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Exploring the Roman villa World between Tongres and Cologne

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Summary

This study explored the potential of the archaeological dataset to improve our understanding of the Roman landscape in the loess-region between Tongres (Belgium) and Cologne (Germany), using a variety of methods and tools, including a Geographic Information System (GIS) for the registration, visualisation and analysis of the datasets. The results of more than 150 years of archaeological research were uniformly interpreted and used to reconstruct the Roman landscapes in the northwest of the empire.

The aim of this study mapping the results of 150 years of archaeological research in three different countries in order to reconstruct the different elements of Roman life in this part of the empire has shed light on a wide array of topics. Although not all of the lines of inquiry introduced in chapter 1 could be followed, at least some of the most important questions were answered.

Some of these answers were not sought intentionally. It came, for example, as a surprise how influential the different archaeological traditions in each of the three countries comprising the study area turned out to be. The time spent on data collection resulted in a profound knowledge of the histories of archaeology in each country, pertaining to the prevailing methods, the most important excavations and sites and the most influential researchers. This, it turned out, was vital knowledge to gain a full understanding of the dataset. It made assessing the reliability of each individual item in the basic dataset significantly easier. The influence of differing archaeological traditions on the resulting maps, however, was completely unexpected. It was found that the variance in settlement density in the region, presented in chapter 5, is largely due to modern-day archaeological practises, rather than environmental circumstances in the Roman period. This was something that would have been hard to establish without extensive knowledge of the archaeological traditions in each country. These outcomes should also be seen as an incentive to actively look at what is done, in archaeological terms, in neighbouring countries. This is difficult given the situation most archaeologists find themselves in today, with budgets, deadlines and the competitive tendering process leading research agendas. It is hoped, therefore, that the results of this study will encourage archaeologists to reflect on past archaeological practises and prevent them from underestimating their influence in the past and today.

Upon embarking on this study, the goal of mapping the Roman landscapes seemed a straightforward task. At the end of the data acquisition phase, however, it became clear that the diversity in information, especially in terms of quality and reliability, was such that the production of the desired map almost seemed an impossible task. The fact that most national archaeological databases register archaeological findspots, rather than features such as settlements or cemeteries, generated difficulties in particular. This led to a realisation that the basic dataset would have to undergo a reappraisal in order to produce the desired maps. Use of geo-software, in this case ArcView, facilitated this reappraisal process. It allowed for the inspection of every single item registered in the first dataset, in terms of the archaeological information and the actual location of the material. Together with criteria for the characterisation of data, it was decided to introduce three levels of interpretation. This helped to gain information about the composition of the dataset and also made for homogeneity, within the overall dataset, and within the different categories that were used. The reappraisal, executed according to guidelines and criteria formulated specially for the Roman landscape in the study area, resulted in a homogeneous, reliable, dataset that allowed for interregional comparisons. It also eradicated biases

caused by differing archaeological traditions, not only in the three countries, but also over more than 150 years of research. Although this reappraisal was unplanned, it proved to be a valuable exercise. The results provided a solid basis for the reconstruction of the settlement landscape; the reappraisal method itself can now be used in other similar landscapes, where the same problems of data heterogeneity exist.

The next step in this study was the reconstruction of the settlement landscape. This entailed a second evaluation of the dataset, whereby all sites containing settlement evidence were analysed again with focus on the archaeological material and its location. Based on the spatial dimensions of excavated settlements in the region, guidelines were formulated that were used to decide which sites to map individually and which to merge together into one settlement. Thus, a new settlement dataset was formed using the strictest criteria. Next, funerary evidence was used to identify possible settlement, based on archaeological information that burials were nearly always located in close proximity to settlements. Again, this was based on actual observations from the study area. This resulted in a second dataset, that used funerary sites as evidence for potentially undiscovered settlements. The last step consisted of a reappraisal of find material assemblages that could not be characterised according to the criteria formulated in chapter 3. This was a group of considerable size. It was argued that these often humble find material assemblages could be considered as evidence for small post-built settlements, possibly single farmsteads. Working with that assumption, a third dataset was created. This way three settlement datasets were made, each with a different character.

Two of the new datasets, the smallest, consisting of 1186 sites, and the largest, consisting of 1944 sites, were then used in several analyses and calculations. The advantage of working with two, rather than one, datasets was that they offered ranges, and explored minimum and maximum values, for example regarding settlement density and demography. Interestingly, the 'behaviour' of the two datasets, though fundamentally different in nature, was by and large the same with regard to the influence of environmental factors. This could be seen as evidence for the validity of the assumptions made that certain types of funerary evidence and even small concentrations of find material can be considered reliable indicators of Roman rural settlement in the region. However, further research, preferably through excavated evidence is needed to substantiate this claim.

