

A METHODOLOGICAL APPROACH TO THE COMPARATIVE STUDY OF PLANTED TOWNS IN 13th CENTURY MECKLENBURG

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ABSTRACT

The eastwards expansion of German speaking settlers in the 13th century planted about 40 towns in the territory which would become the duchies of Mecklenburg, an area formerly settled by early feudal Slavic tribes. This history is well documented in written sources and archaeological findings, but not yet studied as urban form. This paper describes a method of analysing the urban morphology of towns planted in the 13th century. The method is developed based on an encyclopaedic approach to collecting historical data. The means of this methodology intertwines known historical data with a systematic analysis of the urban form and its elements, based on definitions introduced by Conzen and Kropf.

The article briefly introduces the history of the planted towns in 13th century Mecklenburg. The second part of the paper defines a method, how knowledge from both written historical sources, archaeological findings, and results of morphological analysis can be collected and systematised to enable a comparative analysis of the findings based on these 40 towns. Finally, the practicability of the method is put to the test with a brief analysis of the town of Malchin, planted in 1242 by the dukes of Mecklenburg.

The presented work is part of a current research undertaken by the author. It was presented as a keynote lecture during the 1st ISAR Castelvecchio Calvisio Summer School in July 2020.

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Introduction

In the historical region of Mecklenburg in northern Germany, a large number of cities can be dated back to the 13th century. The Slavic population, living in an early feudal society with a tribal organisation, witnessed the introduction of German speaking settlers. The settlers, invited by the feudal lords of the newly christened Slavs, facilitated a process of inner colonisation. A number of towns developed from merchant settlements along the Baltic sea (Rostock, Wismar), but the great majority of planted towns cannot be explained by merchants settling along the larger trade routes around the Baltic sea. Their existence was “geared to the needs of the immediate vicinity” (Bartlett 1993:180). From about 1200, the interior of the duchies of Mecklenburg was structured by a network of small towns and markets supplying the area with artisan products and local trade. Even though the countryside around the towns witnessed a parallel colonisation by German speaking settlers, the main language and culture outside the city walls remained partly Slavic for at least another 200 years.

During the 13th and the first half of the 14th century, the inhabitants of the small market towns grew increasingly more independent from their feudal lords. The burgesses were protected by the German town laws, which protected them from being directly subjected to the “Landrecht” of the feudal lords. The German town laws, in combination with modern fortifications and effective bodies of self-government, withdrew the towns from the direct access of the feudal lords and established urban settlements as free subjects of medieval law (Peyer 1995).

The method presented in this paper is the basis of an ongoing study of the urban morphology in towns planted in Mecklenburg in the 13th century conducted by the Norwegian University of Life Sciences NMBU.

State of knowledge and academic relevance

The history of the planted towns of 13th century Mecklenburg is well documented. Our knowledge of the process of urban transformation springs out of two different fields of historic research: The analysis of known written sources and the results of urban archaeology. Both these methods have enjoyed 150 years of accurate research, and a great number of publications have formed the perception of the urban processes in the 13th century.

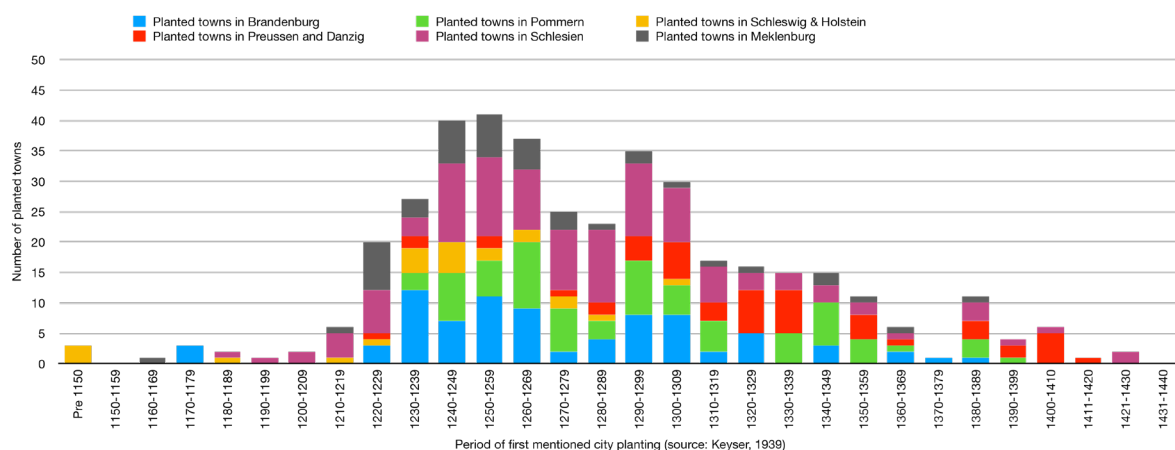
The historic research in Mecklenburg dates mostly to the second half of the 19th century and the first half of the 20th century. The research of historians like Schlie (Denkmäler.

