



5th Annual Conference
CE-TAG 2018
(Central Europe – Theoretical Archaeology Group)

The Production of Space and Landscape

Abstract Book

Conference dates: Monday 8th – Tuesday 9th October 2018

Conference venue: Haus zur Lieben Hand, Löwenstraße 16, 79098 Freiburg, Germany

Organizing committee: Michael Kempf and Margaux Depaermentier, Archaeological Institute, Dep. Early Medieval and Medieval Archaeology, University of Freiburg.

Reception fee: €20 (payable upon arrival at the conference venue)

Conference language: The official language of the conference is English.

Monday, 8th October 2018

10:15 Registration

10:45 Conference Opening

11:00 Keynote Lecture: Moving in space and time

*Thomas Meier, Archaeological Institute, University of Heidelberg, Germany,
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12:00 Lunch Break

1. Concepts and Cognition

13:30 Spaces and Places. A Foucaultian inspired theoretical commentary

Based on and in continuation of Paul Michel Foucault's approach of "Heterotopia" we assume that divergent forms of appropriation of a real place arouse different – partly competitive, partly contradictory, partly consistent with each other – spaces at the same time. These spaces are admittedly bound to their locality but they are not (pre)dominated by them. At the same moment we understand – after Heike Delitz – real places, which are architectonically designed, as a material manifested modus of a socio-cultural formation into which they have been inscribed and from which they rebound on social conditions. Also regarding Henri Lefebvre's works on the production of space as social processes' result of spatial practices we would like to explore the emancipatory potentials and conditions of possibility of subaltern groups by adding James Scott's explanations concerning resistance processes in apparently immutable semantically occupied and defined spaces.

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13:50 Landscape, spacing and the modern megalithic thinking

The aim of the proposed paper is twofold. First, in an attempt to widen the theoretical framework of the production of space and landscape in archaeology, I will introduce the concepts of landscape and spacing by cultural geographers John Wylie and David Crouch and second, using the example of the modern stone ring from Nemějice in the southern Bohemia (Czech Republic), I will try to show the possible implications of these concepts in interpreting archaeological situations.

In his article “Depths and folds: on landscape and the gazing subject”, John Wylie defines landscape as *the materialities and sensibilities with which we see*, (Wylie 2006, 531). In this point of view the landscape exists as a tension between the self and the world. In a similar vein David Crouch developed the idea of landscape *as the expressive poetics of spacing*, such landscape *can be multiply situated, engaging different temporalities in memory and mobile lives* (“Flirting with space: thinking landscape relationally“, Crouch 2010, 10). The term of spacing *emphasizes capacity and energies for change that is abrupt, non linear and non-accumulative, and that includes influences that are other-than-human* (Crouch 2010, 7). Presenting and discussing the chosen example the paper tries to explore the potential of these concepts for archaeological understanding of the complex networks among human, material and environmental actors.

Karolína Pauknerová

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14:10 Is it Greek? Reconsidering social space in Ai Khanum

Most theories of social space applied to archaeology, such as Lefebvre’s Production of Space, Chalmer’s extended mind theory, Handlungsräume, and DeLanda’s notion of deterritorialization tend to lay more focus on the immediate surroundings of social actors. These theories, while interesting, have failed to integrate new developments in social theory and cultural anthropology. Current scholars devoted to social theory have argued that one of the essential elements in understanding social space is that of the normative relation between actors. More specifically, Vincent Descombes has argued that social relations are not built on norms shared among a plurality of actors, but rather are based on norms that force actors to dialectically differentiate themselves from each other. What does this mean to our understanding of social space? Whereas the production of space surrounding the actors take centre stage in the theories named above, Descombes’ ideas applied to social space forces us to conceive social space in terms of dialectical structures, such as mine/yours, near/far, foreign/familiar, private/public, global/local, etc.