An important aspect of the second and larger dataset ($n=1944$) was the proposed proportion of post-built settlements. Although the assumptions behind the interpretation of certain small finds assemblages as evidence for a post-built site may be liberal, the scenarios it produced potentially provoke new ways of thinking about the landscapes on the loess. In the smallest dataset ($n=1186$) only 3% of all sites were interpreted as being of the post-built type. This means that according to the most strict criteria, 97% of all settlements in the study area were of the stone-built type. In the large dataset ($n=1944$) the post-built settlement was still a minority at 35%, but it showed the possibility of a large number of rural sites that until now appeared to have been missing from the archaeological record in the study area. Focusing on the results of systematic surveying and excavations in the lignite mining region in the German Rhineland, it was demonstrated that here the proportions of stone-built to post-built sites might have been equal, which is important information for the reconstruction of the social organisation of the rural landscape (see below).

The issue of settlement density in the region was explored using the two settlement datasets. Using the dataset of 1186 settlements produced a density of 0.33 sites per km^2 . Use of the dataset of 1944 sites resulted in larger areas of a higher density, in some areas as high as 4 sites per km^2 , but showed that in many parts of the study area density remained lower than one site per km^2 . However, it was argued in chapter 5.4 that these averages are due largely to bias created by modern-day archaeological practices, rather than being a reflection of the situation in the Roman period. The main evidence for this claim is based on the observation that the highest density is found where a combination of non-invasive and invasive archaeological research methods has been systematically applied to an entire region. A combination of highly favourable environmental circumstances could not be attested in these areas.

Based on the results of the best-researched micro-regions of the study area, southwest and east of the German town of Jülich, a settlement density of 3 to 4 settlements per km² was proposed as a realistic scenario for the entire study area. Regional variety in settlement density as a result of cultural factors other than the ones tested in chapter 6 remains an option. This would require further investigations, preferably based on new field work.

In chapter 5.4 possible demographic scenarios were explored. Firstly values for the entire study area were calculated, based on the actual settlement density numbers. This resulted in an estimated population of between 17,000 to 28,000, based on an average of 15 people per settlement. The next step was to calculate scenarios based on the four settlements per km² density proposed earlier. This resulted in an average of 206,000, or 60 people per km². These numbers were then used to explore the topics of territory size, labour force, and living arrangements at settlements. It was suggested that a composition of two smaller villas and two single (post-built) farmsteads per km² would constitute a realistic scenario, whereby the two villas exploited 45 hectares each, and the two small farms 5 hectares each. Every villa would house 3 of the 4 labourers needed on a permanent basis, with the other labourer living on the small farm. Although much more research needs to be done on this topic, it is hoped that the scenarios presented here demonstrate archaeologically viable models for the Roman agricultural world. In my opinion, research weaknesses such as the amount of labour, both permanent and seasonal, necessary to work the land, and where these labourers lived, need to be addressed in future research. If not, settlement density remains an almost abstract phenomenon that has little to do with the reality of Roman farming.

The settlement datasets created in this study were sufficient to answer the majority of research questions regarding settlement patterns and organisation. It has been shown that the study area was a predominantly rural landscape, with only 1% of all sites being characterised as ‘towns/small towns’. The range of settlements turned out to be more diverse than merely the traditional ‘town’ – ‘villa’ – ‘native farm’. Starting with the settlements with an urban character, there were the ‘official’ towns of *Atuatuca Tungrorum* and, located just outside of the study area, *Colonia Claudia Ara Agrippinensium*, with quadrangular lay-outs. Next there were the ‘unofficial’ towns, such as the *vici* of *Iuliacum* and *Coriovalum*, which appeared to have developed much more organically, and small ribbon settlements, such as those found at Rimburg (Dutch Limburg) and Baesweiler (German Rhineland). The reappraisal of the settlement dataset further identified a possible fourth type, named ‘concentration of habitation’ in this study. These concentrations were not located on main roads and could only be identified because of overlapping buffer zones (see chapter 5). What this type of settlement constituted of remains unclear at present, due to a lack of detailed information.

Sites with a rural character were also more diverse than previously thought. This study, primarily based on survey evidence, avoided the use of the term ‘villa’ as the main distinguishing factor was considered the type of building material. Hence the use of terminology such as ‘stone-built’ and ‘post-built’. The group of stone-built settlements turned out to be the dominant settlement type, regardless of which dataset was used. However, exploration of the different variables of each stone-built site showed a considerable diversity within this group. By focussing on specific variables (such as lay-out of a settlement, number of rooms, and the presence of villas and certain architectural and decorative elements) it was possible to identify several discrete ‘types’. Some of these were arguably ‘richer’ than the others and it is tempting to identify them as dwellings of the elite. However, more information is needed, preferably in the form of extensive new research, before any such claims can be validated. Nevertheless it is remarkable that, in comparison to other ‘villa-dominated landscapes’ in the North, most excavated stone-built settlements in the study area were quite modest, consisting of small and medium-sized villas, with only two ‘palatial’ sites. This evidence seems to substantiate the assumptions made by other researchers regarding a ‘middle class’ of farmers at villa settlements, in addition to the upper class of landowning elite.

