

EDITORIAL - LANDSCAPE ARCHAEOLOGY TODAY CONFERENCE PROCEEDINGS

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INTRODUCTION

This special issue of the Journal of Landscape Ecology presents selected papers given at the conference “Landscape Archaeology Today” held at Hebrew University, Jerusalem during 1-2 March 2017. This was the first such conference held in Israel and had participation of many young people as well as senior archaeologists. This resulted in a very stimulating conference which we plan to repeat in Istanbul in 2019. Our main purpose in holding this conference was to identify the key questions defining landscape archaeology in Israel and neighboring areas. Many of our landscape archaeologists had been working somewhat in isolation; this conference gave an opportunity to meet and identify others working in this rather new field of study.

The Ancient Near East is traditionally known as the cradle of modern civilization. It is rich in large settlements, the archaeological excavations of which provide us with enormous amounts of material to process and analyze in order to achieve better understanding of ancient cultures. However, this richness of data is a double-edged sword: the endless architectural remains, pottery, metal tools and other artefacts constantly appearing from the ground are so vast that the study of even a small tell is a life-time job which deserves all possible devotion and resources of an archaeologist. Douglas Bailey has given this phenomenon a very telling definition as “the curse of the Tell”.

Indeed, the archaeological record collected from the dwelling houses, temples, palaces and industrial facilities at the sites tells us a good story of the mundane and ritual activities conducted there. However, the life of a person in particular and of a community in general is far from limited to the borders of the settlement: people herd their livestock and harvest their cereals in the fields and they travel the roads, rivers and seas in order to trade the production surplus with their neighbors. Monuments are built in order to be seen from great distances, sometimes from many kilometers beyond the limits of the settled site.

Various natural features, such as deep caves and high peaks were sanctified by people, and many buildings of religious significance cannot be explained without understanding that they had been aligned with celestial features or specific landmarks located at significant distance from the sites. Either way, it is clear that only a small part of the human cosmos was located inside the habitation space: most of life was spent out of the territory of the homes and settlements, and clearly the story based on the study of these features alone will be far from complete.

In order to understand an ancient community in all of its complexity, we must extend the scope of our study far beyond the borders of a biblical tell to the very frontiers of its oikumene in order to include every possible aspect of human activity reflected in various natural and anthropogenic elements of the landscape, which in its turn will help better understand the economic, social and religious life of the community under study. However,

these elements do not float in the void. Just as all the aspects of the human life are inseparable from each other, the elements of the landscape are always interrelated and only are meaningful when studied in the context of the whole ecological system.

For the sake of this conference we define the study of archaeological landscape as a discipline, the main aim of which is the study of the interrelations between different elements of the landscape with each other, and between them and the people who inhabited this landscape, and the way these interrelations influenced social and economic life, and the cosmology of this culture. Therefore, we may try defining the main tasks standing before a landscape archaeologist in accordance with these aims:

- a. An ability to define and describe a physical landscape, to understand its various elements and the way they relate to each other as parts of the ecological system.
- b. An ability to embed a physical landscape into the social structure of a society inhabiting it.
- c. Understanding the symbolic value of the physical landscape as an element of the cosmological model of this society.

Clearly, these goals are very ambitious even for a scholar who studies modern landscapes with living respondents and media coming to his assistance. As these goals pertain to ancient and especially prehistoric periods only scarce remains of the material evidence are available for study, and the task of reconstruction of the landscape setting is arduous.

However, recent developments in the disciplines of humanities and natural sciences have brought new theoretical approaches enabling us to ask new research questions impossible to consider only few decades ago, on the one hand, and new technological discoveries provided us with field and laboratory methods which make the task of answering these questions feasible on the other hand. Unfortunately, the range of theoretical and field methods is so wide, that mastering them or even following the last developments in this field is not obvious for an archaeologist.

A landscape archaeologist is not a lone scholar anymore as in the early days of archaeology, but must be part of a team and part of the scientific community. Therefore, a forum where one can gain knowledge and share personal experience with colleagues is urgently needed, especially in the East Mediterranean basin where this field has been long neglected by mainstream archaeology. We set out to improve this situation.

In accordance with the considerations presented above we have made an effort to achieve participation of authors from disciplines as diverse as possible which can represent the complexity of landscape archaeology and its scientific questions. These lectures present discussion from both theory and methodology, applicable in the field and laboratory. Issues from various disciplines such as traditional archaeology, geomorphology, botany and archaeobotany, geographical information systems analysis (GIS), and many others have been organized in six different sessions: 1. Theory of landscape archaeology, 2. Ecological systems, 3. Agriculture in antiquity, 4. Landscapes Sacred, 5. Use of GIS in landscape archaeology and 6. Issues related to absolute radiometric dating of the landscape features (OSL). These are briefly outlined below, with contributing authors.

THE SECTION OF THEORETICAL APPROACHES IN LANDSCAPE ARCHAEOLOGY

Uhl, Pazout and Gassner bring discussions of various theoretical approaches to interpretation of social and political landscapes based of analysis of certain elements. **Pazout** brings a discussion on one of the most important yet frequently neglected elements

of the social landscape: roads. He tests the theory of predicting road networks as function of natural mobility potential and as a consequence of site locations. His case study is about pattern prediction of the network of Roman roads in the southern Golan. **Uhl** discusses the problem of settlement shift of the Eastern European Neolithic Cucuteni culture. She shows a model of transition from one period to another which is different from the better known Tell formation process. **Gassner** deals with one of the more dominant topics in the study of Herodian archaeology: the question of King Herod's personal involvement in the building projects attributed to him. She tries to answer this question by researching and discussing the location of a 'common denominator' in the structure of Herod's "Landscape" palaces, through the study of the relationship each palace has with its surroundings: all of them featured water projects on an unprecedented scale, which in the conditions of the arid Near East was both a personal statement of Herod and his imperial propaganda as a king.