Ai Khanum is an exemplary case-study. Located in Afghanistan and founded in the Hellenistic period, the city is often labelled as an ‘outpost of Hellenism in the Far East’. At

face value, the city is composed of a diverse range of cultural features, with the Greek theatre, gymnasium, and inscriptions as the most recurrently highlighted elements. While scholars have increasingly incorporated theoretical insights from social sciences in their interpretations of the city, colonial undertones are still persistent. The aim of the presentation is to shed new light on how Ai Khanum is organized in terms of social space, in particular, how it managed to integrate different cultural features, and how people interacted within and across the city.

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14:30 Virgil and the production of 'mixed' landscape: surroundings of Taranto in *Georgics* (4.125-140)

The Latin poet Virgil shows different landscapes in his Augustan poetry: idyllic pastoral space (*Bucolics*), agricultural land (*Georgics*), the *Latium* (*Aeneid*).

Criticism has generally analyzed Virgil's landscapes as a intellectual and artistic production. However, especially in the *Georgics* (a didactic poem and a tribute to the *Satunia tellus*) we can look for pragmatic and cognitive aspects through a multidisciplinary insights between literature, history, archeology and cognitive sciences. An exemple is the landscape described in an *excursus* on gardens (*georg.* 4,125 ff.) which shows the conception of space perceived by Romans, in which natural elements alternate with others modified by man.

The examined space was near the fortified city of Taranto (an old Greek setting) in the area where the river Galaesus still flows (a natural park), where *flaventia culta* grown (an anthropized environment with cultivation of wheat), but close to unproductive fields (natural but negative element), if there were no man's commitment. But Virgil tells about an old farmer who turned that useless *ager* into a beautiful garden, declaring to have seen it personally (*memini... vidisse*) with details, almost to invite readers to visit it. Also archaeological finds of Museum of Taranto (MARTA) confirm agricultural activities in Roman times, and historical sources attest the presence of settlers there.

Virgil therefore emphasizes the importance of human modeling of natural space on large and small scale (cities, fields, garden), in which Italic-Roman people became masters; also our landscape's perception and space's production largely derives from them.

Francesca Boldrer

Department of Humanities, University of Macerata, Italy, francesca.boldrer@unimc.it.

14:50 Coffee Break

15:20 „Was Gott durch einen Berg getrennt hat“ ... Boundaries as practice and phenomenon of attribution

This presentation wants to contribute to conceptions of space and boundaries both as socio-cultural constructs and as physical phenomena. Starting from the social rather than the physical, it wants to approach possible ways to connect intangible (subsuming social, cultural, mental etc.) to physical phenomena in landscape. Drawing on a variety of approaches and definitions from cultural anthropology, social theory, and the wider field of 'boundary studies', the contextuality of social and cultural boundaries and their possible relation to topographical features will be discussed. Rather than assuming simple representational relations between both, they need to be considered as versatile parts in a constantly recreated web of meanings. To better understand what intangible boundaries may mean, I will talk about communicative boundaries, praxeological boundaries, motion boundaries – i.e. boundaries related to and resulting from different practices. Relating them to topography requires avoiding to define certain topographical features a priori as boundaries, but to reconsider both the physicality or materiality and the phenomenology of landscape, of space, and of place. I want to take a 'neo-materialist' position, emphasizing the 'affordance' physical phenomena, both topographical and resulting from human action, may offer to groups in space.

Alexander Gramsch

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15:40 Physical versus cognitive maps in modeling hunter-gatherers spatial behavior: The case of Late Paleolithic groups in the eastern part of the North European Plain

Some of the recent ethnoarchaeological studies represent sharp critics in respect to predictive modelling of the location of Stone Age sites based on landscape topography. The critic mainly underlines oversimplification of assumptions in the core of spatial simulations, which are solely based on resource extraction strategies and ignorant to occasional events (such as forest fires) and social and ideological factors (such as taboos etc.) known for the modern hunter-gatherer groups (Grøn 2012; 2018). At the same time, statistically significant correspondence between the site location and particular landscape types that was found in numerous researches indicates the statistically significant behavioral trends.

