Past&Present at Tarchna&Tarquinia: a flexible approach to make visible the invisible

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1. Introduction

This contribution deals with the scientific, technical, and scholarly aspects of interpretation in Archaeology to transpose fragmentary archaeological remains in poor condition into their original whole condition in order to identify underlying mental attitudes, thereby unveiling a twofold invisibility. This invisibility is represented by the links embedded in the material aspects of the remains of ancient communities and by the actions in life which that same material evidence references, together with textual and iconographic repertories. It is currently well established that the reconstruction of a historical and cultural context in Archaeology is a very complex activity involving different degrees of reliability and requires the expertise of different scientists to grasp the original system of interaction of different branches of reality. Moreover the development of digital resources has changed the concept of studying and sharing information. The current paradigm sees the use of Information and Communication Technologies (ICTs) as publishing media and the use of geo-spatial technology (GIS, LiDAR, laser scanner) as the solution for realising virtual reconstructions of archaeological interpretations in scientific and edutainment environments [Forte, 2004; Lulof, 2012]. In the current scenario, the final user can access either databases compiling large amounts of existing material in a format inaccessible to non-specialists or easily digestible reconstructions based on a number of interpretative assumptions (often grounded in partial understanding of the documentation) over which the final user has no control. Interdisciplinary tools and services are lacking, yet to control the whole research process, from the fragmentary evidence of the archaeological remains, to the final interpretation in order to let the final user handle the whole raw data set and grasp the intellectual process leading to the conclusive phase of cultural and historical reconstruction.

The ground-breaking nature of our research is to challenge such a paradigm, to implement a new cognitive framework to face interpretation problems, and change our understanding and thinking about the reconstruction of the features of ancient communities. The research methodology is designed to implement intelligent and creative solutions to bridge the gap among different disciplines (Archaeology, Geoarchaeology, Architecture, Information and Communication Technologies), which in this case are present in the same infrastructure in the domain of Archaeology: the "Tarquinia Project" that started

30 years ago in the ancient Etruscan city of Tarquinia in Italy (UNESCO 2004). We can take advantage of previous research from the 19th and first half of the 20th Century and of the excavations of the Università degli Studi di Milano carried out since 1982 in two sacred areas of the ancient Etruscan city, the 'monumental complex' and the Ara della Regina sanctuary [Bonghi Jovino, 2010; Tarchna I, 1997 - IV, 2012; Tarchna, Suppl. 1 2005 - Tarchna, Suppl. 2 2008], and in the fortifications [Bagnasco Gianni, 2012]. The relevance of the results of this research gave substance to an extensive series of interpretations regarding visible and invisible Etruscan cultural traits. In addition to other archaeological and epigraphic issues, they concern the material aspects of rituals, based on the recurrence of cultic practices in the above-mentioned sacred areas, whose activities might also be revealed by organic and inorganic remains [Bagnasco Gianni, 2005]. Tarquinia strongly challenges researchers to be open to unconventional and unexploited topics due to the complexity of the site. Its multifaceted heritage embraces inhabited areas of the Civita plateau (150 hectares), the necropolises (roughly 6000 tombs, of which 400 are painted) and the territory. Researchers have to confront intermingled links between human beings in contact from different areas of the ancient Mediterranean, the Near East, and Europe, a stratification of activities over a span of time of more than eight centuries from founding to Romanisation, and Tarquinia's impact over time on scholars and artists inspired by its impressive Heritage. Besides all the above-mentioned factors the information of indirect literary sources is to be considered.

From the beginning several experts in disciplines other than Archaeology collaborated in the "Tarquinia Project", so that we have already been pursuing the ideas described above [Bagnasco Gianni et al., 2012]. Our aim now is to apply this strategy systematically to reconstruct the completeness of the material aspects of Archaeology and decode their relationship with the invisibility of ancient life.

Therefore Tarquinia is the ideal place to implement our ecosystem of tools and services supporting our groundbreaking cognitive framework to handle interpretation problems.

