods but also of an intangible nature such as the creation of new processes or organizational models. All reported in the first edition of the European LE.A.DE.R project. (Learning And Decision Making Resources) [8], started in 2000 and concluded in 2006, which saw the active participation of citizens, involving rural areas for their improvement with consequent help to the weakest sections of the population.

One of the most interesting models that responds to the definition of the subject of the design action is represented by the "territorial community of practice" (Maffei, Villari 2004) [9]. In this context, members collaborate by sharing their project experiences and passions to develop a territorial innovation strategy customized based on their skills and abilities. These members share knowledge, language and tools necessary to carry out design actions, becoming key actors in a design process. The community in question is therefore configured as a real design community, adopting an approach centered on territorial communities.

The execution of design activities for a community by a community requires a collaborative attitude that involves all the actors of the project, regardless of their social context. These concepts are widely discussed in approaches such as "participatory design" (Greenbaum and King, 1991) [10] and "co-design" (Sanders and Stappers, 2008) [11].

As previously highlighted, the design process to address specific territorial issues is not always limited to the creation of physical and tangible products, but can also concern the development of new strategic dimensions or the formation of collaborative networks. The literature that most of all offers inspiration on the strategic aspects of design is that of Francesco Zurlo, who in a volume of the "Design Strategies" series precisely describes those design attitudes useful to produce innovative products and services within of the organizations themselves. In fact, we see how the author himself refers to strategy as an "interactive and multi-actor process" where the protagonist must possess the ability to "know how to see, predict and show" (Zurlo, 2012) [12] the specific design skills considered essential in collective design processes.

In doing so, the outputs of the design process precisely become those networks of relationships, definition and orientation that characterize a product-service project capable of creating value for the territory and its inhabitants by enhancing local resources. The definition of this network, however, does not remain unchanged from territory to territory, but since it is built precisely on territorial resources, on the intangible values we talked about before, on people and their customs, it takes on different facets, adhering more and more to the concept of user-centred design, or as in this case better defined under the umbrella of community-centred design.

1.2 Subsection

Fig. 1: Impegno del Comitato Centro Sociale ODV e Città Viva per I cortili delle case popolari di via Trento, Caserta.

Fig. 2: Intervento agronomo, Progetto Reumacenter Orto per la cura della fibromialgia a Torre del greco.

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Valeria Cera, Marika Falcone A knowledge system for Micaelic rupestrian architecture in Campania (Italy)

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Abstract
The paper reports on the progress of a scientific collaboration agreement between the University of Naples Federico II and the Diocese of Teggiano-Policastro, focused on the mapping and cataloguing of the micaelic rupestrian architectures in Campania (Italy). The aim is the setting up of knowledge, monitoring, and conservation systems for the assets of this heritage, through the digitisation and manipulation of survey data. The case study of Sant'Angelo a Fasanella (Salerno) is introduced.

Keywords: rupestrian architecture, micaelic culture, hermitages, heritage preservation, 3d survey technology

1. Introduction and state of the art
For the past couple of decades, increasing attention has been paid to the knowledge and protection of rupestrian architecture, aided by the inclusion of many sites in the UNESCO World Heritage list [1].
It is a particularly significant type of architecture because it describes Man's life choices in his evolutionary history [2] as well as the changing solutions and techniques formulated by human ingenuity to make natural cavities suitable places to host different forms of activities [3]. Undoubtedly, the cultic use of rupestrian hypogea characterises most architectures [4][5], which have been profoundly intertwined since archaic times with the rituals and spiritual needs of specific religious faiths. Within this framework, Christianity offers notable examples, many of them linked to the cult of St Michael the Archangel [6]. These are extremely typified rupestrian architectures, whose fascination is amplified by the spread of the micaelic faith throughout Europe with a geographical location of the most important sites according to imaginary, but rigorous traces known today as the *Sacred Way* (Fig.1). Beyond the religious faith, however, what all examples of cave architecture have in common is their status as a true Cultural Heritage, given both by the wealth and variety of artistic and architectural works that distinguish them, and by the intangible value enclosed in the rock walls. At the same time, it is a particularly fragile heritage because its close relationship with the natural element that generated it also determines its being exposed to various factors of deterioration, especially linked to microclimatic conditions and their variations [7][8][9]. Based on these considerations, the research presented here was defined, which is part of a scientific collaboration agreement between the Urban\Eco Interdepartmental Research Center of the University of Naples Federico II and the Diocese of Teggiano-Policastro (Campania, Italy). The study is oriented, in a first phase, to the mapping and cataloguing of the architectures dedicated to the cult of St. Michael located in the Campania region, to reach, in a second phase, a detailed analysis of some exemplary cases for which to prepare appropriate knowledge, monitoring, conservation and protection systems through the digitisation of the asset. (M.F.)

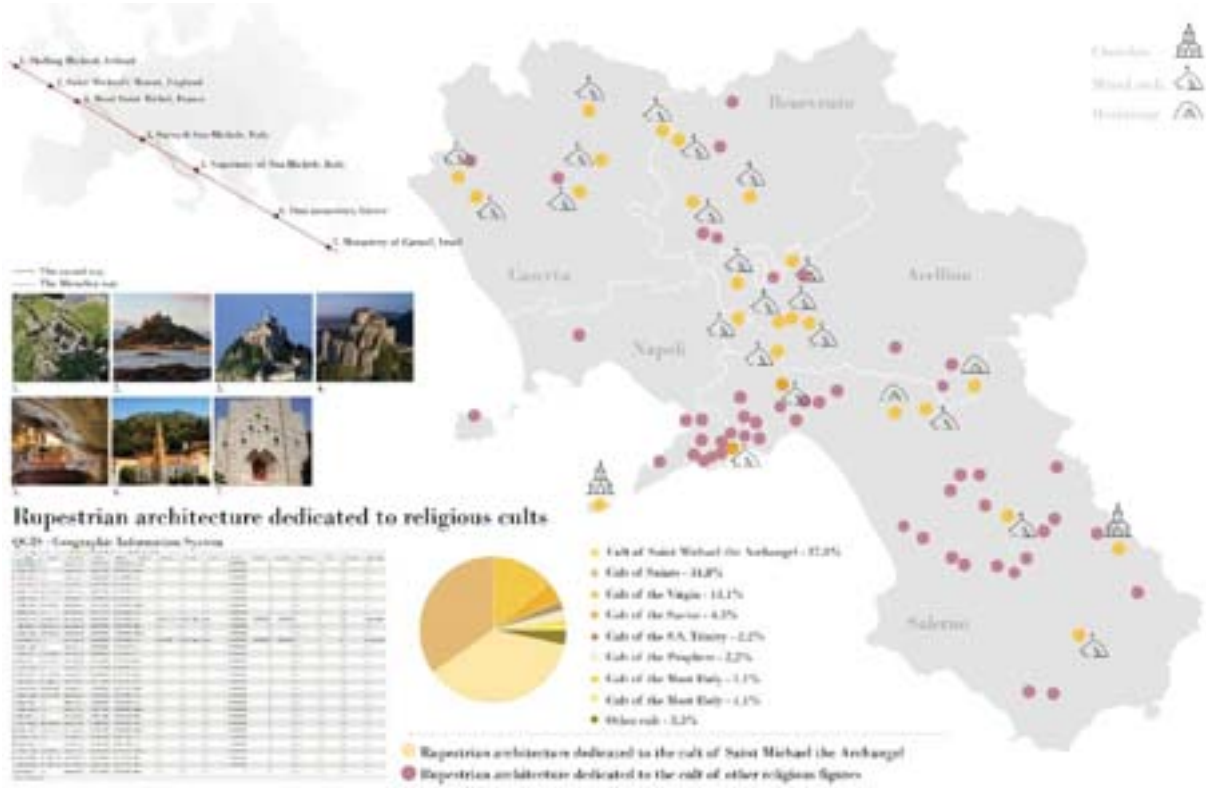

Fig. 1: The *sacred way* and mapping religious rupestrian architecture in Campania region (Italy). Image by the authors.

2. Methodology and first results

The study of the cultic rupestrian architectures present in Campania began with an initial classification and mapping of them in GIS, distinguishing 4 types (Fig.2): (i) churches, places specifically dedicated to Christian religion; (ii) chapels, small places of worship, isolated or dependent on a more complex architectural organism; (iii) sanctuaries, places of devotion linked to miraculous events or manifestations, or parts of churches where relics or sacred images believed to be miraculous are preserved; (iv) hermitages, isolated places to which one or more individuals originally went to lead a life devoted to prayer and contemplation; with the addition of a fifth category (v) for mixed architecture.

