Disciplinary territories and disciplines of the territory: Paths and intersections between the archaeological research and other scientific approaches to the landscape

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Abstract

This paper discusses the development, within the framework of archaeological knowledge, of a specific branch of study dedicated to landscapes, describing its scientific outlines and research objectives. The work deals with the archaeological concept of ancient and contemporary territories, intended as historical and social layered landscapes. Among the qualifying features of this archaeological activity are diachrony and interdisciplinarity, which promote a close integration with various other scientific disciplines dealing with the territory. Environmental archaeology, rural archaeology, spatial archaeological analysis represent the areas most linked and intertwined with other research fields. They produce a complex and global archaeological study of layered landscapes aimed at a multi-dimensional planning.

Keywords

Landscape archaeology, layered territory, diachrony, interdisciplinarity.

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Introduction

Over the past decades, archaeological landscape research in Europe has developed, both in terms of theoretical-methodological reflection and quality of results; in recent years the approach of territorial research has been deeply revisited and the same concepts of landscape and territory were subject to careful examination and review.

Recent scientific literature shows that the definitions of archaeological landscape, although diversified, may be reduced to the least common multiple defined as a *container* of abiotic and biological forces acting in a given environment.

The qualification of the landscape as a container (a similar expression, also applied to symbolic elements, was used in geography by Quaini, 1991) does not come from the desire to favour a broad, general or a generic definition and neither from defining the territory as a mere scenery, a theatre backstage where natural transformations take place, where humans act, and where relations between the latter and the environment are created.

Such a definition aims to attribute a systemic and relational nature to the notion of an archaeologically conceived landscape. It is therefore understood as a very complex context. The whole territorial spectrum is seen as an active and mobile entity. It is subject to mutations when one of the elements operating within the set of changes is also capable of triggering a general mechanism of change, which also acts on the individual components.

An archaeological landscape is also a *layered* landscape that has a horizontal as well as a vertical dimension. Its layered nature is repository for sedimentation of traces left by changes and territorial developments and preserves the memory of various forms of settlements which were formed over time.

Two terms frequently used for this condition are those of landscape-archive and landscape-palimpsest, both used in a strictly archaeological context (Volpe, 2008), whereby contemporary landscapes are 'complex palimpsests of layered

landscapes', more than in other disciplines (Marini Barbiani, 2011).
Based on these assumptions, the archaeological landscape has a historical perspective. It is the product of the interaction between humans and the environment in which the persisting elements of the environment are continuously confronted with factors of innovation and change. Moreover, the archaeological landscape is also considered a *social landscape*, to the extent that it is not just the physical space of encounter between man and nature, but also the place of cultural, symbolic, ideological and power development, often shared collectively, as a result of social interaction.
At the same time, the landscape is also the material manifestation of the interaction between anthropic communities and the environment, it determines the formulation of choices regarding the place of residence, production and the circulation of people and goods. This definition has been widely used by Spanish scholars and it led to the classification of three categories of environments such as 'physical, built and imaginative' (Martin Civantos, 2006, pp. 4-5). For symbolic and conceptualized space there are valid arguments discussed by Criado Boado (1997).
In our opinion, this framework represents a *climax* in which the levels of knowledge, awareness and appropriation of certain territories by the human action and social consciousness gradually increase. Brogiolo (2007) highlighs the role of the economic aspect and proposes a reshaping of this triad in 'workspaces, human settlements, and ideological spaces'.

Beyond the site, towards the territory

New scientific ideas were progressively established in the last decades of the last century through an intense dialogue with other disciplines relating to the territory. Consequently, in terms of research methods and systems, it was recognised the need to design the right trajectory for future advancement of archaeological landscape studies based on previous works linked with the territory (David, Thomas, 2008; Cambi, 2011).

Between the 1960s and 1980s the layered and archaeological landscape was mainly seen as an alternation between site and off site areas located in between the settlements themselves. This vision, in analytic terms, was generally unbalanced in favour of sites, considered as the expression of a higher degree of human presence or action for residential or productive purposes, therefore hierarchically superior and dominant with respect to off-site/non site spaces (Cherry, Shennan, 1978; Bazzana, Guichard, 1986).
A broader view has replaced this sequence of in and off site spaces based on the role of population and employment through the recognition of the crucial importance of the *hors site* and *sans site* areas in territorial dynamics and replacing the centrality of settlements with the centrality of network of settlements and landscape (Zadora Rio, 1986; Leveau, 1999).
Off-site and non-site areas may constitute a varied source of archaeological information no less important than the one coming from settlements and productive sites. To this end, a good example is the recognition of landscapes as source of power (*powerscape*), focusing on installations outside the sites such as roads and canals (De Guio, 1990).
Recent literature addressing the equilibrium between in site-off site settlements argues that the landscape is nothing more than 'a *per se* wider archaeological site' and, in its social and productive connotations, is 'part of the material culture of the society that created these ancient landscapes' (Martin Civantos, 2006, p. 3).