Starting from this point, we aim to define a "free" approach that intends to put scholars involved in the research team are in position to handle data according to their own procedures within the same environment. ICTs based on an ecosystem of benchmarks and references in ways close to the individual practices could support this flexible approach, meant to avoid the use of predetermined terminologies and categories, going beyond individual current work for achieving a common result in the domain of historical reconstruction. We propose a radical change of perspective, starting from the collection of raw data in several fields (material aspects of Archaeology, Geoarchaeology, Architecture, Topography) to grasp the underlying model, thanks to the assessment of recurrent associations among different categories of evidence, instead of starting from preconceived theoretic models and using data to confirm them. The added value of the group is therefore enhancing the proper methods of every single discipline involved in a multidisciplinary environment, beyond the current work of every individual researcher. Distinct small-, medium- and

large-scale investigation methods are integrated for the first time to produce a significant interdisciplinary cognitive tool to move from the materiality of the remains of the Ancient Past, to wholeness, to what lies behind at a metaphysical level and is therefore invisible to us.
The potential impact of our contribution is to offer a new approach to the cultural resources of ancient sites directed both to the research community and to the general public, according to the requirements of the European Charter for Researchers.

2. State of the art and objectives

Nowadays archaeological interpretation is influenced by a crucial twofold problem concerning means and objectives. Current means are challenged by the improvement and increasing of science-based disciplines completing archaeological investigation such as Archaeometry, Geoarchaeology, Architecture in the domain of Archaeology, Landscape Archaeology and Archaeoastronomy that are all threatened by a risk of centrifugation and lack of synergy. On the other hand current objectives go beyond a generic “cultural” and “historical” reconstruction and take into account that it is necessary first to reconstruct how shards and ruins originally looked, and provide the missing elements, and then to reach the level of the invisible aspects of Ancient life from imagery to dynamics in daily life and ritual practices (agency, emotion, gender, representation).
The very task of setting up interpretations in such a state-of-the-art manner obliges the researchers to support the means and objectives with a logical and structured and ultimately more fruitful approach, which is the focus of our joint undertaking. We aim at meeting the present needs of Archaeological research, which is evidently in pursuit of a cognitive framework to deal with interpretation problems [Forte, 2004; Lulof, 2012].
In other words the objective of our contribution is to produce powerful interdisciplinary tools and services to overcome the risk of centrifugation in Archaeology-oriented disciplines. One primary challenge is to enhance the collaboration among experts from different disciplines and organisations. Wenger (1998) defines a community of practice (CoP) as a group of people who work as a community in a certain domain undertaking similar work, and share practices and address a common set of problems. CoPs develop their own languages and notations to express and communicate their knowledge, ideation, problems and solutions [Carrara et al., 2000]. The data provided by a knowledge management system needs to be presented using proper terminology complying with reasoning strategies typically used by members of the CoP in order to support domain experts adequately. Supporting sustainable collaboration between experts with different background needs to be understood as developing communities of interest where members of different communities of practice meet in order to pursue a common goal. A community of interest (CoI) is defined by Fischer (2001) as a community that brings together stakeholders from different CoPs to exploit their own expertise and background in addressing design problems of common concerns. In such situations, communication gaps arise among collaborating stakeholders who belong to different

CoPs [Snow, 1959]. To bridge these gaps it is necessary to seek intelligent and creative solutions [Engelbart, 1995], but this is never a minor task. Understanding how domain experts work will help to design communication and collaboration support across different knowledge domains [Valtolina et al., 2012]. The objective of our team is to produce powerful interdisciplinary tools and services to allow the data to speak out instead of the researchers. It is a challenge for a modern viewer to understand the activities carried out by the members of ancient communities and their meaning, in daily life or cult practices or both, from partial textual sources and “frozen” images left from the Past, from shards of mobile finds, fragmentary architectural structures, and landscapes that now look very different from how they appeared in ancient times. Such an approach turns out to be a useful theoretic platform for any archaeological research that can profit more by the materiality of ruins, shards and fragmentary epigraphic documentation than ancient literary written sources and opens the way to using the symbolic to approach evidence [Franzini, 2001; Bagnasco Gianni, forthcoming].

This is of the utmost importance in the field of Landscape Archaeology (Geoarchaeology and Topography). Recent studies in urban design focus on common spaces, cities, and landscapes in terms of simplified cognitive maps in which key-spots are connected through paths [Rodaway, 1994; Herzog, 1997]. Theoretic approaches applied to cultural traits recognize sensitive objects (visible, tangible, sonorous) as monumenta (“warnings”) in the historical development of a given culture [Le Goff, 1978], for identifying the interplay between human actions, behaviours and their surroundings (“place attachment”) [Altman and Low, 1992; Hidalgo and Hernàndez, 2001]. We also know from literary sources [Cordano, 2002] that among ancient Mediterranean populations geographical concepts were communicated through images borrowed from natural features (“schemata” such as parts of the body, etc.) and used to assess territory, landscape and shores. These were both differently conceived within each culture and widely shared to exchange information for overseas expedition and travel purposes.