The cultic use of the cave led Man to the creation of a number of small architectural artifacts to shape the nature of the rock to liturgical needs so that it was possible to find recurring elements distinguished in (Fig.3): (i) cave paintings, depicting an iconographic repertoire; (ii) altars, the number and type of which varied depending on the size of the cavity and the financial availability of the patrons; (iii) staircases, created by modelling the rock walls; (iv) brick aedicules, mostly located near the altars and decorated with sacred images; (v) graves of famous and not-so-famous people, the presence of which can be traced back to the predominantly funerary and private vocation of the places of worship; (vi) hermitages, symbolising the increase in the phenomenon of hermitism that occurred in the post-Tridentine age.

With reference to religious faiths, the research, in line with parallel initiatives [10][11], verified the predominance of the devotion of the hypogea to Saint Michael, focusing specifically on the hermitage typology, given that, from a typological and morphological point of view, it is the most significant, having maintained a close link with the natural component of the rock. The relationship with the cult of the Archangel defines the presence in the rocks of a further characteristic element consisting of the baptismal font which, in addition to being destined for devotional uses along the lines of the Gargano grotto, took on the practical function of a water collection basin and a reservoir for watering pilgrims.

Once the above-mentioned framework was in place, the study is focusing on a few exemplary cases identified, at the current state of research, in the hermitage of San Michele a le Grottelle (in Padula, Salerno) [12][13][14] and the hermitage of Sant'Angelo a Fasanella (Salerno). The second case study is introduced here, which is particularly interesting as it is part of the Vallo di Diano, a UNESCO World Heritage Site.

The research, in progress, started with the preparation of a historical analysis as well as the definition of a digitisation campaign of the hermitage. The artefact is notable (Fig.4): firstly, its planimetric configuration reveals a remarkable articulation, complexity and surface extension when compared to other rupestrian architecture in Campania. The presence of tunnels and gathered areas reveals an

interesting use of space that the current survey is bringing out in a new key, also in comparison to previous surveys. Moreover, the extremely naturalistic and wild aspect of the site is highly suggestive, especially regarding the exterior, where only the entrance suggests access to a cave, perfectly hidden in a rock wall that has remained intact in its consistency and nature. Finally, the remains of a Benedictine building at the base of the cave reveal historical and liturgical connections that have conditioned the architecture and statics of the cavity and that the survey in progress is analysing. (V.C.)

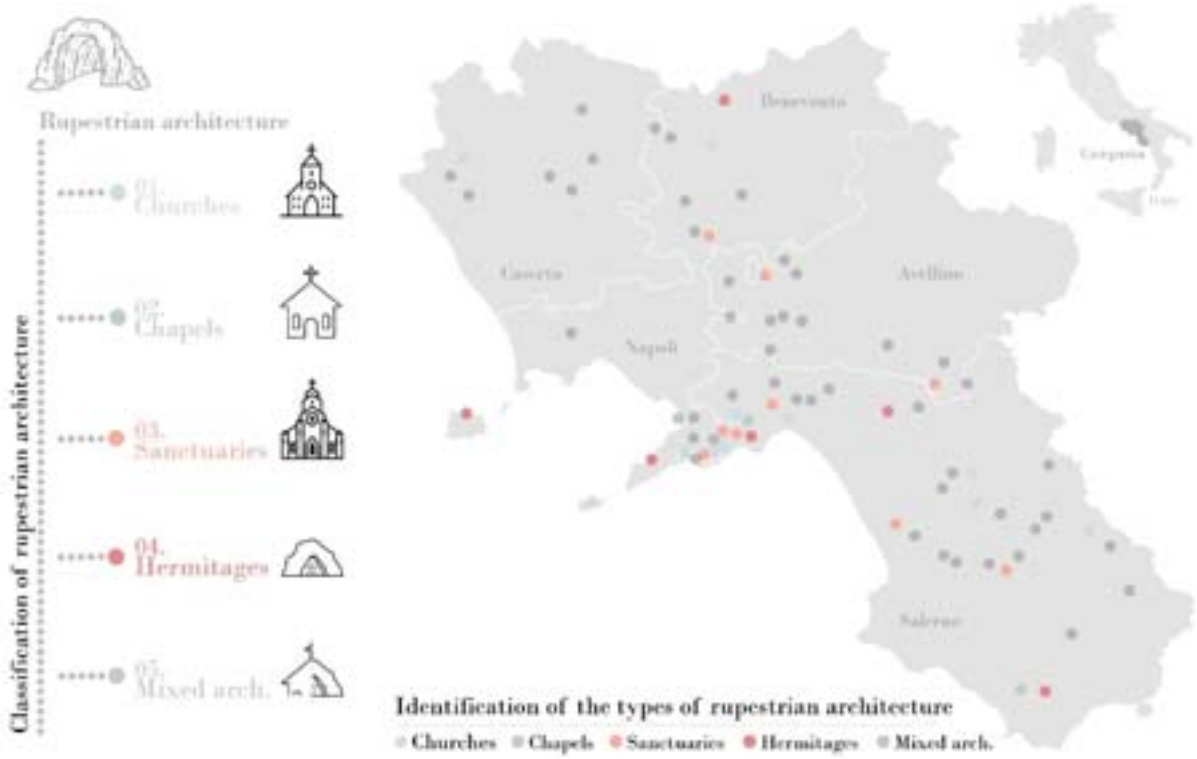

Fig. 2: Classification of rupestrian architecture and its distribution in Campania region (Italy). Image by the authors.

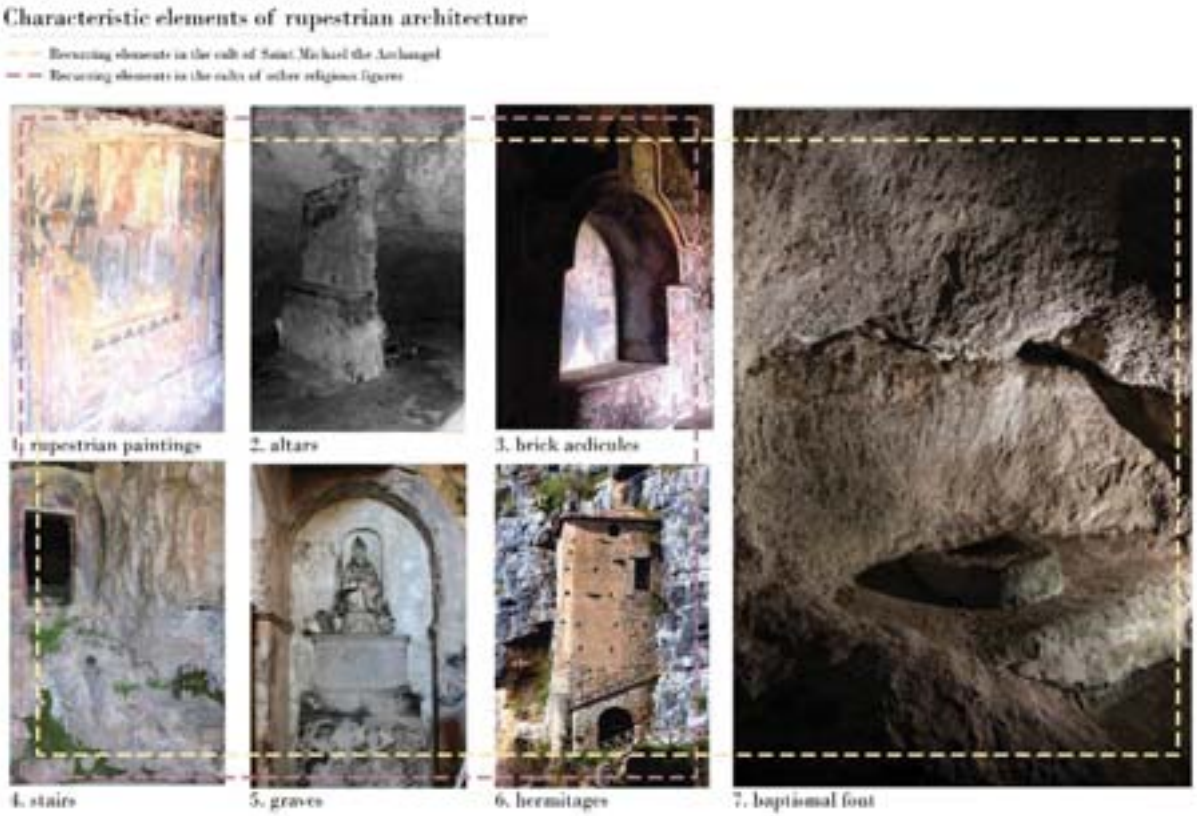

Fig. 3: Recurrent elements of rupestrian architectures. Image by the authors.