Contributing to the discussion on physical versus cognitive maps in modeling hunter-gatherers spatial behavior, we propose to focus on categorization of the mapped objects.

This approach is exemplified by two case studies. Our first case study concerns the Late Paleolithic sites, which are characterized by different degrees of preference to certain landscape types in Lubuskie Lakeland, Poland (Sobkowiak-Tabaka and Jasiewicz 2015; Jasiewicz and Sobkowiak-Tabaka 2015). Categorization of these sites provides an explanatory framework for the locational preferences. The second case study deals with Federmesser sites in the eastern part of the North European Plain aiming the number of occupational events and seasonality in respect to locational preferences. The obtained results identify subsistence strategies of the regional Late Paleolithic groups, which makes possible the detalization of predictive landscape modelling.

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16:00 Landscape Marking in the Ulúa Iconographic Tradition

This paper explores the ways in which features of iconographic traditions in areas of cultural contact can be (re)analyzed as external markers of constructed cultural landscapes that are internally situated and separate from the natural world but physically indicated by material culture markers. It thus builds on the cognitive landscape theory developed by Hudson and Milisauskas – which is rooted in the identification of cognitive landscapes physically indicated by material culture markers but extant only in the minds of their experiencers and accessible only through processes of cognitive mapping that link the external (physical) and internal (cognitive) worlds – and explores how this perspective can be applied to archaeological studies of cultural frontiers and regions of intense cultural contact. Taking Ulúa artistic conventions as our case study, we explore how iconographic compositions containing Maya and other foreign elements functioned as a means of marking hybridized cultural landscapes and negotiating both the region’s multi-cultural space and its associated identities. Particular attention is given to Copador ceramics produced around Copán, since the animal and human figures dominant in their iconographic compositions reflect the emergence of a new and hybridized cultural landscape and demonstrate one of the ways in which individuals and groups were able to mark their position within it.

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16:20 Mapping the Invisible Landscape

The landscape is produced through a wide variety of complexities arising from social, cultural, political and economic processes. These factors are not only constantly changing, but they are often invisible or difficult to perceive as a whole, as well as hard to trace, translate or to understand. However, while conventional maps always show a stable and a static aspect of the landscape, mostly focused on the physical attributes of the terrain, there are many mapping operations that are dedicated to revealing invisibilities, tensions, systems of control and repression, among other hidden experiences on the territory. These are approaches mainly operated from artistic practices or in the margins of planning disciplines such as architecture. Nevertheless, despite their lack of expression in relation to conventional methods of territorial representation, these operations bring to the forefront a vast constellation of continuous processes and networks of relations that are at the basis of the production of space and landscape. Thus, the present text intends to identify and analyze these processes of mapping and its relevance for the understanding of landscape as a continuous process of production and change.

Miguel Costa

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16:40 Wine reception and *Apéro dînatoire*

Venue: Archaeological Institute, Dep. Prehistoric Archaeology, Early Medieval and Medieval Archaeology, Belfortstrasse 22, 79098 Freiburg – *Inner Courtyard*.

(For registered participants! Please register until 30th September by email: michael.kempf@archaeologie.uni-freiburg.de)

Tuesday, 9th October 2018

2. Tools and Case Studies

9:00 **“Invisible scenarios, creating space in buried context. Experiences, limits and perspectives”.**

Up until the last few decades, the majority of attention was given to excavations and excavated contexts; however, the increasing application of remote sensing technologies, especially geophysical methods, have made buried and “invisible” landscapes accessible. Although geophysics is constantly improving thanks to the efforts of teams worldwide, buried contexts cannot be seen and studied in the same manner as the excavated ones. Therefore, it is increasingly important for current research to examine approaches that allow more information to be obtained regarding buried sites, especially those in which it is not possible to carry out extensive excavations in the near future. For this purpose, a useful method is Space Syntax which allows for the relation of a social landscape through its topological approach. Following the configuration of space, the technique allows the formulation of hypotheses regarding how people could have moved inside the space and which places were more suitable for social encounters. Through the Space Syntax method, it is possible to produce baseline data which can then be compared with traditional archaeological interpretations of a given spatial context. This paper aims to highlight some issues related to the interpretation of buried archaeological contexts, and to discuss previous applications of Space Syntax to those cases, in order to understand the limits and the opportunities this technique offers for the understanding of “invisible” scenarios.