Barromi Perlman in her paper contributes a theory on the complexity of the usage of photography in field archaeology, which on the first sight is a purely neutral medium of data. She shows how a photographer can change the narrative of his creation (intentionally or not) through the manipulation of the size and position of the workers caught in the photographs of the archaeological excavations or various elements of the surrounding landscape and turn them into a part of a social or even political discourse.

THE SECTION OF SACRED LANDSCAPES

This section deals with a specific aspect of theoretical study of the role of landscape in ritual life: two papers by Weissbein and Freikman deal with liminal zones of the social landscape frequently neglected in Tell-oriented archaeology of the Ancient Near East: **Weissbein** presents a reassessment of the Late Bronze Age temple at Tell Mevorakh based on the analysis of its landscape setting rather than the data acquired inside directly from the ritual complex and interprets it as a liminal monument rather than a road temple. **Freikman** discusses pre-urban hoards found in the dark and deep caves in the Samaria area. Unusual conditions in which these depositions have been hidden deep under the surface of the ground exclude a possibility of burial offerings or regular hoards. The discussion on the context of this assemblage produces a conclusion that they may be interpreted as ritual depositions, left by shamans at the border between the realms of the living and the dead members of the society.

THE SECTION OF ECOLOGY

Three papers deal with the interaction between man and habitat: **Soennecken et al.** have chosen a different approach to study patterns of settlement distribution in the Jordanian Gadara region surveyed by the team in 2009-2012. They study the correlation between the archaeological sites and the ecological characteristics of the habitat and then compare the ecological setting of the Roman period settlements with the earlier ones in the Wādī al-‘Arab region, concluding that newly founded villages were now less dependent on the natural water sources due to the system of water supply built there by the Roman authorities. **Ackermann et al.** present an even more integrative approach, thanks to the richer archaeological record in Israel, combining geomorphological, archaeobotanical, palaeofaunal and even archaeogenetic information available on this area to argue for Israel as a Total Anthropogenic Landscape as a result of human activity from the Pleistocene to the Industrial Revolution. Both studies demonstrate the need for integrative use of

geomorphological, biological and ecological information together with classical archaeological data to gain an understanding of the ecology of the past.

Zwickel presents the possibility of deduction of the economic model for existence of a settlement with help of the analysis of various elements of the agricultural landscape in its vicinity instead of concentrating on the excavation of the settlement itself. The economy based on agriculture is fluid, and its model can change significantly among adjacent areas or different periods of time at the same landscape unit.

In addition, **Homscher et al.** present new methods of collecting and recording data for the sake of study of an ecological system. The Jezreel Valley Regional Project (JVRP) team presents the possibility of using modern field-based methods of data acquisition, such as 3D photogrammetry, remote sensing, and high-precision ground control, and ways to integrate them into computerized data-management systems producing much more precise plans and imagery than with help of conventional methodology. Furthermore, they demonstrate the practical implication of this technology through the study case of a survey in the Jezreel Valley.

THE SECTION OF AGRICULTURE

Two papers has been dedicated to one of the most important factors in the relations between the man and his ecosystem: agriculture. **Orendi et al.** contributes an analysis of the agricultural installations from Tel Burna in conjunction with systematic archaeobotanical sampling of the site. Based on this data the team proposes a comparative reconstruction of the types of crop plants cultivated at the site during the Bronze and Iron periods and significantly enrich our understanding of changes occurring in the agricultural activity following the political changes in the regions. The paper by **Wieler et al.** presents the analysis of the pattern of agricultural installations in the Negev Highlands desert as a function of the levels of rainfall runoff during the Byzantine-Early Islamic periods. Moreover, based on comparison between the properties of these sites and modern installations they conclude that there probably was not severe climate change in the Negev for the last 1600 years.

SECTION OF GIS

(THIS SESSION WAS ORGANIZED BY DAVID GUREVITCH)

The development of digital technologies has brought new methods and options impossible to contemplate only 20 years ago. Geographic Information Systems (GIS) is one of them. Analyzing landscape within reasonable time and effort becomes possible are for anyone due to various computer applications developed during the last decades, many of them freeware. **J. Howry** presents a discussion on the challenges posed to a scholar in this field by the age of digitization. **Birkenfeld & Paz** present the results of an analysis of the Ramat Beth Shemesh highland settlement pattern in the course of the Late Bronze period. They bring an attempt to reconstruct Late Bronze Age socio-political interactions in this area using viewshed analysis: the pattern of lines-of-sight in this area points at the existence of sub regional centers visible from the surrounding settlements. The GIS method used to conduct such analysis in a short time has great protentional in the landscape archaeology. **Frumin** used similar methodology for a discussion on the localization of Sartaba, the second of the fire beacons in the chain between Jerusalem and the northern diaspora.

Applying the visibility test on the statistic terrain model he clearly showed that traditional propositions are impossible to accept, and proposed his own theory regarding the location of this station.

SESSION OF OSL

(OPTICAL STIMULATION LUMINESCENCE)

Gibson & Lewis presents a paper on the recently conducted discussion on dating of the agricultural terraces in the ancient Southern Levant. He argues that the absolute dates acquired with the help of the OSL method by Gadot, Davidovitch and other scholars should be treated with great caution. Based on the analysis of topography, site location, contention over territory, and other factors expressed through the local landscape he claims that spread of terracing should be dated to much earlier period, possibly Chalcolithic.

While this collection represents only about a quarter of the papers presented in the conference, it does reflect the range of questions which can be addressed in landscape archaeology. We hope that the next conference we plan for Istanbul in 2019 will develop these themes more fully.

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guest editors