Diachrony and interdisciplinarity in the study of layered landscapes

The archaeological perspective on ancient territories with regard to the spatial and geographical dimension is currently defined as non-selective, non-exclusive and non-hierarchical. This open view extends also to the chronological and historical sphere. The approach to layered landscapes is now predominantly of diachronic style, with no predetermined temporal partitions, paying attention to the evolution of territories and communities,

as well as to the transformation, not necessarily synchronous, of parts of the territorial system. This view does not exclude specific or chronologically more limited research paths.
Alongside the diachronic angle, the interdisciplinary perspective has become a basic approach for archaeological research (in particular, but not only, for landscapes) (Volpe, 2008). This well defined view of the territory and the diachronic attention to multi-factorial elements contribute to looking at the landscape as the product of interaction between residential areas, manufacturing sites, work spaces, rural and pastoral areas, woods and uncultivated areas, infrastructure for transport and mobility, and supply chains. Each of these elements is broken down into various archaeologically relevant units: in agriculture, enclosures, estates, and farmhouses; in livestock farming, pastures, meadows, cattle tracks, pens and stables; in woods, charcoal burning and cutting areas; in fluvial systems, banks and canalisation; in raw material extraction systems, stone and clay quarries and mines. Of great relevance to the analysis of archaeological units are peculiar (springs, wells) or marginal areas (lagoons, swamps, high mountains, desert and cold areas).
The spectrum of scientific disciplines with which archaeology interweaves more frequently and intensely includes geology, geophysics, geography, biology, botany, climatology, ecology, demography, history of agriculture, land and settlement development, agronomy, architecture of buildings and landscaping, urban planning, ethnology, cultural anthropology, and many others. In addition, the archaeometry (with its heritage of questions, issues, and scientific and technical- analysis) now constitutes the interface between the hard sciences and archaeology.

Environmental archaeology and landscape

Over the past few decades, the branch of environmental archaeology has found and defined its scientific outlines (Evans, O'Connor, 1999; Dincauze, 2000). It was driven by the increased awareness of the importance of natural factors and ecological

contexts in determining territorial dynamics and, particularly, by scientific experiences in the field of *historical ecology*.
The concepts of *ecosystem* (Butzer, 1982) and *ecofact* have contributed to disjoin environmental archaeology from the exclusive domain of prehistoric archaeology, broadening its field of application. In this new scenario, even the archeobiological research (in its archeobotanical, archeoantropological and archaeozoological version) has found new and more robust foundations.
In this framework, archaeological research is based on historical ecology approaches which highlight the importance of the local, regional and sub regional scales. Restricted geographical areas, on the other hand, represent the right dimension both for establishing and defining the relationship between human groups and the environment in order to modelling forms of acquisition and management of resources, and for creating a community identity and collective awareness.
Small scale archaeological studies are at the crossroads between methods and choices of local and topographical history of British tradition (Aston, 1985). Furthermore, contributions from German and Italian eco-history are also worth mentioning. The idea of ancient landscape seen under a local perspective is presented as being a historical and social product (Beck, Delort, 1993). Another view also considers environmental archaeology at macro scale, in particular when climatic processes of long duration and substrates and geo-pedological contexts are taken into account in the analysis.

Rural archaeology and landscape

Environmental archaeology studies are closely linked with those devoted to the investigation of the countryside. The latter have, in turn, inherited the research insights both from historical and geographical origins of settlements and productive patterns in agricultural areas (Guilaine, 1991; Choqueur, 2000), and from analysis of ownership and tax regimes, goods and resource production and management of settlements.

