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ARTÍCULOS

Gerión. Revista de Historia Antigua
ISSN: 0213-0181

EDICIONES COMPLUTENSE

https://dx.doi.org/10.5209/geri.83941

Preface

Landscape archaeology has long been undergoing a development that could be described as spectacular, especially in prehistorical studies and in periods or cultural areas where the lack of other types of information is a constant. This archaeological approach has proved to be an extraordinarily useful tool for raising social and environmental questions about a material record that is excessively closed in on itself without these perspectives. Furthermore, the recent technological development of Geographic Information Systems (GIS), forming a conglomerate of progressively complex computer programmes, together with the progress of remote sensing and new methodologies applied in the field of historical topography, have allowed extraordinary advances in surveying techniques and in the interpretation of the landscape, from a political, symbolic, cultural and socio-economic point of view, which can only be understood in their complexity from the perspective of Landscape archaeology.

The questions of Landscape archaeology (although sometimes not the literal expression) have increasingly become part of Classical studies, and in particular Hellenistic studies. This can be seen in themes related to the uses of the territory, the identification of the place of the peasants in society, the detailed study of building techniques, the generalisation of surveys as a primary research method, etc. In this sense, the new studies that have been appearing in the field of Classical archaeology and history and the application of new techniques have ended up including, also in the specific field of Greek studies, methods and interpretations that fully affect the archaeology of the landscape. In this way, the landscape, first and foremost political, social and economic, has been constructed through the use of new methods.

We refer, in the first place, to the Geographic Information Systems (GIS) that allow us to elaborate a cartography (**Fig. 1**), useful as a historical and archaeological tool, with which we can work efficiently and where it is possible to define any point with absolute accuracy; introduce all kinds of available information and that which we can obtain through literary sources, epigraphy, numismatics, archaeology, historical topography, prospecting, etc.; measure areas, perimeters, distances, river courses, contour lines, slopes, etc.; trace land and naval routes, calculate areas of visibility, not only on land but also at sea, and visualise the results in two or three dimensions, in a model which therefore becomes another source of knowledge and explanation of certain historical phenomena. In short, GIS provides three elements that could be described as extraordinary: a large volume of data with unquestionable precision and in a very short period of time. In their application to landscape archaeology, GIS allow us to reconstruct the ancient human and environmental landscape in a more reliable manner.