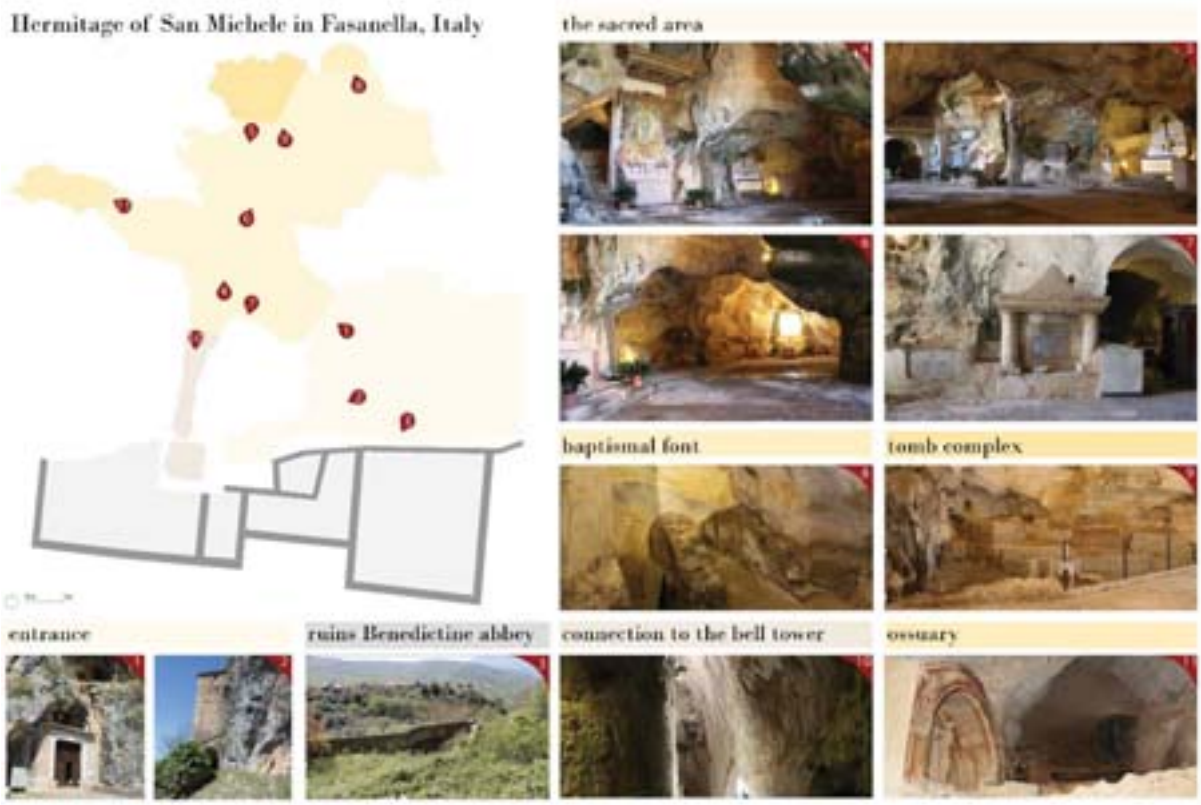

Fig. 4: Hermitage of Saint Michael in Sant'Angelo in Fasanella (Salerno, Italy). Image by the authors with Francesca Della Corte.

3. Conclusions and future developments

The research, as mentioned above, is in progress and aims to systematise knowledge on the hermitages dedicated to the Micaelic cult, located in Campania, through the indexing and cataloguing of the assets of this heritage and their networking. The ultimate objective is to safeguard Campania's micaelic rupestrian heritage through the setting up of specific preventive conservation and restoration programmes. To this end, some cognitive actions have already been initiated for specific examples such as the hermitage of Sant'Angelo a Fasanella. The process planned focuses on the digitisation of artefacts and the manipulation of survey data for the extraction of informative descriptors capable of guiding the most appropriate conservation and preservation choices, as was done for the first case of the Grottelle. The approach aims to be provident of subsequent developments, aiming to configure an analysis aimed at the search for invariants that manifest peculiarities or common wills to characterise specific forms in a typological family that is much broader in its declinations, with contents of the highest historical and cultural value. (V.C., M.F.)

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Noemi SCAGLIARINI Reconstructing Urban *Heritage*: Carlo Aymonino's Vision through the Paganini Theatre Project in Parma

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Abstract
The interactions between humans and the environment have always shaped architecture, the city, and the landscape. Over the centuries, climate changes, human activities, and technological evolution have shaped the form and function of our built and natural spaces. The past has left us with a wealth of architectural, urban, and landscape heritage that now constitutes the collective memory of our communities.

Keywords: Urban design, Urban context, Cultural heritage, Carlo Aymonino, Paganini Theatre.

1. Introduction
If the present requires us to rethink our approach to designing and managing built and natural spaces, the future presents an even greater challenge. We must address ongoing climate changes while preserving and enhancing our cultural heritage. The preservation of architectural heritage becomes an opportunity to experiment with new solutions, emphasizing the characteristics of contemporary architecture in the dialectical relationship between the old and the new. This concept underscores the importance of architecture capable of engaging critically and consciously with existing architectural heritage and the urban context in which it is situated. The goal is to create a virtuous dialogue between the past and the present and open new prospects for the future of the city. In this regard, an attentive and sensitive approach to the urban context and preexisting architectural heritage is of fundamental importance. The objective is to strike a balance between conservation and innovation, valuing the complexity and diversity of a city's historical and cultural heritage.

1.1 Project
Carlo Aymonino's project for the competition to reconstruct the Paganini Theatre in Parma opened in 1964 with the aim of restoring the Reinach Theatre, later Paganini, which was destroyed in the 1944 bombings, offers interesting insights for addressing current and future challenges related to cultural heritage. It demonstrates how it is possible to reconcile innovation with respect for the history and culture of a place by configuring a city that expresses the intrinsic sense of the locations, as is the case with historic city centres. Many of Aymonino's projects address the theme of urban fragmentation and the reconstruction of historic city centres. This theme originates from a crucial point: the absence of a unified vision for the city has led to a transformation, not of the entire city but rather of its individual components. As Manfredo Tafuri states in "*Teorie e storia dell'architettura*" (1988), this transformation originates from the moment the city loses a unified plan. In addressing this issue, Aymonino followed a design methodology deeply tied to the urban context. The destruction caused by the devastating bombings that struck the Pilotta in 1944 further solidified the current image of the Pilotta as a grand "ruin" located in the heart of the city. During those events, the bombings nearly destroyed the Ducal Palace, the Farnese Theatre, and the Reinach-Paganini Theatre. This situation remained unchanged until 1964 when, upon the recommendation of Ignazio Gardella and Bruno Zevi, a competition was announced to rebuild the Paganini Theatre. Over the centuries, in various projects, the system of open spaces between buildings emerged as a highly relevant element, serving as a generative force in shaping this part of the city. This aspect forms the foundation of Aymonino's project, as he himself suggests in the manifesto drawing (Figure 1). In this drawing, you can find the plan derived from the 1767 Sardi Atlas (Table XI, La Pilotta, the Royal Palace, and adjacent areas) and the area designated for the reconstruction of the Prefecture

Palace, as established by the new ministerial decree in 1958. The manifesto drawing is enriched with historical photographs of the locations, showing the overpass perpendicular to the Regio Theatre before and after its demolition, the Prefecture Square, and the Reinach-Paganini Theatre. The drawing reveals Aymonino's deep sensitivity to the crucial phases of the history of this part of the city. The idea of stratification in the historic city and its inherent complexity will be a fundamental element in the conception of the theatre project. The 1767 plan takes on significant importance in the drawing as it highlights a key moment in 1766 when several buildings in the area were demolished. These demolitions were carried out to enable the implementation of Alexandre Ennemond Petitot's project for the new Ducal Palace. By incorporating the plan into the drawing, Aymonino underscores the continuity and the ambition of morphological reconstruction in the new theatre project. The history of urban stratification is further illustrated by a second plan dating from 1851, outlining the Pilotta area in its condition before Petitot's project (Figures 2-3). In this plan, areas subject to demolitions in 1776 are highlighted in yellow, including the Dominican Church, which was an integral part of the Pilotta Palace complex. It is also possible to identify the four squares, representing a spatial configuration that the designer intends to restore through the placement of the new theatre. Subsequently, in the book " *Piazze d'Italia. Progettare gli spazi aperti* " we find a planimetric sketch created by Aymonino (Figure 4). In this drawing, the theme of open spaces as generative elements is clear, reconstructing the four squares and reconfiguring the situation to match that of 1776, as previously anticipated in the manifesto drawing. The drawing prominently features the use of adaptive geometry and emphasizes the importance of pathways, indicated by circular elements and arrows. The development of the project follows a logical sequence, starting with the urban analysis of the preexisting city and culminating in the reconstruction of two public squares. The project takes shape based on two guidelines: the Pilotta and the Prefecture, with their overlapping resulting in the theatre, various halls, and an art gallery. The extension of the Farnese corridors creates two rectangular shapes at their intersection, and in this point of convergence, Aymonino places the theatre hall. In his book, he adds three more new diagrams (Figure 5), further reinforcing what has been previously discussed regarding the project's genesis. Once again, he considers the stratification in the history of the historic city, the various urban transformations over time, and its complexity.