1902), Krüger (Krüger 1925), Struck(Struck 1938), Hoffmann (Hoffmann 1930) and Keyser (Keyser 1939) generally give a very thorough documented historical account of the town planting processes in Mecklenburg. Their results are at the same time flawed by the early-20th century-narrative of the Germanic settlers’ superiority over the Slavic population. The source found in contemporary documents have also shown to be tainted by the fact that a significant number of documents known in the “Mecklenburgisches Urkundenbuch” (MUB) later proved to be or were suspected of being falsified. The discussion about urban form in planted cities in Mecklenburg was reintroduced in the early 2000s by controversial debate on the actual planting process. Deppe (Deppe 2004) and Ruchhöft (Ruchhöft 2005).

Urban archaeology as a method has traditionally been a both accurate and scientific, but also limited, source of knowledge from the Middle Ages. Since most of the medieval towns are still in use as urban settlements, the possibilities of systematic archaeological survey are limited. Local excavations like in Malchin (Jänicke 2015) and Woldegk (Jänicke 2019) reveal strong indications about the continuity of urban structures since the Middle Ages regarding plot size, street geometry and built structures. Even though these excavations confirm Slater’s conviction that “in the majority of towns ... the initial plot pattern” can be seen as “a remarkably stable element in the town plan”(Slater 1981), but they will not allow the spatial analysis of larger areas or an entire settlement.

The recent efforts of the regional government of Mecklenburg-Vorpommern to create a GIS-based digital map of the region have nevertheless opened new possibilities for the research of urban structures. For the first time, statistical and geometrical data sets can be used for the study of the urban morphology of these settlements. As such, urban morphology has the potential to become a third source of knowledge – in addition to written records and urban archaeology – for the study of

Figure 1: Number of planted cities in Central European territories.



urban transformations in the Middle Ages. Digital databases and the possibilities of advanced data management to compute, calculate and truncate large amounts of data, give way to the main methods of urban morphology: geometry and statistics. These opportunities did not exist 20 years ago and set the stage for the use morphological methods in history writing.

The intention of this paper is to develop a method where document research, archaeology and urban morphology can be collated and combined. From its inception, urban morphology has been defined as an “interdisciplinary field” between geography, architecture and planning (Moudon 1997) and – as in this case – archaeology and historical sciences. Since the output of the study of historical documents, artefacts found during an archaeological survey, and statistical data sets from a plot geometry analysis result in very different data formats, the processing of data has become very intricate. A holistic perspective on the urbanisation processes in the 13th century therefore meets great methodical challenges. The definitions of urban morphology are largely developed by Conzen (Conzen 1969) and later supplied by others, e.g. Kropf (Kropf 2017). Instead of focussing on chronological definitions or object related research, the definitions of urban morphology are based on definitions of urban typology, for example house–plot–block–street–city. In addition the typology gets interwoven by building fabric and land utilisation (Whitehand 2001). These definitions describe both complexity and hierarchy of the built structure, its fabric and economic use.

Research question

The aim of this paper is to develop a system where acquired data sets can be collected and presented in a way that allows the integration of information with very different formats, thereby making them comparable.

Method

The method used by Keyser to collect data from historical processes in the urban history of German towns is well known and recognised. His book “Deutsches Städtebuch” (Keyser 1939) is still the standard encyclopaedia, because it represents the state of knowledge at the end of the golden age of urban historical research in Germany. Keyser’s approach is to create a matrix structure to filter information into a standardised set of categories. Using his method, the information sets from very different locations become comparable and easier to process. All information concerning a town’s fortifications,

walls and gates, for example, are gathered under category 5 in Keyser's 16 category catalogue. Keyser's work with categorising information about German cities earned him a place in German urban research history, despite his instrumental role as a "political historian" facilitating war crimes during the Germanisation of the occupied territories in Eastern Europe during WWII.

The second work that formed the method presented in this paper is the fundamental work of Sir Banister Fletcher, "A History of Architecture on the Comparative Method" (Fletcher 1945). Fletcher's approach is purely phenomenological, which makes him compare architectural works of similar functions and time even though the subjects of the comparison are formed often by very different circumstances and cultural history. What makes his work interesting and intriguing not only for architectural historians is the phenomenal quality of the drawings that make comparison easy and sparks the readers imagination by its unified graphics. With this approach findings of very different character and context can be sampled intuitively to allow phenomenological and stylistic comparisons.