These principles are clearly shared among other ancient cultures, which draw attention to the geometrical division of the cosmos, such as the existence of sacred regions in the sky that were “reflected” in the design of architecture and urban plans, by applying geometrical rules and astronomical alignments. Nevertheless conceptual criteria were sometimes followed in planning the relationship of a site with the surrounding landscape, or even in the very choice of the site itself [Rugglers, 2005; Magli, 2009]. We know that also the principles of Etruscan religion were based on the concepts of “division, delimitation and orientation”. Favourable/unfavourable sectors were identified on such concepts, regardless of the shape and size of the object of the practice of divination [Colonna, 2004; Bagnasco Gianni, 2008]. In spite of the abovementioned theories we still have no conceptualized means to approach the rationale conditioning Etruscan space organization from small to large and territorial scale.

The importance of the proposed work is to challenge the core question concerning the scientific, technical, and scholarly aspects of archaeological research

and its outreach entails research-related communications initiatives directed to the general public. Its goal is also to enhance critical attitudes towards interpretations supported by virtual reconstructions that might be appealing but are often not grounded in the complete available documentation. The groundbreaking nature of our team is therefore to make it possible for the final user to monitor the totality of the research steps and check the intermediate results leading to the ultimate interpretation of invisible matters taking into account their reciprocal links at a small (stratigraphic units and mobile finds), medium (archaeological sites) and large (territory and landscape) scale and reach the level of the relationship between the visible archaeological evidence and the invisible aspects of ancient life. This is an ambitious goal that can not be carried out by only one investigator due to the amount of core time and energy needed to deal with every single series of documentation. For example the current methodological approach reached in the excavations held in Tarquinia is of excellence from the point of view of the cultural and historical results but has been managed so far by the archaeologists with the partial cooperation of a number of science-based methodologies.
Our strategy involves a new status in archaeological research that on the one hand remains grounded in the interdisciplinary goal to produce cultural and historical reconstructions and on the other hand preserves the specificity of every single science-based discipline involved while enhancing its methodological achievements in a multidisciplinary environment. The idea is to deliver, thanks to such a background, a new regulation in the Archaeological approach to ancient sites in order to manage data at a small, medium, and large scale and identify the invisible links connecting the variety of indicators issuing from the different paths of research and make them clear for the observer.
As a result the impact that the proposed work will have if successful is multifaceted, opening up new frontier lines towards the epistemological approaches to interpretation and as a consequence new horizons and opportunities for science, technology and scholarship.

3. Methodology

Our multidisciplinary approach is meant to enhance the individual practices, avoid the use of predetermined terminologies and categories, and go beyond individual current work for producing reliable “archaeo-indicators” in the fields of Archaeometry, Geoarchaeology, Architecture in the domain of Archaeology, Landscape Archaeology and Archaeoastronomy.
In our current practice we have implemented a system of benchmarks (‘capofila’), for identifying the attributes of every single macroscopic element (mobile finds, stratigraphic, structural, topographic, geoarchaeological unit, etc.), that is available to our perception at a first level of investigation.
At the second level we assess numerical impact and association rates of fragmentary evidence in each category (small, medium, large scale), according to a context-oriented approach (stratigraphic, geographic and topographic), bearing in mind that they belong to a wider cultural and social framework. In the archaeological literature, this concept of context as an association of objects in the same structural container has a long and notable tradition [Mül-

ler-Karpe, 1959] to build chronological tables based on the incidence of typical and recurrent associations to which could be matched cultural phases. However, according to the renowned French schools of anthropology as well as to Anglo-Saxon scholars [Hodder, 2000], the concept of pure archaeological context has been supported by the importance of the cultural environment and social structures. Therefore we assume that reiteration of phenomena is likely to depend on circumstances produced in the Past rather than on chance [Bagnasco Gianni, 2002] and might help to identify the epistemological objects of our research.