1.2 Conclusions

Through the restoration of the spatial condition of the four squares in 1776, Aymonino's project stands as an emblematic example of "making new interventions an opportunity for the restoration and recovery of preexisting historical parts" (C. Aymonino; *Piazze d'Italia. Progettare gli spazi aperti*, Milan, Electa, 1988). This project works on the theme of urban fragmentation through the design of open spaces and seeks to achieve formal completeness through an operational methodology that aims to make the project a means for completing the urban city.

Fig. 1: Competition Drawing.

Fig. 2: A.E. Petitot, Project for the New Ducal Palace, 1766. From: Teca Digitale Biblioteche del Comune di Parma.

Fig. 3: Iconographic Plan of La Pilotta and Adjacent Buildings, 1851. From: C. Aymonino; Piazze d'Italia. Progettare gli spazi aperti, Milan, Electa, 1988, p. 23.

Fig. 4: "Planimetric Study" of the Placement and Open Spaces with a Perspective View. From: C. Aymonino; Piazze d'Italia. Progettare gli spazi aperti, Milan, Electa, 1988, p. 23.

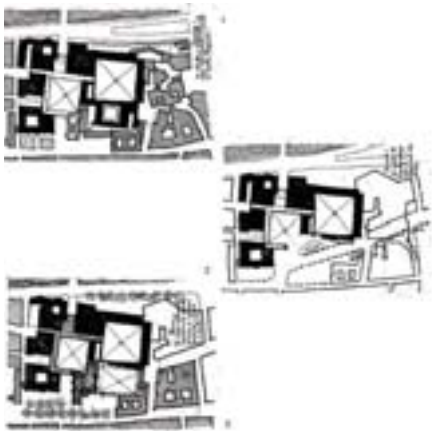

Fig. 5: Historical-Functional Study Plans." From: C. Aymonino; Piazze d'Italia. Progettare gli spazi aperti, Milan, Electa, 1988, p. 25.

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Michele Mario Truosolo Cultural Heritage: between architecture and urban planning

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Abstract
Cultural heritage connects the past and future via historic structures, art, and traditions. Architects, urban planners, and communities collaborate for its preservation. Cities like Kyoto and Rome showcase heritage preservation amidst modernization. The Mother Church of Salemi and the San Domenico Convent project exemplify this shared responsibility to enrich our cultural heritage and shape the future.

Keywords**: Heritage, Community , Urban planning , Reuse.**

1. Introduction
Cultural heritage represents a vital part of our identity and history. Historic buildings, works of art, thousand-year-old traditions and archaeological sites constitute a precious fabric that connects past generations to future ones. This heritage is often intertwined with architecture and urban planning, as cities themselves are living testimonies of culture and history. In this text, we will explore the importance of cultural heritage, the role of architecture and urban planning in its conservation, and the integrated approach needed to preserve our cultural heritage.
Architecture, especially historic buildings, plays a central role in the preservation of cultural heritage. Ancient buildings are not only physical testimonies of the past, but also artistic and cultural expressions. Their design, renovation and current use can profoundly influence our understanding of heritage and culture.
Urban planning plays a crucial role in the conservation of cultural heritage in cities. Zoning, transportation, and urban development decisions can contribute to the preservation or destruction of historic sites. Sustainable urbanism is essential to balance modern needs with the preservation of historic heritage.
An integrated approach involves architects, urban planners, conservators and local communities in the conservation of cultural heritage. This approach seeks to find solutions that respect the past, but that are also functional and sustainable for the present and future. Collaboration is the key to success in this shared effort.

1.1 Examples of conservation and reuse
Numerous projects around the world demonstrate the effectiveness of an integrated approach to the conservation of cultural heritage. From the ancient city of Kyoto in Japan, which has managed to preserve much of its authenticity, to the historic heart of Rome, on which Carlo Aymonino intervened during his office as councilor for interventions on the historic center of Rome, marking a turning point in the way of use and experience the historic center. These examples show how it is possible to preserve cultural heritage while developing modern cities.
Another architect who dealt with this theme was Alvaro Siza, with the project of the Mother Church of Salemi, where the elements of the latter, remained intact in the post-earthquake period, they are recovered and enhanced by marking an open external common space, such as a square within the existing square.

1.2 The cloister as a square

Based on these same principles, a design experiment was born in Aversa (CE) with the Convent of San Domenico as its protagonist, founded by King Charles II under the pontificate of Nicholas III in 1278, which is currently in a state of abandonment. The idea is to integrate the complex into the urban fabric, making the ground floor accessible on all sides, with the cloister which could be a dynamic space, for passing through or stopping, in support to the open space in front of the church.

1.3 Conclusion

In conclusion, cultural heritage is an invaluable asset that enriches our understanding of the world and our cultural roots. Architecture and urban planning are powerful tools for its conservation, but require an integrated approach that balances past and present. Preserving our cultural heritage is a shared responsibility that will shape the future of our cities and cultures.

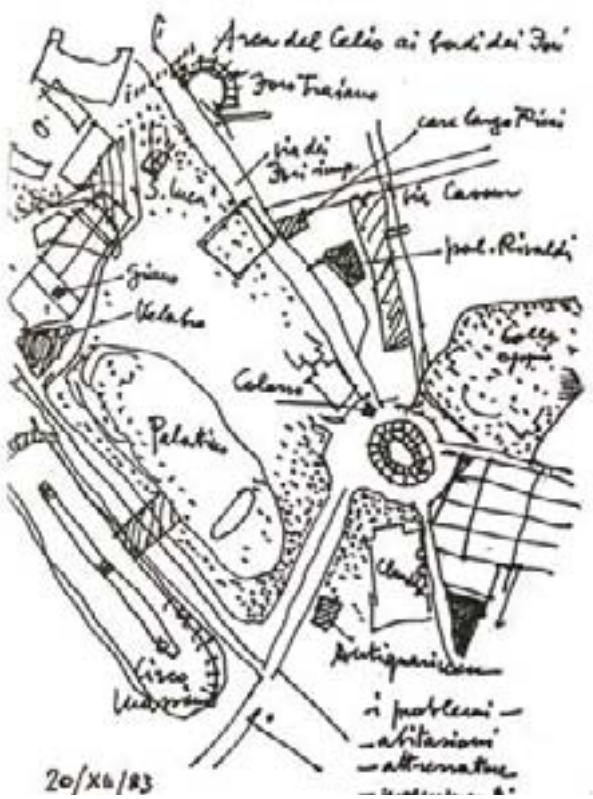

Fig. 1: Carlo Aymonino, Sketches for Ancient Rome, 20/XII/83.