Settlements built without any typically Roman building material (concrete, natural stone, and ceramic building materials) appear to have been largely overlooked in the past in the study area. Recent excavations have, however, proven the presence of post-built settlements dated to the Middle Roman period, consisting of several contemporaneous houses. New research into the status, function, and development of this type of settlement is badly needed. In the chapter on settlement density scenarios (chapter 5) it was suggested that labourers and their families might have lived in single-farm settlements on the edges of the estates where they were employed. Archaeological evidence to substantiate this claim is limited, however it was thought that the small finds assemblages scattered amongst the larger sites might represent such small single farms. Excavations of such find spots, often detected through field surveys, could help to establish the validity of this assumption. If it turns out that no such farm-type existed, however, this has serious implications for our understanding of the social organisation of the region. If the supposed 'working class' of farmers is nowhere to be found in the form of a separate type of settlement, this means that either they were living somewhere else, or that our notions of the assumed 'upper' and 'middle' class farmers, and where they were living, should be readjusted. Further research in this topic would be welcome.

It has also been argued here that the different types of rural settlements (stone- and post-built) were found in more or less the same landscape zones, and that larger and smaller stone-built settlements were found throughout the study area, without any obvious clustering. The locational analyses performed in chapter 6 indicated that, in general, soil type, in combination with distance to the nearest town and distance to the nearest main road, were the most influential factors on rural settlement, stone-built and post-built. Obvious differences in preferences for certain locations for the two main types of settlement did not materialise. The most likely explanation for this observation is that post-built sites housed the labour force necessary to work the fields belonging to rural estates.

The exploration of the settlement dataset in the study area resulted in the identification of a settlement system consisting of several types of sites, urban and rural, based predominantly on the presence or absence of certain archaeological indicators. To include additional factors to complement the material aspect, such as social status and economic functioning, would require additional research, but it is hoped that the study at hand has provided a sufficient basis for such studies.

Overall, the changes in the settlement landscape of the study area during the first centuries AD were profound and widespread. Within the course of a century, stone, mortar and ceramic building materials were used to construct houses and buildings throughout in the study area. It is clear that the stone-built settlements became the dominant type in the region. Virtually every excavated stone-built rural site was laid out with an enclosed rectangular farmyard where the main house and the auxiliary buildings were located. All of this indicates that the landscape within the study area underwent a dramatic transformation, starting in the early Roman period, and ultimately resulting in a true 'villa-dominated' landscape.

Unfortunately, detailed dating information was very limited for the majority of the dataset. Although some patterns could be reconstructed through time, the dating evidence was such that it was difficult, if not impossible, to provide anything more than a very general pattern of "rise and decline" of the Roman settlement system from the first to the fourth century AD.

Attempts were made to reconstruct the landscapes of production by mapping specialist craft evidence, in addition to the assumed surplus production of agricultural products. However, this proved difficult because information relating to specialist craft activities in the region was rather limited. This could mean, on the one hand, that craft activities played only a minor role in the region. On the other hand, though, it is believed that because of the traditional research focus being on the stone-built farms and their agricultural production, the topic of craft production has been neglected. It is clear that many of the craft activities took place in the new towns and villages in the region. Evidence for craft production in the *vicus* of *Coriovallum*, for example, is impressive, with tools suggesting a wide

variety of specialist activities, such as carpentry, smithing, stone carving, production of ceramic building materials and pottery making. Unfortunately this evidence has only been studied at a basic level, thus prohibiting any estimate of the size of craft production in this small town. As the material is often not dated, it is difficult to indicate when these activities developed and when they disappeared. This is true for the majority of evidence for craft production. What the non-agricultural production contributed to the regional economy in general is therefore difficult to assess at this moment in time.

Another topic that could not be explored as fully as the category of settlement was that of religion via cosmology, ritual and beliefs. Although it was possible to register and map a large number of sites with funerary evidence, other sites that could provide information regarding this aspect of society, such as sanctuaries, were only found in extremely small numbers. The distribution of the monumental funerary evidence, with a marked difference between the area with *tumuli*, and the area with monumental stone burial markers and large stone incinerary urns (“sarcophagi”), could be seen as evidence for the territory of the *civitas Tungrorum* on the one hand, and the *civitas Traianensis* and *civitas Agripinensis* on the other. It had to be concluded, though, that the majority of the funerary evidence was undated, which is lamentable as the evidence itself typically consists of intact objects with good dating potential. However, use was made of the wealth of funerary evidence by reinterpreting some of the dataset as an indicator for settlement sites.