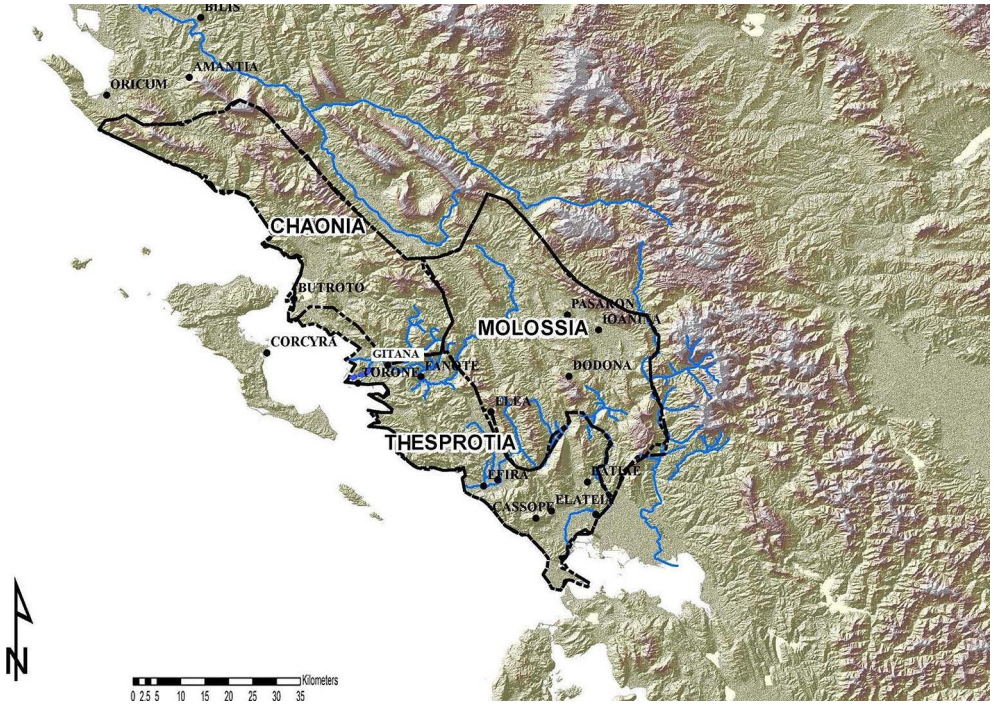

Figure 1. Ancient Epirus through GIS (Hélade F015-UAM research team).

However, GIS can not only be applied to the analysis of the "land" surface, so to speak, but can also be used in the study of naval routes, which played a decisive role in the context of the ancient Greek world. GIS analysis includes places of habitation and, in addition, relevant geographical features (headlands, gulfs, river mouths, inlets, etc.), which were used by the ancient Greeks and exploited from the point of view of navigation and the control of maritime routes. Not only the great naval routes, the return voyages from Magna Graecia and Sicily and the Adriatic towards Greece (both towards the Gulf of Corinth and towards the Peloponnese and, in particular, the region of the Pan-Hellenic sanctuary of Olympia, and then the Aegean), but also the shorter routes, those that linked the mainland coasts or the Greek islands to each other and the islands to the mainland. These are diverse territories, but all of them linked by shipping routes that were open to various social and cultural phenomena and which help to explain the changes that different Hellenic territories underwent in that mutual influence on the nearby mainland and the naval transit that constitutes one of the fundamental elements of Greek history.

Together with GIS, historical topography has proved to be a fundamental tool for the knowledge of the ancient landscape, especially in those areas where information from literary sources is scarce or contradictory; the detailed analysis of terrain features, as well as the cataloguing of topographical references of interest, not only from antiquity but also from other historical periods (e.g. travellers' accounts), has proved to be a highly effective means of approaching the various Greek regions under study. This method, which draws on the best traditions of historical topography developed by Western travellers to Greece mainly in the 19th and early 20th centuries, is at the same

time revised, updated and improved. It involves, first of all, the location of a site and its exact description accompanied by the analysis of the surface material and the drawing of the architectural remains with the modern toponym (see **Fig. 2** as an example). This description is supplemented by the inscriptions and their appearance in the sources, as well as the main bibliography on the site. This is followed by a consideration of its identification with an ancient toponym. In a second phase, the analysed site is connected with the surrounding environment and the description of larger geographical units in an analysis of the distribution of habitation places with the intention of discerning social, demographic, economic and military patterns, and with the possible delineation of its borders and natural resources, etc. Historical topography is certainly limited to grouped, multi-family settlements, but this method considerably increases the number of known sites, reveals the broad outlines of the demographic history and also the density of settlement, and, above all, provides decisive data on which the application of the other working methods and tools will later be based.

Figure 2. Paliokastro. Ancient Same (Cephallenia). Ancient city Walls: pseudo-isodomic (approaching isodomic) courses, between ca. 350 to early third century BC (38.252813, 20.660426, 246 m a.s.l.) (photograph by J. Pascual).

The advantage of this perspective lies in the fact that all the information available on each and every one of the grouped habitation sites is reviewed, sorted and catalogued at the same time. In other words, historical topography underlies the idea of the study of a culture measured through one dimension, space, without the need

for excavation. In short, the results derived from this topographic study can be of paramount importance. Politically, they can help us to establish the different states under study as hierarchical territorial entities (extension, borders, main and secondary nuclei, etc.); in terms of population, they can reveal decisive questions relating to the evolution of population and settlement patterns; and, economically, contribute to penetrating the economic structure of a given area, especially in the definition of the segmentation of uses that is established within the territory or *chóra* of each state and that aims to provide it with a sufficient level of economic self-sufficiency.