We apply to different situations the procedure of checking association rates among different shards of the same pottery production or shape in different contexts, among different single constructions and geoarchaeological or natural and landscape features.

In the case of mobile finds we reliably reconstruct the formal and stylistic choices of the community influencing the basic models of the local pottery production, the existence of minimal sets, and the assessment of the purpose of single objects or sets of objects within their original contexts and for grasping behaviours and actions that motivate them.

In the case of stratigraphic units we ground our research on the interaction with the related mobile finds and radiometric dating to go beyond the Harris matrix [Harris, 1979]. We convey such a procedure in a synergic logical framework to date definitively the stratigraphic relationships that were so far only mechanically related to one another [Bagnasco Gianni et al., 2012]. We intend to apply a “circumstantial paradigm” [Ginzburg, 1983] for dealing with the system of references we have laboriously extracted from fragmentary evidence to overcome the gap between the purpose or function of a single archaeological element and its real performance in context (small, medium, large scale) to support our archaeological reconstructions.

In the case of buildings or parts of buildings we evaluate significant recurring features both from the technical/material and typological/functional point of view in architectural evidence in inhabited and funerary contexts.

We expect to gain the original meaning of each archaeological indicator, beyond our modern immediate perception, thanks to the observation of the system of relationships to which its attributes belong and according to a context –based approach. Thus far this type of analysis has not been undertaken in a systematic way with the support of adequate ICT tools.

In the case of landscape and architectural readings of ancient settlements (physiographic configuration of territory, availability of natural resources) we contextualize architecture, town planning, and territorial strategies from material evidence to interpretation according to the above-mentioned strategy, to assess the background of intimate and ancestral architectural layouts such as sacred areas and necropolises. Such a topic has never received systematic treatment and our team aims at sorting out in Tarquinia structures and related functions on which the territorial system is grounded and study their relationship with the surrounding landscape and with archaeoastonomical aspects from which they may eventually derive.

In other words our approach is based on the dialectic comparison between

the function suggested by direct observation and its effective pragmatic use in its context, which can be assessed from time to time according to different series of contexts - taken separately or together when all present – such as the archaeological, epigraphic, iconographic etc.
The effort has been concentrated so far on methodologies in the archaeological field producing an effective protocol devoted to the exploitation of the global raw data [Bagnasco Gianni et al., 2012], but without making available the tacit knowledge accumulated by the science-based methodologies.

3.1. Analysis on mobile finds and monuments

We intend to apply a number of current scientific tools to investigate the features of mobile finds from the point of view of the relationship between local and imported productions from the rest of the Ancient World, Tarquinia being one of the foremost cities. These acquisitions are going to be crucial for identification of different patterns of production among the objects and monuments that appear to be of foreign influence and are crucial to definitively identify the foreign input in local ateliers and may eventually recognize the integration of the skills and movements of artisans:
• Inductively-coupled atomic emission spectroscopy (ICP-AES) is a technique already available, and X-ray fluorescence (XRF) will be used to determine the elemental composition of the ceramics. These techniques will be applied to doubtful items, whose provenance is still uncertain, to gather all imported items present in Tarquinia, since the identity card of the local pottery productions is already available [Bruni, 2006].
• Fourier-transform infrared spectroscopy (FT-IR), in conjunction with multivariate analysis of data and X-ray diffraction (XRD), will be used for the qualitative and semi-quantitative determination of the mineralogical phases of pottery and paintings.
• Micro-Raman spectroscopy, reflection FT-IR spectroscopy and visible-NIR diffuse reflectance spectroscopy together with the above-mentioned techniques will be used to analyze the pigments both of pottery and monuments.

3.2. Analysis on structures

We intend to apply a number of current scientific tools to investigate the features of structures above and below ground to outline foreign and local contributions. Partial destructive analysis will be carried out to discover the composition of the construction materials and will attest that the history of the structures contains considerable information:
• Diagnostic analysis and dating methods for historical buildings (stratigraphic analysis for architecture, mensiochronology, masonry techniques, chronotypology) will be used to register the multitude of information that constitutes the building, focusing on the space organization and surface treatments.
• Structural analysis will be used to assess the nature and destination of the structures discovered during the archaeological excavations at the ‘monumental complex’ of Tarquinia and those represented in painted/sculpted tombs.
• X-ray diffraction (XRD), X-ray fluorescence (XRF) and thin section petrographic analyses on architectonic elements made of rocks exotic with respect

to the local bedrock will clarify the source of allochthonous stones and main commercial routes.