Fabiana Battistin

Università della Tuscia, Viterbo, Italy, fabiana.battistin@hotmail.it.

9:20 **Modelling Mesopotamia – The production of emerging power relations in an irrigated landscape**

Small-scale activities many thousands of years ago in southern Mesopotamia changed the capacity of such regions to sustain large populations over long periods of time. Mesopotamia’s early anthropogenic irrigated landscapes seem to have emerged from short-term activities, but long term effects were massive. Water and irrigation can bring wealth and stability to communities and nations, but can also harm landscapes and food production on the long term. A narrow environmental threshold may separate stable, irrigated landscapes from unstable, over-used ones. Ancient Mesopotamia would have

'collapsed' because of salinization due to over-irrigation. However, as did the emergence of Mesopotamian society, its 'downfall' would have unfolded over centuries too. It is very likely that full scale effects of interventions are only visible by humans after some time has passed, possibly only in the next generation – which should make it very difficult for these next generations to relate the effects back to actions of their predecessors. The archaeological record of Mesopotamia is rich, and as such allows building mathematical agent-based models within which all different kinds of (human and non-human) agents 'act' and 'link' in building a computer-based society – which in this case would shape itself as the closely controlled irrigated landscapes of Mesopotamia. This contribution will show the results of first modelling efforts for early Mesopotamian agriculture. These results are based on close cooperation between modellers, irrigation experts and archaeologists. Therefore, this paper will also discuss how such cooperative efforts can be shaped in order to maximize productive outcomes.

Maurits W. Ertsen

Water Resources Management, Civil Engineering and Geosciences, Delft University of Technology, The Netherlands, M.W.Ertsen@tudelft.nl.

9:40 Testing methods for identifying boundaries in archaeology

In processual archaeology, Thiessen polygons or variants thereof that take settlement sizes into account were frequently applied to reconstruct boundaries. The results were often unrealistic because these approaches focus on map distances ignoring other topographic features such as rivers or mountain ranges. This observation suggests that modified approaches replacing the unrealistic map distances by least-cost distances provide more plausible results. In archaeological research, often neither the appropriate cost model nor the sizes of the settlements are known, and these deficits may cause errors in the resulting boundaries. But only if all model parameters are reliably identified, the hypothesis can be tested that a given model for boundary reconstruction fits to the data. The paper presents several tests on different scales concerning the boundaries in early modern times for a hilly region known as Bergisches Land east of Cologne in Germany, where historical maps provide the data for the model parameters. For instance, one of the earliest maps showing boundaries in the study region was created by Arnold Mercator in 1575. The map was commissioned to support the Counts of Berg, one of the parties in a conflict concerning some of the boundary sections. On a different scale the boundaries between the administrative units of the Duchy of Berg can be investigated as well as the territory of each settlement location. The latter relies on the fact that the settlement sizes are indicated on some historical maps.

Irmela Herzog

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10:00 Errands for erratics: modelling and explaining megalithic spacing on glacial moraines

The megalithic grave monuments of the Funnel Beaker Culture erected between ca. 3600 and 3200 BC in the Northern European Plain show a clear spatial patterning. They are often found in linear alignments (Zich 1999), and additionally, the graves and the contemporary settlements show mutually exclusive distributions (Schafferer 2014, 97). This patterning has been interpreted as the result of a meaningful construction of space along road networks on the one hand and between arable and burial land on the other (Müller 2013), a “teleological” hypothesis developed from the perspective of the grave monument as a targeted result. Here, we present a computer model supporting a “mechanistic” hypothesis that emphasizes the needs of agriculture, and not the grave monuments themselves, as the primary target of the extensive erratic-hauling during the Funnel Beaker period.

