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Medieval society and landscape, their reciprocal relationship and influencing

Dissertation

English abstract

Introduction

Archaeology is a discipline focused on human. And although we can find many specialisations in it, like medieval archaeology or environmental archaeology, we should not forget the possibilities of stepping out of these specialised ways or of binding them together. Archaeology can also contribute to the knowledge about us and about our own society. The ways in which medieval people have dealt with nature offer many interesting possibilities of ideas and concepts, which are applicable not only on archaeological methods, but also on a reflection of us.

This study aims on topic of a relationship between medieval society and a landscape with example of the relationship with soils. This choice is based not only on an importance of the soils for medieval people, but also on the importance of soils in archaeological research. The soils are an archive of archaeological information and are also one of the most used explanatory factors of environment oriented interpretations. But these interpretations often lead to inconsistent and wrong results. This study is therefore aimed also on a critique of archaeological methods.

To make such critique possible - as to evaluate archaeological methods and correctness of their application - it is necessary to evaluate them from some point of view. Thus study therefore presents a concept of intention - a concept focused on analysis of actions of people in history towards nature. There is a question if the action was performed intentionally, or unintentionally. This concept should improve archaeological research of past relationships between humans and nature. It should be applicable in methods preparation stage of research as well as in an interpretational one.

This study comprises of a presentation of an intention concept, and then there is a section focused on soil research in archaeology. Third part is aimed on presentation of three case studies (abandoned medieval villages), where this concept and detailed soil researched was performed.

Intention concept

There are presented many examples of these stages of human – environment relationship:

perceiving – classification – exploitation – awareness – change

The core of the concept is that it is necessary to distinguish, if researched and analysed actions of historic people towards the environment were intentional, or unintentional. It helps to distinguish, if some environmental characteristic (e.g. soil) could have been a deciding factor of these actions. The concept touches here an environmental determinism in particular and stays that it cannot be easily bound to interpretations. Not always the environment played a role, although it can look like it did.

## Soils in Archaeology

The soils in archaeology can be divided into two main topics. The first one, soils as archives studied more in geological and sedimentological ways, is omitted here. The second one is more archaeological and geographical in approach and deals with soils as environmental factor influencing the life of historic societies. But there are many problems in practice of this approach:

It is not standardized – terminologically nor methodologically

There are many particular studies, but no general book about it (it is obvious more in comparison with that geological approach to soils in archaeology)

Uniformity is hard to found not only in topic itself, but also in studies of every one author

It is usually strongly deterministic seeing the influence of soils on historic societies

The interpretations and results are usually vague

The results are non-conflict – it is hard to oppose them, but it is also hard to test them

There are many studies with opposite results and nobody has problem with it

There is usually no new knowledge – the results correspond with authors general presumptions

This leads to two problems. The first one is about methods. There is no substantial development of methods in last few decades; there is also no substantially new knowledge. It also leads to the view seeing the soils more like a piece of scenery. There are some studies which are methodologically innovative, but generally are not reflected. The second problem is about topic. The soils have a great potential of bringing new knowledge, but nobody seems to use it.

It is necessary to use new methodical approaches to uncover the potential of soils. This study also presents methodical rules which should be followed in such research.

### Case studies

The above mentioned concept and methodologies can be applied on region based studies or on local based studies. This study presents three case studies of local character. The local based studies have an advantage of working with soils directly bound to known archaeological structures (medieval fields in this case).

Methodically, the case studies research is based on these presuppositions:

The people in historic times got a knowledge about the soil and they were aware of their different qualities

They were also aware that they can improve this quality

This has led to intentional spatial diversity of agricultural management

It is possible to get knowledge about this management by means of research

XRF spectrometry can be used to uncover the signal of management from earth

The signal can be extracted from data by multivariate analyses and it can be analysed and visualised spatially

It is possible to interpret results in terms of intentional management, different economic strategies among farms and so on

The researches have showed that it can really be performed that way. There were chemical signals in the soils and more: there were usually more signals than one. These signals were differentiated by means of multivariate analyses. The spatial distributions of these signals were different throughout the fields and also throughout the farms possessions. There were more elements carrying anthropogenic signals: P, Zn, Th, Mn, K, Sr were most usual, but also indications of Ni or Cr were spotted. Two of these case studies were published and are available online:

Horák, J. – Janovský, M. – Hejcman, M. – Šmejda, L. – Klír, T. 2018: Soil geochemistry of medieval arable fields in Lovětín near Třešť, Czech Republic. CATENA 162. 14-22.

Horák, J. – Klír, T. 2017: Pedogenesis, pedochemistry and the functional structure of the Waldhufendorf field system of the deserted medieval village Spindelbach, the Czech Republic. IANSA - Interdisciplinaria Archaeologica: Natural Sciences in Archaeology 8/1, 43-57.