In its beginnings, prospecting was focused on large sites, those covering large areas (up to 300 ha) with a high concentration of pottery and architectural remains. However, since the latter part of the last century, this perspective has been extended to the wider territory, and has led to a redefinition of its methodological objectives. Consequently, the field techniques were deliberately designed to produce a high ratio of new knowledge rather than artefacts, and prospecting was applied to all sites in a given territory, irrespective of their size. It is also used taking into consideration different types of soil, with the intention of covering an area where there may be different types of settlement, a central place, different grouped habitats, farms, sanctuaries, necropoleis, etc., and preferably in an area where the territory of several *póleis* is arranged, an aspect, the latter, which is crucial to understand the impact of a border on the landscape. It was also preferable that it was not occupied by a modern city and that some excavation had taken place. The method consisted of dividing the field into study units (tracts) of c. 1/3 to 1 ha, in which the walkers maintained a certain distance between them (7-8 m, for example) and covered certain distances (for example, of 100 m) collecting along the way ceramic fragments, describing other elements, such as stones or walls with special care in hermitages and churches, and also taking into consideration the visibility of the terrain, scored from 1 to 10. Within each tract, a subdivision of a smaller area (about 10 m^2) was arranged to allow for even more intensive survey to avoid missing older or less well represented periods. All this was transferred to the GIS so that the density of fragments caused a halo effect that made it possible to locate the centre of a site and its boundaries, as well as the chronological changes within it. Intensive prospecting has borne fruit that can be described as spectacular. It has led to an exponential increase in the number of known sites, which are no longer confined to large settlements. We now knew the relationship between the size and importance of each settlement, the internal hierarchy of a territory, the place of residence of the majority of the population, the changes in settlement, the relations between the centre and the periphery and the population and socio-economic impact of a border line. In short, prospecting gave us the opportunity to explore the true diversity of ancient communities.

Spatial archaeology has also developed other methods that have revealed their capacity for the analysis of ancient societies. To introduce just a few of them, we refer to Thiessen's Polygons, the Central Place theory and Cluster analysis, and, especially for its application to the Greek world, the "Next-Nearest Neighbour" model (**Fig. 3**). The latter is particularly well suited to account for agrarian societies and can be satisfactorily accommodated, because of its simplicity and flexibility, to the analysis of ancient Greek states. This method, which basically consists of calculating the average distance between settlements, allows us to establish the average theoretical territory of a group of states, of *póleis* for example, and enables us to distinguish various categories of states as they move away from or towards the average theoretical territory proposed as a model. It also opens the way for an analysis of the territory, of the study of the

distribution of establishments in a regional framework, reflecting the extent of the territories of exploitation, their organisation, their resources and their influences. In this way, we can define the logical economic territory of a state and calculate the average territorial extension required for its subsistence. A series of economic characteristics and a type of economic exploitation that is essentially defined by the hierarchy and diversification of uses can also be glimpsed within the territory, and it is also possible to define the existence of a regional market that can also develop a series of supra-regional relations. It is also useful for the delimitation of the borders between the different states by comparing them with those that we can fix through what we could call a traditional approach, that is, taking into account the relief and historical data (textual, epigraphic, archaeological, etc.) This method is also effective in investigating the hierarchy of territorial occupation in the very articulation of the *chóra* of each state, the distribution of human settlements in a given territory and the relationship that can be established between the main and secondary nuclei and between the second-order settlements themselves. In short, the methods applied by Landscape archaeology prove that the distribution of settlements and states over a given territory is regular and non-random and responds to certain precise and observable characteristics, to a process that decides the installation of human groups in a region. It is therefore possible to establish a model for the distribution of settlements and states in a given region, which allows us to verify the validity of the information we have on the ground and through ancient sources and which is based, not only but also, on the notion of the distribution of sites according to regularities which are partly statistically measurable and verifiable.