The original ice age number and distribution of erratics on a ground moraine is unknown, but based on historical data on megalithic landscapes such as Oldenburg county, their sizes and numbers can be estimated and randomly distributed on a circle. After random selection of potential points for monument building, the process of clearing the landscape from erratics is modeled on this virtual glacial landscape by several algorithms, and monuments are built until a large proportion of the area is cleared. This simulation is repeated 10,000 times. As a result, an algorithm based on two conflicting rules, 1) the resulting area without erratics should become as big as possible, 2) hauling distances should be kept as short as possible is able to reproduce the observed linear and exclusive patterning of Funnel Beaker monuments. The model also shows that clearance becomes increasingly laborious with time, explaining the cessation of megalith erection after a few centuries.

Therefore, we propose that glacial erratics, originally dispersed over the landscape, had to be removed from the fertile soils to allow for the use of the newly introduced ard (Rosenstock et al., in press). Hence, turning clearance cairns into megalithic monuments may have only been a second step in the creation of Funnel Beaker space.

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10:20 Coffee Break

10:40 Diffusing archaeological space

Methods provided by archaeological sciences - in the first place by archaeological prospection - enable the spatio-temporal analysis of archaeological evidence at the scale of landscapes. These datasets represent the archaeological record of observed phenomena initiated or influenced by human activity in relation to other environmental parameters. Based on these datasets, landscape archaeology is a rapidly evolving sub-discipline of archaeological sciences. For the traceable and reproducible analysis and interpretation of these observed phenomena a clear definition of spatial and temporal relations and the respective characteristics and attributes of spatiality and temporality are crucial. An axiomatic definition of the four-dimensional archaeological space is fundamental and must include the necessary theoretical framework. This space consisting of three spatial dimensions and one temporal dimension has to be defined and constructed in order to enable the spatio-temporal analysis of archaeological landscapes. For this purpose the correct synchronization of various observed phenomena is within the focus of research. To synchronize events manifested within the archaeological record and observed at different localities, the speed of interaction between these two sites is a necessary parameter, whereas each event is represented by a time interval. This speed - the propagation velocity - can be derived in applying the laws of diffusion theory. In combination with network analysis the interval-based temporal superposition of observed events can be determined similar to the spatial superposition of stratigraphic units. All this information can be displayed by a stratigraphic sequence respecting spatial and temporal relations at any scale.

Matthias Kucera

Ludwig Boltzmann Institute for Archaeological Prospection and Virtual Archaeology, University of Vienna, Austria, Matthias.Kucera@archpro.lbg.ac.at.

11:00 “The use of Space Syntax for studying buried cities: the case of the Roman town of Falerii Novi (IT)”.

The application of geophysical methods offers the opportunity to investigate large areas in less time and at a lower cost than stratigraphic excavation. Even if the detail and accuracy of a geophysical survey is lower than that of stratigraphic excavation, often it is the only method to obtain a map of a buried site. As a result, it is of great importance for current archaeological research to look for techniques that can aid in the understanding of buried settlements. One of the most promising techniques for this purpose is Space Syntax, which has previously been applied to geophysical images in only in few isolated examples. Here I present a novel use of Space Syntax for the interpretation of geophysical data from the Roman city of Falerii Novi, which is the focus of my current PhD research. My application of the technique utilized magnetometric survey data (Keay et al. 2000) showing the entire city plan. I then made inferences about the urban layout

in areas for which the geophysical data was not conclusive. After having drawn several different hypothetical city plans, I tested them using Space Syntax tools. Finally, I compared these different analyses in order to evaluate the consequences of each planimetric variation. Here I will present some of the hypothesis I generated to analyse the site of Falerii Novi and the results obtained through the application of this approach.