3.3. Analysis on sites and landscape

We intend to apply a number of current scientific tools to identify settlement phenomena and their sequence:

• Laser Scanner, geometric survey and Photogrammetry will be used to implement a 2D and 3D archive containing detailed metrical and graphical restitutions of the shape and texture of objects and monuments in order to analyze, compare, and examine construction and decoration techniques. Aerial Laser Scanner and Territorial Photogrammetry will be used in order to bring out all the marks and territorial layers with high accuracy in terms of location, orientation and scale.

• Archaeostronomical analysis - a wide-ranging multi-disciplinary science examining the ancient landscape, including the sky and orientation of buildings - will take advantage of standard software tools that will be used to reconstruct the sky at the supposed time of an architectonic or urbanistic layout and the identification (if any) of the possible astronomical targets.

• Geographic Information System, a GIS platform will be used to catalog and to systematize the existing documentation about historical cartography and scientific and literary information, in order to identify the persistence and the consistence of meaningful traces of the ancient territorial occupation. Such an exhaustive geo-referenced documentation, gathered in a diachronic and synchronic atlas, enriched with punctual or areal data, will be used to compare and contrast the sequential events of the settlement.

3.4. Analysis on geoarchaeological aspects

Geomorphological analysis will be carried out in order to study syndepositional and postdepositional formative processes of the archaeological record, understand the settlement choices at the time of the occupation of a site, and to identify the value (function/ purpose and role) of particular architectonic features in their proper location [Goldberg and Macphail, 2006; Goldberg and Berna, 2010].

• Intensive geomorphological survey of the plateau including the desktop study (remote sensing) of LiDAR data compared with high resolution satellite imagery and historical and recent aerial photographs and maps, and systematic survey of the area of Tarquinia and the surrounding valleys and hills; special attention will be given to the stability of the slopes of the plateau, the occurrence of mass movements and soil loss across the last millennia.

• Integration of geomorphological data and archaeological layers in a GIS platform will be carried out to produce a geoarchaeological thematic map of the area.

• Thin-section micromorphology of archaeological strata will be performed on the most representative occupation layers and cultural deposits to identify anthropic and natural processes driving the formation of the archaeological record at the scale of strata, features, and cultural phases.

• Pollen and sedimentological investigation of the sedimentary infilling of the

main wells and stable isotopes geochemistry of speleothems found in the underground net of tunnels will be applied to palaeoenvironmental reconstructions.

3.5. Data manipulation

• An ICT platform based on information-integration services, will be implemented to outline reliable relationships among multifaceted datasets (objects, monuments, and their territorial context). This approach is going to address the current lack of tools and systems to combine multi-disciplinary knowledge bases of the involved domain experts in an effective way. For example, in several cases a digital divide exists between technologists and domain experts. While technologists may have a vision based on what is computationally possible, they may lack an understanding of what is really needed to solve the problems of their potential users (archaeologists, but also architects, chemists, and others). Domain experts however can rarely articulate their needs in a way that directly informs the technological development and in general, they do not have the opportunity to combine knowledge coming from heterogeneous backgrounds and different expertise. The idea is to enhance the current potentialities of ICTs to reduce this gap by putting together universities, companies, and cultural institutions in order to study the real problems at the base of effective design of an ecosystem of tools and methods able to support the study, analysis and dissemination of archaeological data in different contexts of study.

• Starting from the knowledge provided by information-integration services defined at the previous point, combined with other data-mining analyses, archaeologists (but also other domain experts) can carry out reconstructions of original archaeological evidence no longer existing, according to probabilistic and statistical methods. Such hypotheses permit the definition of proximity relationships among different categories of evidence, taking into account different ideas and interdisciplinary knowledge useful for supporting interpretations.

4. Conclusion

With this approach we concentrate on the syntax linking the “archaeo-indicators” identified thanks to our multidisciplinary research focused on the recurrence of association rates within different aspects of material evidence and of phenomena.

We intend to support, through ICTs, the delicate operation of identifying recurrent patterns that help to distinguish between “daily life” and behaviours “set apart” [Evans, 2003], which have been assigned over time to “the religious” or to “the sacred” [Carandini, 2000]. Identifying recurrent patterns will also help to locate actions and behaviours in the general setting of iconographic, archaeological, and topographic “sites” and their related “landscapes” to which such performances belong.