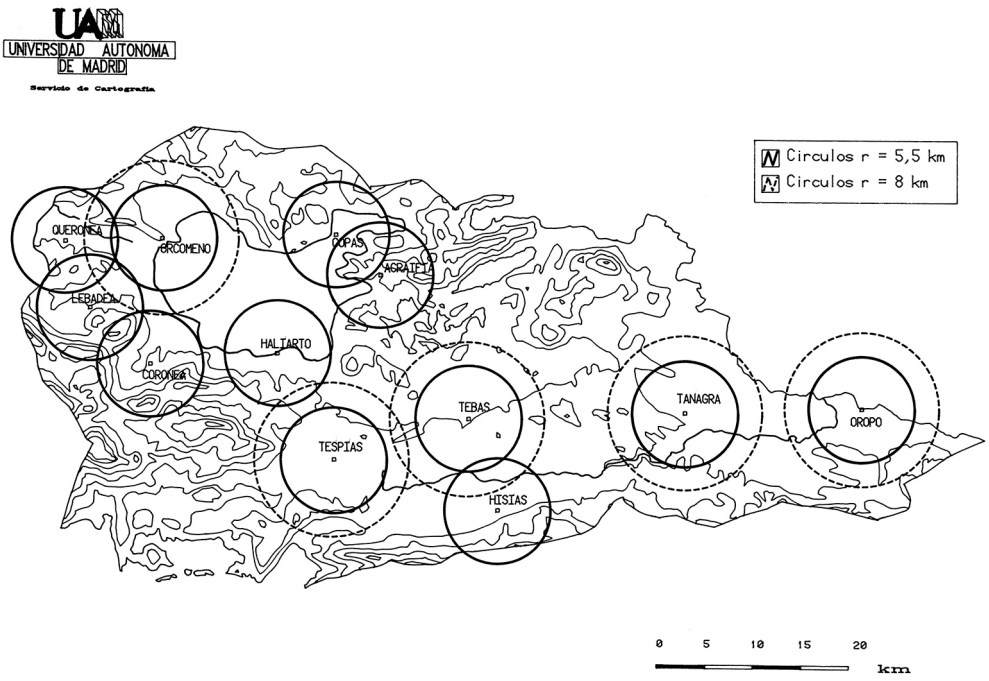

Figure 3. "Next-Nearest Neighbour" model applied to Classical Boeotia (Central Greece) (Pascual, J. (1996): "La Confederación beocia a principios del siglo IV a. C. I: La distribución territorial de las *poleis*", *Gerión* 14, 132).

It is worth stressing, as we have been doing, the importance of these new methodological approaches in Landscape archaeology studies specifically referring to the Greek world. Indeed, the polis has a demographic, social, political and cultural component, as well as a territorial definition. In other words, it is a political, moral and religious community that occupies a specific point in space. Thus, the polis possesses a territory that is its own in a dual economic and spatial sense, and which it needs for its subsistence in a world in which the ideal is autarchy. This territory is not empty but occupied by a whole multiplicity of settlements ranging from rural multi-family centres (*démoi, choría, kómai*, etc.) to isolated farms (*oikíai*) and defensive works such as towers and fortresses (*pýrgoi, phrouría*), rural sanctuaries and necropoleis. In short, we can assume that the settlements are hierarchical and form a whole with structured and interrelated parts, so that the distribution of settlements over a territory would be regular, not random, and responds to certain precise and observable characteristics, to a process that decides the settlement of human groups in a region. All this can be studied in depth with the help of new methods and by means of Spatial analysis and Landscape archaeology.