A branch of geographical and historical studies on rural areas and the environment has adopted a *regressive* method in surveying the territories, thus recognizing *de facto* the layered features of the landscape, the sedimentation of elements and the traces of various types and chronology. Contemporary landscapes contain only reduced fragments of previous landscape modelling, sometimes incorporated and used differently, sometimes deprived of their role and thus relegated to the rank of residues and material documents of pre-existing configurations. Other structures and systems undergo a more radical process of obliteration, thus becoming an obvious 'object' of archaeological research. Nowadays it is therefore possible to identify the degrees and the various combination of 'functional, archaic and fossil' elements, and to determine the 'actual, reliquary or fossil' feature of the landscapes (Quiros Castillo, 2004, p. 173).

The archaeology of agriculture, meant as applied research and interactions with the environment, thus adds, alongside the results of historical analysis, those of layered analysis, reconstructing phases and periods in chronological order starting from the more ancient up to the more recent one. This approach helps to investigate different rural landscapes and the formation of traces and evidences in sequences of layers (Kirchner, 2010).

The objective of the study of rural archaeology is also the reconstruction of factors affecting past agricultural networks, from particle units (Tosco, 2012) to complex estates systems. In addition, it also aims at the rearrangement of partitions, divisions and their organization (the archaeological analysis of the Roman *centuriatio* as well as enclosures, open fields and *bocage* are good examples). Furthermore, a different aim is that of deciphering the mechanisms of extraction and transformation of natural energies and the use of natural resources.

Finally, as far as types of ownership and working conditions are concerned, the entire countryside and its cultures are nowadays a debated subject of archaeological research (Ortega Ortega, 1998).

Measured, perceived and symbolic spaces: other landscapes in archaeology

There exist, within archaeological research, other branches which have recently captured the attention of international scholars investigating the landscape as a container and context of culture's mechanisms and social structure definition.
In particular, the focus of these new fields is that of manufacturing cycles of material goods, from the procurement of raw materials to the dismissal of tools. In this way scientists can better observe the interactions among production, landscape and natural resources by defining specific research paths, such as the hydraulic and mining archaeology.
Recently, the archaeology of architecture also focuses on the study of symbolic influences and signs of power revealed by certain architectures (sacred, fortified) and the influnce that these symbols exert on the landscape (Brogiolo, 2007).
Spatial analysis in archaeology has gained a notable attention worldwide in its methodological, theoretical and empirical applications (Hodder, Orton, 1975; Clarke, 1977). Ideas arising from the geo-descriptive and quantitative reflections have also significantly stimulated the landscape archaeology field by offering more elaborated spatial indicators (Kamermans, 2000). New applied techniques are the result of a debate originated during 1960s in the field of processual archaeology. The debate raised the question of settlement dynamics measurement and archaeological modelling with a perspective of a worldwide applicability. Nowadays, a specific branch of spatial archaeology based on data acquisition, data manipulation and modelling (Macchi Janica, 2003) aims at obtaining quantified, verifiable and measurable elements necessary to further investigate the historical settlements and ancient landscapes.
These new research techniques have found greater opportunities since the development of GIS systems. The availability of updated information and data has also spurred geographical analytical systems and models already used by archaeologists in the past (e.g., the Voronoi's maps-Thiessen's polygons).

The archaeological landscape is also a central theme in the light of reconsidering and updating the views of the postprocessual archaeology scholars (Tilley, 1994). These views put the emphasis, on one hand, on the construction of the landscape's idea; on the other hand, on the capacity of the landscape to produce meanings and symbols which affect how the landscape is perceived by individuals and communities.
Given the above considerations, landscape archaeology can be based on the three concepts of constructed, conceptualized and abstract landscapes, which define both the material and the *mental* and symbolic aspects of territory (Ashmore Knapp, 1999).
Studies on ancient and layered landscapes, therefore, fully incorporate the contemporary archaeological debate. The territory is the focus of this debate which insists on diachronic knowledge and on the need for recomposing the archaeological thought (Brogiolo (2007). The territory is therefore seen under global approaches (Volpe, 2008, p. 454) and for this reason it needs interdisciplinary contributions.

Concluding remarks

This paper has focussed on archaeological knowledge of landscape according to various research fields. Notwithstanding the problems in terms of compatibility across meanings, definitions, interpretations and concepts, the territory which emerge from contemporary research in archaeology studies shows us a multitude of facets as the outcome of interdisciplinary interactions between archaeology and other disciplines of the territory.
Multidisciplinary cooperation needs to put its attention on the protection, enhancement and development of historical landscapes, as well as on the integration of various knowledge in terms of new perspectives offered to public and civil evaluation and political-administrative choices concerning territorial planning.

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