Fabiana Battistin

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11:20 Urban kinaesthetics – movement in constructed space

Urban space with its many aspects is a popular research theme in archaeology as well as in a range of other sciences concerned with life in cities. Studying how people shape space, and what roles space plays in (trans)forming social atmospheres as well as environmental, economic and political sustainability has been recognised as crucial in urban research. Nevertheless, the incorporation of the socio-temporal dimension has been limited in archaeology which builds its theories on tangible material evidence. This is mainly because of the large amount and detail of input data required, normally generated only in open-area excavations and survey. The presented argument develops the notion how people's movement differs in urban and landscape environments in terms of human decision-making and sensory perception. This paper further highlights how urban spatial culture has been studied in archaeology and other related sciences through focus on change. A side-step is proposed in a so far little explored direction of spatial continuity as opposed to change, by focusing on those aspects of urban space which display the smallest modifications over time, such as the street networks. Following this line of reasoning, we can also suggest where change, when it does occur, has a more significant relative impact on social conditions.

Archaeologists are used to analysing settlement development in time-slice perspective looking at their development over various 'periods'. I demonstrate how studying the final product – the preserved town layouts or living cities can inform us about long-term patterns in the spatial culture of a certain region.

Monika Baumanova

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11:40 Landscape – Skyscape – Horizon: a Small-Scale Analysis of Sanctuaries at Augusta Raurica

The term *skyscape* has been introduced relatively recently into archaeology. It provides a theoretical framework for studies inquiring into the meaning of celestial bodies and the sky from an *emic* perspective. Like *landscape*, *skyscape*, as mirrored for instance in myths, is culturally constructed and as such, in combination with the material record, may inform about a past society's world-view. This paper explores the concept of *skyscape* by using the example of the sanctuaries of the Roman veteran colony Augusta Raurica.

Melanie Sticker-Jantscheff
University of Basel

12:00 Lunch Break

13:30 On the Significance of Landscape in Minoan Archaeology

Since its beginnings Minoan archaeology aims to cluster various sites to standardized categories of settlement types (palace – villa – sanctuary). While some of these categories might be useful, the uniformity ignores striking differences between most Minoan settlements. Even though the so-called palaces undoubtedly possess striking similarities in size, function and architectural appearances, they still differ in several peculiarities. This applies even more to smaller structures, such as 'Minoan Villas' and undefined settlements. These differences are to a great respect founded on the diversified landscape of Crete. Depending on differing physical environments settlements had differing needs and possibilities. These initial positions, given by the landscapes, provoked unique developments, leading to unique traditions. This contribution is going to highlight the influence of specific landscapes on functional and architectural characteristics of individual settlements on the one hand. On the other hand, it emphasizes the need of considering natural borders and bonding in social and economic network reconstructions. Here again considerations on social systems and economic networks base on the constructed categories of so far known sites. Likewise, the influence of landscape is commonly neglected. Even though a reconstruction of the ancient man-made landscape is impeded by the lack of knowledge – still many sites remain unknown – including the impact of natural characteristics amplifies profound assumptions. So, this talk discusses assumptions on correlations and connection in Minoan Crete based on the given landscape.

Sebastian Adlung
Archaeological Institute, University of Hamburg, Germany, sebastianadlung@gmail.com.

13:50 On the way to the mountains – Relation between the lowland and piedmont areas in the Late Bronze Age

The paper focuses on the settlement pattern in the area of central Asia (Surkhan Darya Province – south Uzbekistan) during the Late Bronze Age. It deals with the question of the presence of the LBA settlement in the piedmont and on the relation with settlement in the lowland. The studied region is delimited by the natural borders – on the south by the river Amu Darya and on the north, west and east by the mountain ranges (Bauysun, Kugitang and Babatag Ranges). The area consists of three landscape types and each of the milieu differs in the natural conditions. The irrigated lowlands serve mainly for the agricultural purposes, semi-arid piedmonts are used for pastoralism and small-scale agriculture and the mountain areas are used for seasonal transhumance. Few years ago it seemed that the LBA population occupied almost exclusively the fertile lowlands, where the settlement was concentrated into a several clusters. During several last years a new LBA sites were discovered in the piedmont area, too. Although the density of the settlement in the piedmonts seems to be lower than in lowlands, it is obvious that the people in LBA expanded also there. One of the possible explanations why they do that is, that the population of LBA extended towards the mineral sources that are located at the foothills of the mountains. It is also possible to consider that the placement of the LBA sites in piedmont is related to the path system that leads though the mountain passes into the neighbouring regions.