However, the human landscape is not only a demographic, political and socio-economic representation, however important this may be, but also carries associated elements, perspectives and studies which, from literature or the history of religions, increasingly introduce the perceptions of the constructed landscapes. In this context, works such as Pausanias' *Periegesis*, for example, have undergone an important revaluation in recent years. Pausanias has gone from being a mere guide for archaeologists to name buildings, to become an expression of perceptions of a territory thought of in religious terms. In this way, it is linked to the phenomenological perceptions associated with landscapes in part of the archaeological studies. In the same way, historiography has been revaluing the news transmitted by travellers. In fact, the accounts of Western travellers to Greece, from the time of J. Spon and G. Wheler (1673) to J. G. Frazer in the late 19th and early 20th centuries, often provide valuable information in the sense of the reconstruction of the ancient landscape and the recreation of a literary landscape that also has romantic and imaginary components.

These written landscapes, which make up the travel literature that was heir to and parallel to the grand tour of the British aristocrats, and of other countries (see **Fig. 4**), emphasise the importance of the observer's gaze. This feature is implicit in the first meaning of the term "landscape" given by the Spanish Academy of Language "part of a territory that can be observed from a certain place".

This definition, by emphasising observation, stresses the cultural fact of landscape construction. The landscape is in the one who looks at it and that "who" is always a social being, with their culture, language, tradition, skills or professional interests. Observing the same territory from the same place, an architect, a general and a peasant will probably appreciate very different features and highlight very different characteristics of the same reality. It is true that there is also a second meaning of "landscape" as "natural space admirable for its artistic aspect", which is clearly improvable, but do urban landscapes not exist? Do we not climb the Eiffel Tower to see the whole of Paris, or the Acropolis or the Lycabettus to see the "concrete desert" that is modern Athens seen from above? It has been questioned whether such a perception existed in ancient Greek. Some deny it, but, in the wake of the so-called "spatial turn", there is a proliferation of studies that also examine classical texts in search of evocations of specific places, different identifications of what in Latin is a

locus amoenus, questioning the possibility that if not the word, then the idea existed. We can think of Plato's description of the valley of Ilisus in *Phaedrus* as a framework for a process of attraction of a young man to philosophical activity.

Figure 4. Column drum from the so-called temple of Demeter and Kore (Thoricus, Attica). The surface is covered with graffiti with British and French surnames indicating the dates when they passed through the site from the 18th century and throughout the 19th century (photograph MVGQ).

The ancient Greeks, therefore, devised landscapes, even if they did not have precise words to define them as we do today. And they expressed this in texts, as in the example above, but also in practical buildings. Or does any fortification not involve a careful examination of the terrain over a large area to ensure conditions of defence, mobility, visibility, in short, an examination proper to Landscape archaeology? Plato, again, is fully aware of this in the topographical descriptions he gives of his devised cities: Atlantis, antediluvian Athens or Magnesia. He does not start from nothing. Institutional, democratic Athens had already fully understood the symbolic value of the gazes directed through the great architectural works that crown the Acropolis. Both the Parthenon and the Propylaea are aligned with the high points of the island of Salamis (**Figs. 5** and **6**). The scenes on the metopes of the Parthenon depict war scenes between Greek or proto-Greek gods or heroes and various evil powers. It has been rightly said that some of the defeated enemies, such as the Amazons, the Trojans and the Centaurs, are evocations of the Persians defeated at Marathon, Salamis or Platea. However, the Athenians do not stop there, for by aligning these buildings with the peaks of Salamis, they constantly emphasise the precise memory of the battle that set them free while consciously acting on the

symbolic dimension of space by constructing the landscape of commemoration. Thus, an architectural and urban detail of the temple acquires a redundant value with Aeschylus' *Persians*, engraving the memory of the victory in the same landscape.