We compare different datasets, find mutual relationships, apply an ecosystem of tools and services to reconstruct the original wholeness and access the invisibility of the related actions. Such an approach turns out to be a useful

theoretic platform opening the way to using the symbolic as an inseparable mix between known and unknown [Franzini, 2001].
ICTs are meant to support interdisciplinary results through cutting-edge graphical tools that will help archaeologists, architects and geoarchaeologists to verify the validity of their interpretations and studies with sophisticated simulations of the archaeological evidence at different scales. Moreover, in these environments, virtual reconstructions of archaeological evidence could be integrated with landscapes and stratigraphic layer-models allowing the combination of the aforementioned activities in a unique context of analysis. In such a context, all experts involved in the process of analysis of the excavation site can more effectively collaborate to define virtual reconstructions based on probabilistic hypotheses. Such reconstructions can then be used to define new public dissemination strategies in the context of museums and archaeological parks.
This unique context of study based on an ecosystem, in which multidisciplinary domain experts can examine all typologies of data coming from an excavation site in its scenarios and landscapes, is going to be the benchmark for developing outreach innovative and creative solutions to involve more tourists, visitors, specialists, teachers, and students according to their context of use, needs and interests. In this process of environmental and socio-cultural development the contribution of experts in Psychology, Sociology, Managing Engineering and Edutainment is crucial to complete our interdisciplinary approach and connect modern and ancient societies' experiences, through transmission of values and environmental valorisation. For a complex and multidisciplinary research project like this, Tarquinia is the ideal place, adapted to create awareness among the general public about the results of Archaeological research and to disseminate and make visible its acquisitions, according to the European Charter for Researchers.
In particular, the collaboration of Social Psychologists experienced in community psychology, environmental psychology and intrapsychic influences of culture is needed in order to promote initiative directed to the population of the modern town of Tarquinia. The aim is to involve the local community in the promotion of the archaeological values of their own environment and to let them experience the enrichment coming from the personal interaction with the cultural artefacts present in the city's context [Vygotskij, 1934; Cole, 1996].
At a first evaluation, it seems that a wide part of the local population has developed a psychological detachment from the Archaeological area and its fate and development, investing instead in other areas of activities (moving often to the nearby cities) both for work and leisure. Young people and in particular local students who still experience a daily connection with the town environment and history seem to be still more emotionally connected to the Etruscan history and to the possible future of the town. As the first step of our Project directed to the local community (since 2012) we involved students from high school in the wider framework of archaeological excavations, described above.
Our best practices are therefore focused upon giving back to the ancient Etruscan city its value of prominent cultural and natural landmark in the Past, to

make it possible for the modern community to assess it in the same way. According to current theories of “place identity” and “place attachment” the modern community is in position to feel and experience the continuity between past, present and future. Since the first excavation experience of the high school students it was evident that they were well acquainted with Etruscan history, the role of Tarquinia and the history of the archaeological finds displayed in the town museum and Civita’s exhibitions, but they look at all of this as to something connected to the past more than to present and future life. The involvement in the archaeological work allowed most of them to be directly in contact with the richness of the town environment and with the artefacts on which their own culture has been built, for the first time in their lives. In this training “in the field” a great part of the students experienced a sensation of fulfilment, psychological well-being, and enhancement of their own skills, also called “flow of consciousness” [Csikszentmihalyi, 1990; Csikszentmihalyi, Csikszentmihalyi Selega, 1988]. This optimal psychological experience allows them to enter in an emphatic contact with the environment, the Etruscan artifacts and the archeological profession and to increase their involvement in the knowledge and promotion of Tarquinia’s environment richness and opportunity.

Our multidisciplinary research group will promote and propose again the involvement of the students in the archeological training, developing different ways of connecting with school programs, family culture, daily experience, teenage culture and communication strategies. Starting from the students the aim is to broaden the involvement to their families, their teachers, and other social and political realities present in the town territory, to promote a social process that may reconnect the ancient Etruscan culture, its values and its artefacts, which made it to be a prominent cultural and natural landmark in the Past, with the actual cultural environment and the contemporary population of the town, their communication models, their needs and their dreams for the future.

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