Anna Augustinová

Institute of Classical Archaeology, Faculty of Arts, Charles University in Prague, Czech Republic, anaugust@gmail.com.

14:10 An Iron Age liminal landscape on the Swabian Jura, SW Germany

The Heuberg is a 10 x 20 km landscape in the southwestern part of the Swabian Jura. In contrast to adjacent landscapes such as the upper Danube valley or the Baar, the Heuberg has a low settlement density during the Iron Age. This observation has traditionally been explained while referring to the limited agricultural conditions: infertile soils, low annual temperatures, high precipitation and long winter and frost periods characterize this landscape. In addition, there is only limited access to fresh water since it is a karst landscape. This argument is unconvincing because it presupposes that prehistoric societies perceive landscapes just as we do today in modern capitalist societies.

Using the concept of liminality, we get a much better understanding of the Iron Age land use on the Heuberg. Archaeological evidence suggests that the entire landscape was structured in order to perform rites of passage during the Hallstatt and the La Tène period. Based on the distribution of settlements and burial sites, three different zones

can be identified on the Heuberg: a “landscape of the living”, a “landscape of the ancestors” and the “void”. The center of this ritual landscape is the so-called Heidentor, a rock formation with the shape of a gate. It can be shown that these three zones only exist as long as the Heidentor is used for ritual purposes. With the abandonment of the ritual use of the site, the conceptualization of the Heuberg changes.

Jan Johannes Ahlrichs

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14:30 Coffee Break

14:50 The fragmentation of landscape – Early Medieval land-use strategies and settlement continuity in the Upper Rhine Valley

Modelling of archaeological remains in the landscape is a common tool in multidisciplinary research projects that focus on the movement of material and people. The interactions of human, material, and environmental spheres, however, depend on the scale, permeability and availability of the environment. A consistently populated large-scale site-catchment in the Upper Rhine Valley was chosen to understand local mobility patterns in the 5th and 6th century AD. Social structure and social organization changed at the transition from the Imperial Period to the Early Medieval Ages, affecting land use strategies and economic developments. Larger infrastructural networks were replaced by small-scale dwelling assemblages indicating local spheres of influence in a rather fragmented landscape. Since Early Medieval settlements are rarely detected (or detectable) in the broad research area, the spatial distribution of so-called *Reihengräberfelder*, grave groups and single graves enables the spatial transferability of settlement dispersal, land-use change and exploitation. How did land-use strategies alter in the late 5th and 6th century? What is the spatial link of burial site and settlement spot and how is that relationship biased by the modern residential coverage? Spatial analyses of GIS-based and remotely sensed geomorphological data deriving from satellite imagery were conducted to relate environmental conditions to hypothetical land-use opportunities in this highly fluctuant and continuously utilized area.

Michael Kempf

Department of Early Medieval and Medieval Archaeology, University of Freiburg, Germany, michael.kempf@archaeologie.uni-freiburg.de.

15:10 Societies, space and structures

From the middle of the 5th century AD onwards, the so-called *Reihengräberfelder* were found along the borderline of the Roman Empire in the West. At the beginning of this development, the cemeteries were mostly lacking any organising principles. Not until the 6th century AD, the necropolises differ in the way, how the burials were arranged to each other: they show real linear patterns. How can this phenomena be interpreted and what does it tell us about the Early Medieval societies?

Susanne Brather-Walter

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15:30 General Discussion

16:00 End of Meeting