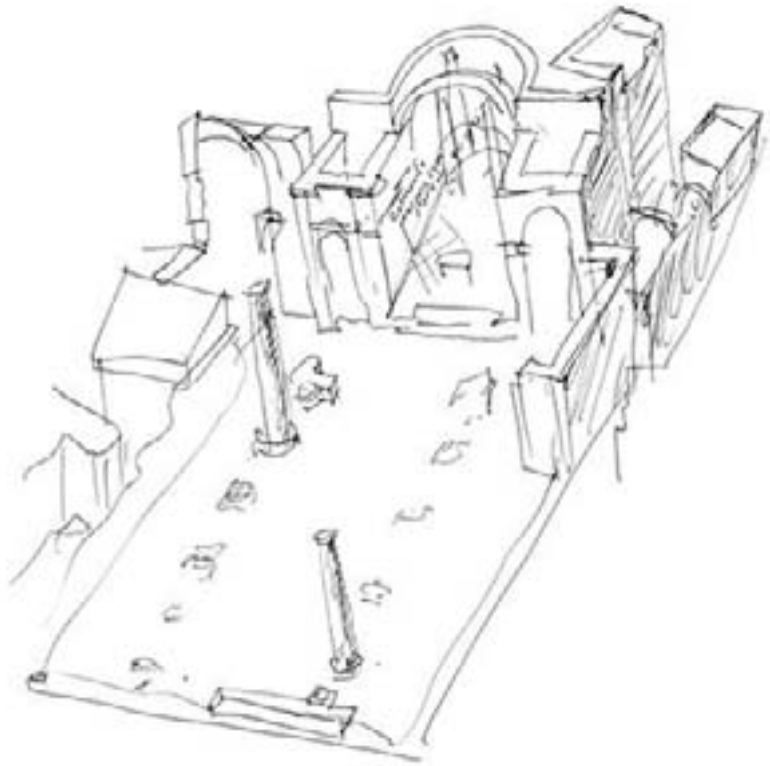

Fig. 2: Alvaro Siza, Sketches for Salemi, 1987

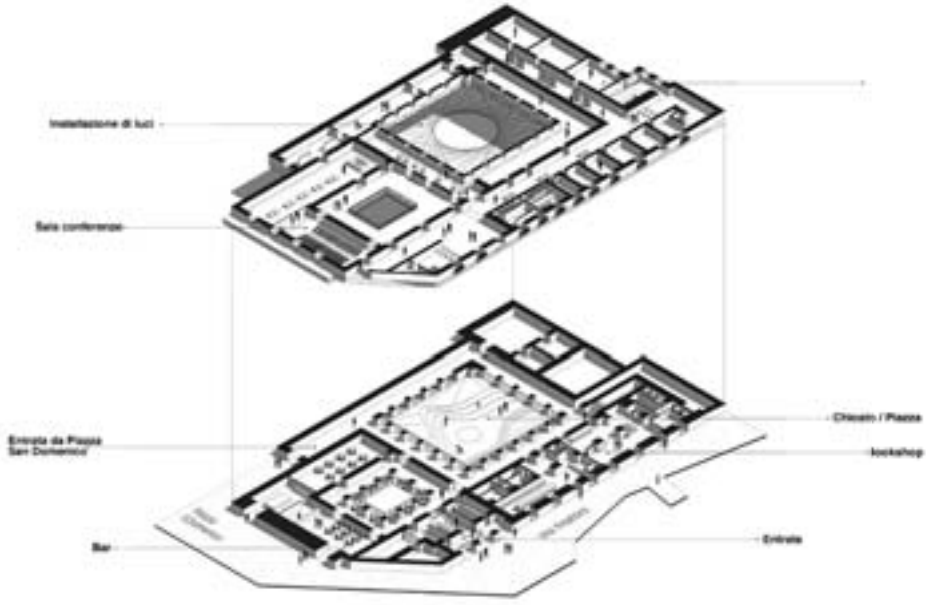

Fig. 3: Exploded view of the project for the Convent of San Domenico in Aversa (CE) (project by Truosolo Michele Mario, Antonio Zitiello and Mariateresa Argiento)

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Rosaria Parente Design and Bim for the management of hospitals

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Abstract
In this historical moment, we have witnessed the continuous globalization that makes geographic boundaries effective and increases the ease of contamination necessary for the dissemination of news, people and viruses, prevention with the application of multidisciplinary scientific research becomes of fundamental importance. In the field of design and planning, a valid tool for the management of hospitals and nursing homes is the Building Information Modeling in which numerous skills are used to create works that respect the environment and human health, with a control looking to the future.
With this in mind, the paper be inspired by research carried out in the context of the tutoring activity for the drafting of some theses and, in particular, of the thesis concerning an nursing home. Particular attention had been dedicated to ventilation and air conditioning systems inside hospitals which are very complex and dynamic environments in which indoor air plays a fundamental role, precisely for the possible correlation with any pathological changes generated by the stay of both patients and health professionals. The study involved the analysis of the design components, regulations, general characteristics of the systems within the hospital areas and specific within the individual departments that require special adaptations such as operating rooms, magnetic resonance or intensive care.
Starting from the description of the building and its configuration on the various floors, the attention has focused on the composition of the operating block and its characteristics, from a plant engineering point of view and specific requirements such as ducts, delivery and return vents, filters and air handling units. The same analysis was reserved for the magnetic resonance department, with a description of the parametric design and intelligent objects.
The concrete realization of the BIM model has been the object of attention, both from an architectural and plant engineering point of view.
The topic addressed becomes more relevant if one thinks of the great utility and improvement in terms of design efficiency given by the use of BIM in the hospital field; just think of the great advantages that derive from it in the case of managing the structure over time and the possibility of reorganizing the spaces in case of particular conditions such as those that the world has been facing in the last period.

Keywords: BIM, contamination, design, MEP

1. Clash-detection to checking interference

As is known, in the BIM management software, the designer can design the building from a three-dimensional point of view, with each element parametric, starting from the creative and conception phase of the project and continuing for all its subsequent phases, from the executive project to the actual construction on site.
But one of the most important aspects of BIM is the management and use of data, which over the past few years has been done through the so-called clash detection or "collision detection".
Through the clash detection it is possible to combine in a single model the different projects deriving from the different disciplines, architectural, plant engineering and engineering, in order to predict the collision points between the projects. Through this system, therefore, it is possible to anticipate the critical issues that would arise in the construction phase, avoiding the exorbitant costs of corrections

and variants. Think also of the great possibility given by this tool when reorganizing spaces in hospitals and nursing homes where the plant engineering part plays a role of primary importance.
Keeping the hospital healthy means managing air conditioning in the best way possible, so that the internal air is properly ventilated, heated and conditioned in a controlled way. It is well demonstrated in the reference medical literature, in fact, that nosocomial or blood infections have drastically reduced today with a consequent lower death among patients, thus arriving to guarantee an optimal level of assistance and treatment with hospitalization and hospitalization times shorter.
All this has been achieved thanks to a renewed and better management of the air, controlled in terms of contamination by means of air conditioning systems designed and customized to meet all those requirements to guarantee the best performance and environmental conditions, taking into account the fact that the patients themselves represent one of the first sources of contamination.
A good air conditioning system serving a healthcare facility should have: redundant-parallel systems, diversified generation systems, radiant systems for summer and winter air conditioning of hospital stays, leak and temperature control system that covers the entire distribution network, cable ducts technicians who allow serious maintenance, an Air Treatment Unit (AHU) with variable flow rate according to the presence in the environment, use of the stand-by, optimization of regulation and control systems that take into account real needs, metering units in the various departments to monitor thermal and refrigeration consumption.
In plant management, the clash dection tool plays a fundamental role and is divided into three levels of analysis:
There is the Hard Clash which consists of basic plant engineering and is considered the most common clash. It develops when two objects are physically in conflict with each other: the example consists of an air conditioning duct that crosses a beam. Usually it is required that these clashes are always resolved in the model, right from the Concept phase. In fact, they are usually solved by moving one of the two elements directly.
The conflict can also be resolved by replacing one of the elements with another. This is the case of the Hard Manageable Clash, which materializes when a conflict is resolved in the implementation phase. An example of a school can be the simple replacement of an air conditioning duct with a flexible sleeve. In this hypothesis, however, an alteration of the model (with the relative replacement of the component) is necessary and it is advisable to keep the signaling alive by affixing a mark. Then there is the Clearance Clash, otherwise known as Soft Clash, which occurs when two objects do not physically penetrate each other, "but their proximity is such as to make assembly and / or maintenance impossible or excessively difficult."
The examples can be represented by a groove for false ceiling lighting, which does not offer the possibility of mounting or replacing the relative lamps, or of a glass that causes difficulty in being clean, of a profile that is not possible tighten. Usually this type of conflict is resolved in the Schematic phase or in the subsequent Design Development phase.
The elimination of these conflicts is very difficult. Furthermore, with regard to almost all plant engineering disciplines, tolerance spaces are required to be modeled, using the BIM coordinator tool.
Another complex category of clash is 4d or Workflow Clash. It is a type of "temporal" conflict and occurs when two objects in the building are designed to generate collisions or overlaps during the assembly phase.
The resolution, in general, should be entrusted to the designer, but it is often physically entrusted to the works manager, involving information that is not present in the model, such as the entry routes of the goods, or the places where the materials are stored. The so-called "Collision Level" transversely overlaps all the aforementioned categories of clash, which determines when and how the different types of clash must be solved by the different disciplines. In this sense there are several levels:
- Level 1, with maximum criticality, must be resolved immediately within the model.
- Level 2, highly critical, can also be resolved during the coordination meeting.
- Level 3, includes important but constantly evolving collisions, which are physiologically resolved only at the end of a phase.
It should be remembered, in this sense, that the categories shown are applied to a collaborative BIM, a situation in which the model is shared on a regular basis between the different disciplines.