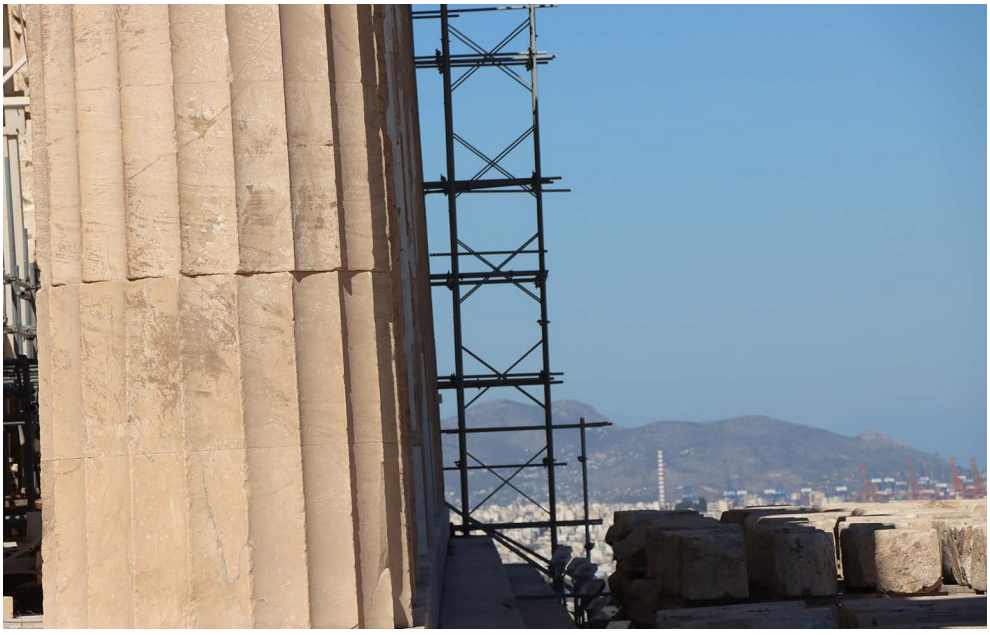

Figure 5. North colonnade of the Parthenon, looking west, aligned with Mount Vigla (left, 366 m a.s.l.) and Mount Mavrovouni (right, 375 m a.s.l.) (photograph MVGQ).

Figure 6. The Propylaea of the Acropolis aligned with the commanding heights of the island of Salamis (photograph MVGQ).

Consequently, the idea of landscape, although perhaps not the word, was present in ancient Greece through various creations in which rites also play a very important role and, in particular, the processions or pilgrimages that characterise the celebration of many of them. There is no need to insist on the journeys to celebrate the great Panhellenic festivals, with their gigantic effort of spatial and temporal coordination between different calendrical systems, by routes that are not always easy, in order to arrive in time to correctly celebrate the sporting competition, the literary *agón* and the sacrifices to the gods.

In conclusion, new research methodologies, demographic, political, socio-economic, symbolic, religious, philosophical and literary landscapes, from the Bronze Age to the Hellenistic period, from the Ionian Sea states to Athens, via the Peloponnese and Epirus are all topics that can be found in this monograph, which is the result of the recent meeting (LAC2020+1, "Landscape Archaeology Conference") held on 8-11 June 2021 in Madrid, supported by research projects PID2019-105281GB-I00 and PID2019-106782GB-100, as well as the BBVA Foundation and the Spanish Society for Classical Studies. Obviously, it is not intended to cover all the issues raised by Landscape archaeology and related new methodologies, but it can nevertheless serve to highlight three important aspects. On the one hand, it shows the interest of the application of methodologies from Landscape archaeology, Geographic Information Systems and Historical topography to the scientific knowledge of the ancient Greek world. Furthermore, and reciprocally, it highlights the multiplying value that the use of literary references with different levels of relevance and treated with the hermeneutics established for the study of texts has for the perceptions inherent to landscape archaeology. Finally, the different advances in this field, which have been promoted from different approaches and perspectives in the field of the study of Greek civilisation, are presented.

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