2. Facility management for the building's maintenance

The efficiency of the real estate assets passes through a correct management of the so-called facility management which deals with the management of buildings and their systems and services such as electricity, gas, plumbing, lighting, cleaning, catering.
As the expert in Bim and Facility Mario Caputi explains: "… the design model (BIM) evolves into the construction one (Product Information Management, PIM) and ultimately into the management one (Asset Information Model, AIM) throughout the life of the project, going to be enriched with information and data useful to the facility manager in his asset operation and maintenance activities ".
In this regard, it is essential to apply the principle of "Begin with the end in mind", establishing a strategy and a series of requirements that, upstream, define a path capable of guaranteeing the success of the work.
The concentration of the Bim in the management phase determines in the latter a real use as a simulation, planning and implementation tool for the facility manager, thanks to the three-dimensional approach related to the parametric objects of the environment, representing a valid tool to ensure data control and interoperability in an intelligent way.
The aim of this tool is precisely to simplify the design complexity to determine a more functional model for building management, with a structure that can be implemented in the different phases so as to guarantee an As - Is / As - Built of the building, with the significant data needed for FM, in an updated, coherent and reliable database.
In light of the foregoing, we could definitively clarify the advantages of applying BIM in Facility Management:
Internal communication improvement. The BIM model, as it is rich in information, facilitates communication between all stakeholders and prevents any misunderstandings. It is also a "healthy bearer" of improvements and best practices which the end user, together with a possible property, can only benefit from.
Maintenance phase improvement. By accessing the detailed information contained in the BIM model, maintenance programs are drawn up and implemented in a simpler and more direct way. Product information stored in BIM models, populated with real manufacturer-specific BIM objects, can earn facility managers months of work, creating carefully populated maintenance systems complete with information.
Improvement of life cycle management. In a BIM model, assessments on the Life Cycle Cost should be a rule as well as a rule of law, Art. 96 Legislative Decree 56/2017. This helps owners make informed buying decisions and understand where their money can be used wisely. Sometimes products that seem expensive are actually the cheapest long-term choice. With a BIM model, an adequate analysis of Minimum Environmental Criteria can also be carried out and give rise to evaluations of circular economy of materials.
Improvement of the use of space. The BIM model allows Facility Managers to understand exactly how all the space in a property is used. Proper space management is an effective way to reduce expenses and prevent waste.
Safety improvement. The BIM model allows a better analysis of the behavior of the crowd and, as regards safety measures, a better optimization of fire-fighting, evacuation or safety systems and related signs. BIM models developed with specific objects can make it easier to optimize and position the signs for public safety.

3. Project management through the BIM

The presence and importance of air conditioning systems in hospital buildings is crucial: in the absence of an adequate air conditioning system, an efficient hospital building cannot exist. Without air conditioning it is in fact impossible to maintain an acceptable level of well-being for patients and operators. The heart of HVAC (Heating, Ventilation and Air Conditioning) is represented by the technological unit, which must be inserted inside a structure detached from the central body, where all the main backbones of the mechanical and electrical systems are housed.
It is important to highlight how the air conditioning system of hospital structures cannot be considered as a stand alone but its design must integrate with the overall design of the work in order to create a healthy and comfortable environment contributing to the well-being and recovery of the patient health.
The hospital is, therefore, to be considered as a complex and constantly evolving structure linked both to the development of medical knowledge and to possible variations in the need of users which could lead to an adaptation of the intended use of the various environments and consequently of plant engineering equipment.
It is therefore necessary to be able to modify implants according to new needs, making the approach to these changes quick and easy, minimizing interference with medical activity.
The development of the project must be carried out on different levels and by multiple professional figures in order to verify all aspects and the way in which they can interact with each other. BIM models,

being intelligent models, they are able to establish relationships with all components in order to have an integrated project that facilitates the exchange and accuracy of the information provided. All the "protagonists" of the process, whether they are architects or engineers, can operate according to their competence on the architectural, structural or plant engineering level by exchanging common information during the entire project phase.
In the field of plant design, the reference model is known as MEP (mechanical-eletrical-plumbing) and contains all the necessary plant references. Through the MEP it is possible to carry out all the design levels allowing immediate feedback in the future while ensuring ease of updates and variations, with relative influences on the schedules of the systems.
The choice to use BIM models is dictated above all by the countless advantages including increased productivity. In a 2013 study conducted by Mc Graw Hill Construction, it can be seen how the use of BIM increases productivity on all three categories of MEP (mechanical, electrical and hydraulic) compared to when it is not used.
A further advantage given by the use of the MEP is the possibility of being able to export, import and create links with other applications thanks to the variety of formats (dwg, dwf, dxf, dng, ifc, gbxml). By exporting the building data in gbxml format, it is possible to use it in energy calculation applications in order to verify whether the project is sustainable. Furthermore, it is possible to test, immediately and without leaving the BIM environment, the performance of their design thus eliminating the timing of data transfer in other applications.
The possibility of having a plant model that is developed contextually with the architectural model associated with it allows to obtain a coherent and reliable model. Using the BIM model, it is possible to create a database of data to manage in a univocal and centralized way all the information of the project which allow to guarantee an accurate future plant management improving the efficiency of the maintenance of the single components of the plant.
The advantages of using the BIM methodology can be observed in all phases of the work from the phase prior to construction to maintenance of the same.
In conclusion, in a complex structure such as the hospital one must take into account all the interconnected needs that involve not only the design part but also the health of the people, the well-being of the medical staff, the suitability of the spaces, the medical equipment and systems. that must be at the forefront.
In addition, all the precautions that lead to an eco-sustainable design that necessarily passes for energy and economic savings must be adopted and in this context it is convenient to rely on a technological system, BIM, which allows all the people involved to exchange and have access information with ease and being able to perform real simulations.
boast a system of technologically advanced equipment and stands at the forefront in this sector.

4. BIM model

The realization of the BIM model of the Nursing Home Città di Bra has like aim the digital return of the entire complex in all its parts to obtain a model that can be managed by a designer for any improvement that may be necessary in the future.
The created model can be defined as intelligent as it is capable of transmitting information related to the geometry of the object and the physical and construction characteristics of the material. The information connected to the model makes it "questionable" by selecting the various construction elements such as the wall or one of the plant elements inserted.
Each element of the BIM model has a one-to-one correspondence with that of the real object detected without inconsistencies or ambiguities and this allows a perfect linearity in the passage of information between the real building and the one being modeled.
The various elements of the model are mostly parametric and can be modified according to specific values entered, thus adapting to the variability that is closely linked to an existing object.
The realization of this model allows that in the future the same can be used by all those who want to work on the project.
The approach that has been used to create this model is the "traditional" one, that is, to pass from the data acquisition phase to the graphic return phase through on-site surveys and return them in vector drawings through CAD software.
The drawings, supplied in dwg format, were imported by the graduating student, into a BIM modeling software, specifically REVIT to set up and create the model through architectural modeling in order to operate directly with walls and architectural floors.
The walls were layered with internal and external plaster, while the central brick was also inserted for the partitions. The areas of the elevator shafts were built with reinforced concrete walls.

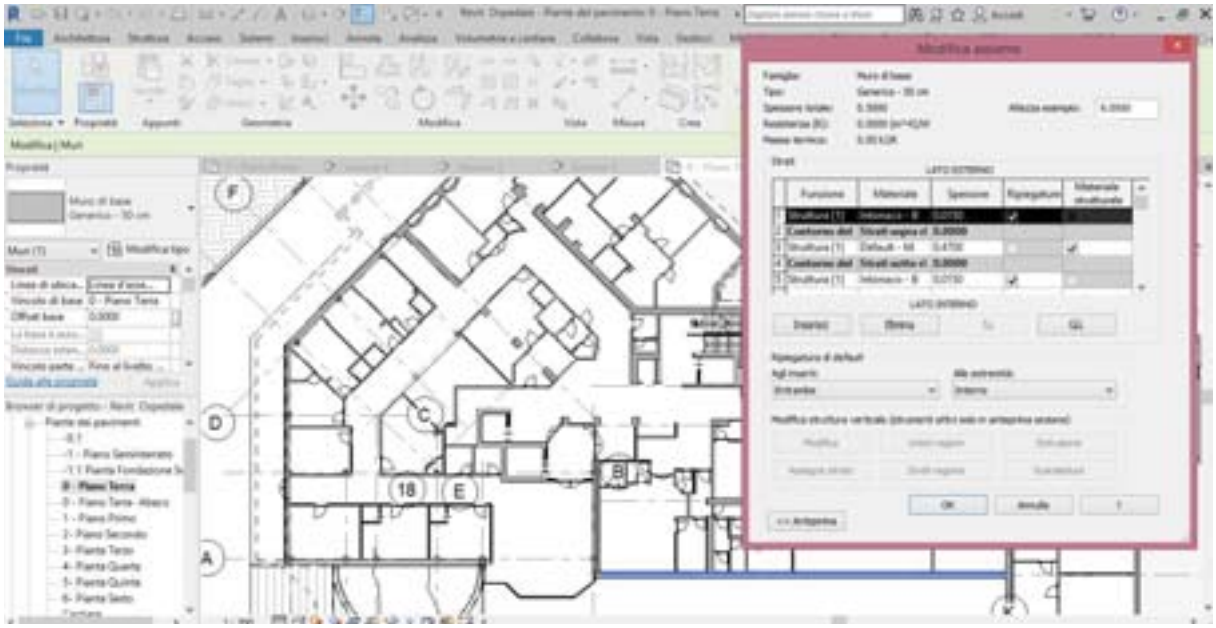

Fig. 1 Detail of the 50 cm masonry

The metal structures are made with steel HE beams.

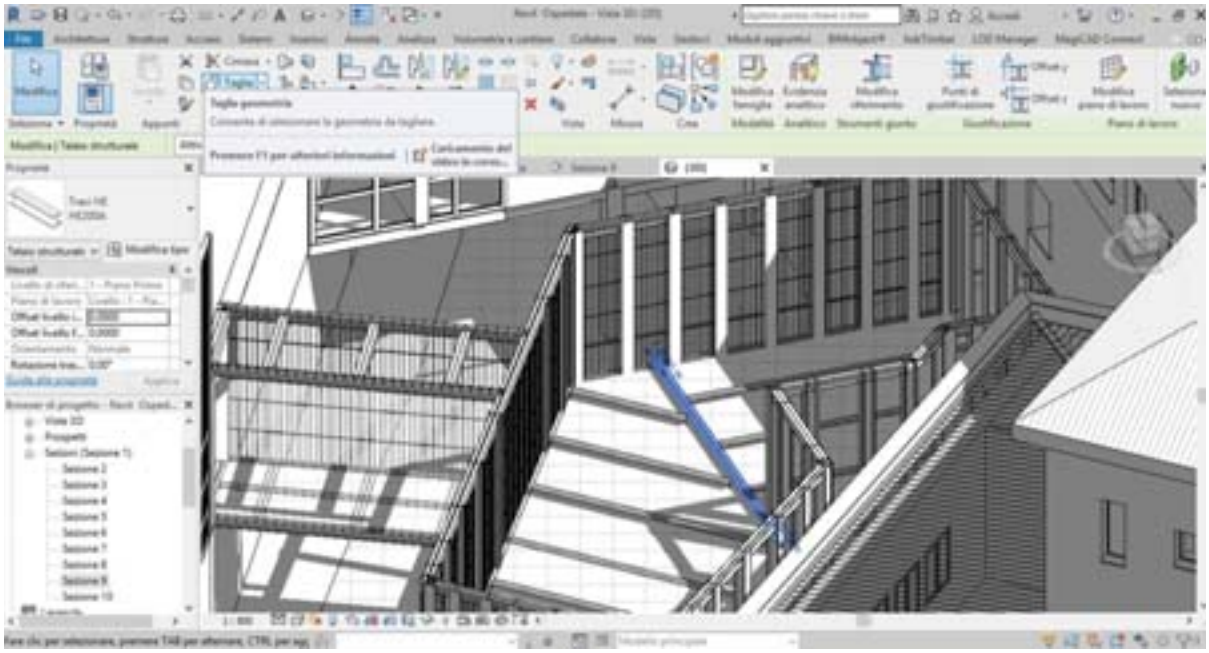

Fig. 2 Detail of the HE200a beam for horizontal connection of the metal elements

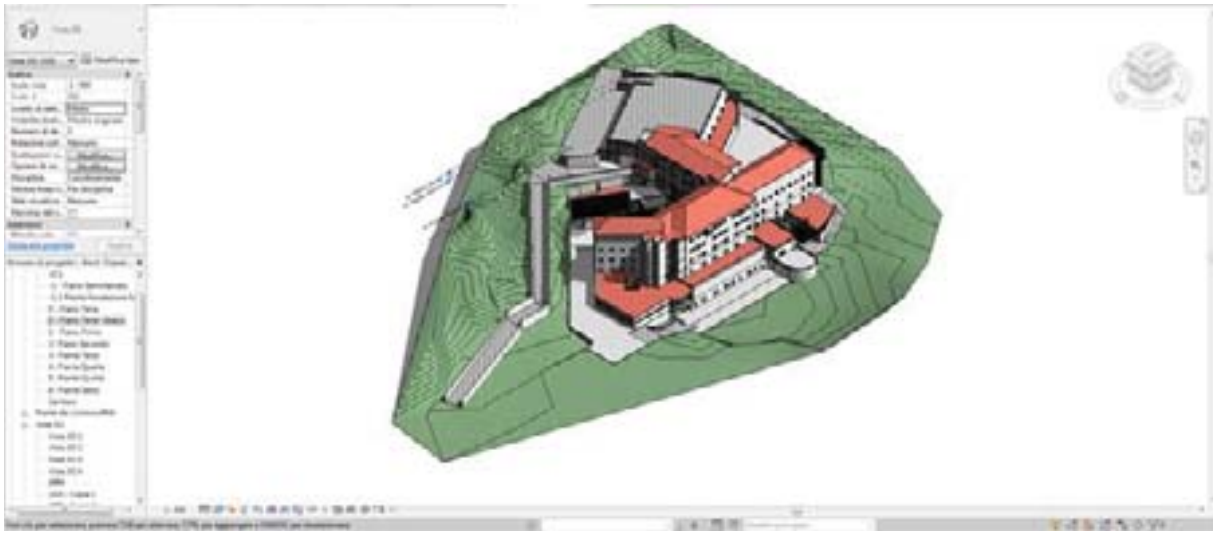

Fig. 3 3d view of the architectural model. Made with Autodesk Revit.

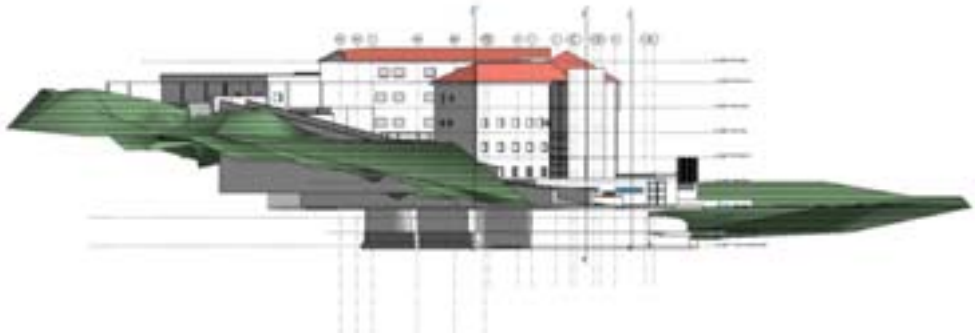

Fig. 4 West elevation.

Once the architectural project was completed, the plant project was modeled using the Revit MEP family (canalization, electrical and piping systems) in the mechanical section. Therefore, the architectural project previously created was imported in order to insert the various system elements based on those actually installed.
The distribution pipes have been inserted respecting the design schemes and the present elements have been inserted as ducts made up of rectangular or circular ducts with the relative special elements such as curves, reductions and fittings.

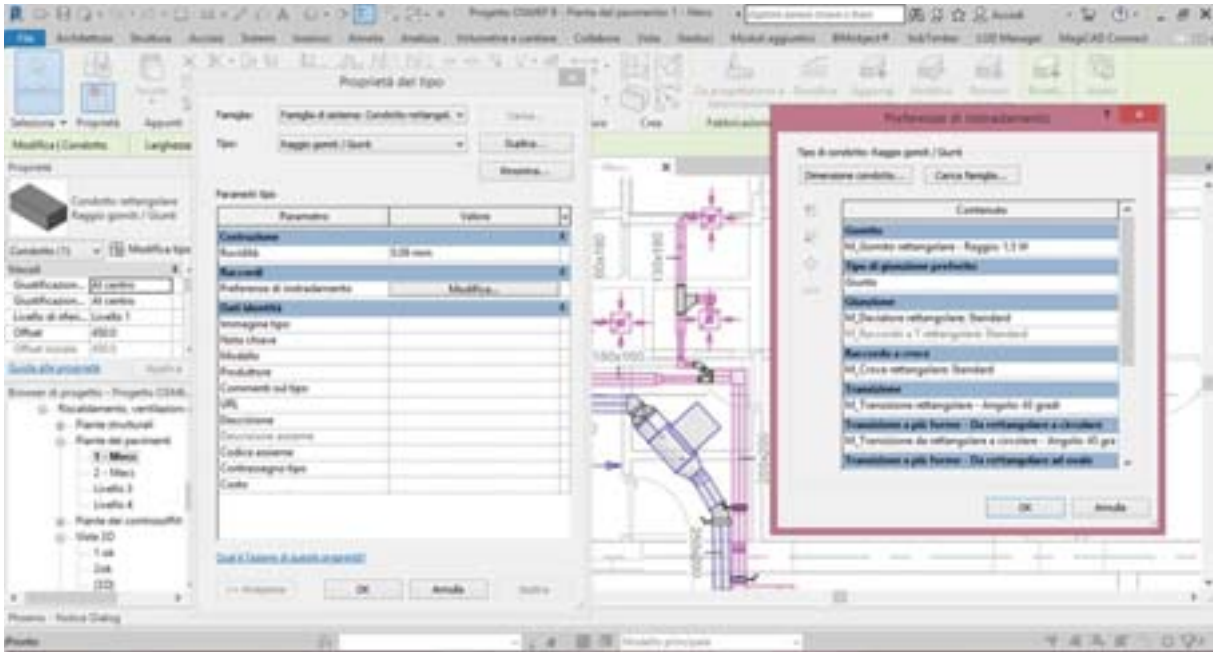

Fig. 5 Parametric element of the delivery duct.

5. Conclusion

The paper wanted to focus on the role that Design and BIM can play in the management of hospitals and nursing homes.
The quality of the healthcare facility is given by a set of components, which concern the processes, the results of the design, the measurement and control of certain requirements, the certification of the processes, the observance of the quality indicators.
No less important is the importance of a project that is capable of developing and promoting a correct process of harmony between employees in the health sector, who take advantage of the work of technicians, and technicians themselves. The functionality and the correct success of a design idea also includes this aspect within which the design must be able to interpret the needs, attitudes and any critical issues to be removed in a hospital environment ensuring maximum functionality for the well-being of patients. The design of the local health system must always be updated and follow the dictates of national laws, taking into account what health represents today.
The technical designer of the health facilities therefore must also be updated on changes in the other sectors that affect their own. Therefore, the work must be designed according to its evolution. The latter's study must also balance the needs of the territory and its peculiar characteristics, the local demographic phenomenon.
It is clear that the figure of the technician who works in the healthcare sector needs to have an update and a wealth of knowledge that goes beyond mere engineering and design matters. The technician must be able to interpret the characteristics of the structure to be designed, the needs of the users who will frequent it and the territory in which it is located. Fundamental, in this sense, is the designer's ability to study and research, which must translate into a necessary flexibility to develop knowledge that goes beyond one's own disciplinary field and is able to cooperate with the other figures involved through an intelligent system (BIM).
Software support is essential so that all the information and knowledge acquired can be related and available for reading by all the figures involved. A methodology such as BIM is the support needed to connect and collect all this data.
We must not forget that material models, such as graphics, are subject to some limitations, as Carmine Gambardella points out: "Geometric modeling is the scientific process for which a theory is developed that can conceptually reflect the essential characteristics of the object o phenomenon within a specific code. Normally, the modeling process insists only on certain aspects of the investigation: it follows that the final model developed is limited to treating only part of the object or phenomenon to be modeled. Thus in the three-dimensional space of geometry height, width and depth are easily described, but color, time, visual perceptions, physical, chemical, etc. properties are not equally easily represented. "
The design must turn towards sustainable planning by creating a balance between historical memory and new needs, between nature and man as well as between recovery and innovation. We must

therefore start from a cognitive approach that is able to observe, understand and represent all the components of reality understood as a complex system of material or immaterial relationships.
It is essential that the designer is able to verify and integrate all the information derived from the different disciplinary sectors. The analyzes carried out directly or indirectly constitute the mode of representation of complexity but are also "elements of judgment and evaluation, analytical and synthetic of the architectural asset, competing with the *in vivo* representation of reality and its critical description for the maintenance of a artifact or a state-of-the-art site, based on active and multidisciplinary monitoring ".
In fact, the analyzes can be continuously updated with new contributions, in a dynamic fueled by the new knowledge acquired and inserted into the system, but also by the communication between the specialists who contributed to the study and by the comparison between the opinions expressed.
In conclusion, it is possible to affirm that information technologies and BIM, specifically, offer the tools to achieve this goal by allowing the creation of a system that is open, continuously implementable, accessible and integrated by all the information from the various analyzes carried out, a Knowledge database that at Covid-19 times could find great application in the management of nursing homes.

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Alessandro BARCA – Stefania MASSARO The role of teaching in creating immersive and inclusive cultural contexts. Crossmedia at the service of Intangible Cultural Heritage

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Abstract
The present contribution aims to analyse the educational-didactic potential of cross-media books and in particular of digital storytelling as an educational tool that is widely used not only in the world of education; in particular, digital storytelling as a means of cultural transmission in museum didactics will be considered, starting from the Changes Project which involves, in addition to the University of Bari, other Universities and Research Institutions including the Universities of Turin, Bologna and Naples. From this project comes the experience of the workshops, carried out with the students of the degree courses in Primary Education Sciences and Education and Training Sciences of the University of Bari, which will focus specifically on the valorisation of intangible cultural heritage by creating inclusive, interactive, immersive (AR and VR) and playful (gamification) cross-media works to be included in the museums participating in the project.

Keywords: Digital Storytelling, crossmedia, Intangible Cultural Heritage, museum didactics.

1. Intangible Cultural Heritage and digital storytelling as an ideal tool for museum education

Intangible cultural heritage or ICH - Intangible Cultural Heritage - as stated in Art. 2 of the 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage - is composed of the traditions transmitted within a community including, among other things, social practices, traditions, rites, festivals, performances, oral, artistic or nature-related expressions and crafts that represent the expression and values of groups or communities, but also tools, objects, artefacts and spaces, as well as knowledge and skills that communities, groups and, in some cases, individuals recognise as part of their cultural heritage [1] This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by the communities and groups concerned in accordance with their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.

The knowledge and appreciation of tangible and intangible cultural heritage represents a great educational and didactic challenge, as it is not only aimed at the mere dissemination of culture, but is useful in shaping people capable of recognising themselves in an area through the appreciation of what it offers in cultural terms; at the same time, it enables future citizens of the world to safeguard and protect what has been given to them by those who have gone before.

In order to best favour the process of knowledge, valorisation and protection of the intangible cultural heritage, it is necessary to offer the most innovative and inclusive means possible.

Among the various solutions, we considered digital storytelling for the creation of cross-media books, which in museum contexts is a powerful tool for shared, co-participated and, therefore, inclusive knowledge.

For almost two decades, in fact, scholars and supporters of storytelling, including Robin [2] and Lambert [3] to name but a few, agree that storytelling is the ideal communication and participation technique to

fulfil the educational function: the forms of storytelling and the languages with which these are realised are increasingly moving in a direction of co-participation and sharing.
The most recent reflections [4] on the subject show how digital storytelling continues to be a practice that is also perfectly in line with the communication needs of museum institutions and adequately abreast of technological developments, finding its place in inclusive actions, as it is connected to various forms of accessibility of knowledge and capable of overcoming various communication difficulties; it becomes, in fact, a means of flexible adaptation of knowledge, of construction and co-construction of knowledge, and of valorisation of diversity [5]. In the specificity of museum didactics, digital storytelling allows a greater awareness of the cultural heritage among young people, to assign meaning to material and immaterial works, but also meaning to the events that are transmitted through it, adapting to the users, their inclinations in terms of learning and their needs.
. Within the workshops realised for the Changes Project, in which the University of Bari is one of the partners, a human-centred design was first of all conceived, whose main purpose will be to ensure that the tangible and intangible relics are placed in such a context that they can be known with multimodal approaches so as to convey the information and historical-scientific notions of the relic through several channels and, therefore, such that they can be enjoyed in different customised ways. On the other hand, in having to design a cross-media content about the history and characteristics of a series of intangible relics, such as, for example, traditional local recipes - taking up one of the 17 elements recognised by Unesco as intangible cultural heritage, i.e. the Mediterranean diet - and knowing that, to benefit from such content, there may be people with various disabilities: visual, hearing, intellectual, etc., the narration will be constructed in such a way as to link the presentation of the individual intangible relics (recipes of typical dishes written in the local dialect and then translated into Italian, English and Spanish using the Easy To Read language; videos of local elderly people cooking typical dishes; period photos of patronal festivals such as the 'Tavole di San Giuseppe' where votive tables were set with typical dishes to be donated to the needy, etc.) to the historical and scientific context of reference, thus providing different paths of fruition from the general to the particular or, vice versa, from the particular to the general. Each cross-media work, thanks to its ability to make people learn in a circular and not only linear way, will have within it escape rooms, gaming activities, immersive activities with virtual simulations, and links for in-depth studies with simplified interactive maps for younger users or those with intellectual disabilities. There will also be the possibility of access for the deaf with the interaction, for each content, of subtitles in the various languages and experts in sign language; the same possibility of access will also be given to the blind with avatars or voice-guides.
Although the workshops are not finished and the cross-media works have not yet been fully completed, it is evident, however, that digital storytelling remains a valid tool to support museum education in order to implement the dissemination of cultural heritage, especially when it is structured to be enjoyed by persons with Special Educational Needs. These works will allow people to 'touch' culture, to immerse themselves sensorially in the understanding of it, becoming an active tool for the construction of knowledge. As the scientific literature in the field teaches us, educational scenarios in which educational and research experiences are conducted through multisensory manipulation and stimulation present effective results in terms of learning. In the didactic field, it is necessary to design new paths that take into account the potential and effects that new technologies can have on museum education and beyond, understanding how the multiform and multimodal nature offered by cross-media and in particular by digital storytelling [6], can contribute to the progress of a culture of beauty [7], of the valorisation of one's own territory, also offering everyone the possibility of accessing this type of knowledge, without constraints and with respect for individuality.

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