The method to be chosen to depict the urban history of planted towns in 13th century Mecklenburg has to be able collect data from

- mostly well documented written sources
- archaeological findings
- morphological examination of plans

In order to host such a wide range of formats, a matrix structure consisting of 6 main categories numbered A to F has been created. These categories are designed to manage written introduction and historical information (category A), a generic spatial analysis of the town's position in space (B), a morphological analysis of the town's structure (C), a record of significant buildings that can be related to its historical development, both in its periphery and interior (D and E) and a collection of relevant sources, literature, historical drawings and maps (F). These categories are then divided into sub-categories.

Following a general introduction to the town, the state of knowledge and source situation is presented (A1). To establish important frameworks to historical events relevant written sources are cited (A2), followed by a short presentation of the planting process (A3) and the development of the urban form (A4) based on historical sources. The introduction to the town's history concludes with by a presentation of present and historical population (A5), minorities (A6), civic governance (A7) and courts (A8). The introduction is supplemented by

an introduction to modern developments or present changes that might prove to be relevant for the study (A9).

The second category titled “city in the landscape” starts with an analysis of the town’s position in the region, relation to other towns, trade routes and feudal territories (B1), followed by function in their medieval context (B2) and topography (B3). The category is completed with an analysis of the urban economy as it relates to geographical and regional parameters (B4).

The morphological analysis (C) follows Conzen’s methodical structure by mapping the town’s shape, size, orientation, and geometry, which is documented and categorised (C1). The street system is described by geometry and orientation, where measurements of street length, width, and slope is based on GIS data provided by planning authorities (C2). The next step is to document and categorise the block structure based on plot plans (C3). Among the data of greatest interest are average plot sizes in different blocks, geometry, and orientation. The plot structure is mapped based on available GIS data, especially geometry and plot width (C4).

As part of the analysis of the city, significant structures and buildings are added to the mapping process. The analysis on the building level is separated into peripheral fortifications such as city walls (D1) and city gates (D2). Besides measuring geometry and orientation, digital data are combined with historic photography to reconstruct physical structures such as removed city gates (Fig. 3). For the reconstruction of wall geometry, archaeological data and visual readings are to be included, since physical remnants of city walls are often used in present buildings.



Figure 2: C - Malchin: Plot plan and 2019 building structure.

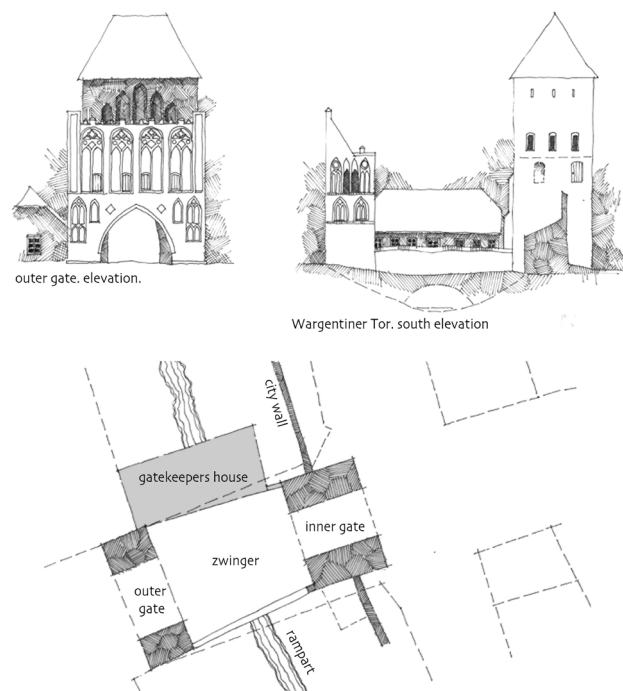
The mapping of public buildings inside and outside the city walls is essential for the understanding of the medieval town's economical life and geometric presence. All available information concerning the size and orientation of the market (E1), the town hall (E2), the castle or the bailiffs-house (Vogtei) or other fortified structures inside the city (E3), parish churches (E4), monastic (E5), charitable (E6) and educational institutions (E6) is gathered. The registration of remaining civic buildings or their archaeologically recorded remains (E7) is to be correlated with the plot data in section (C4), before finally adding buildings relating to the town's economic life like mills or workshops (E8).

Putting the method to the test: Malchin and Woldegk

Malchin and Woldegk are two towns in the sample of about 40 towns founded in the 13th century, later belonging to Mecklenburg. Malchin was founded by the dukes of Mecklenburg in 1236, while Woldegk tributes its planting to the efforts by the margraves of Brandenburg to secure newly acquired territory in the years around 1240. Both cities are very modest in size (population of 7300 and 4300) and were both largely destroyed by Russian forces in the last days of WWII. Both towns were reconstructed in the 1960s and 1970s by methods of industrialised construction, an effort that did not take the historical plot structure nor the building scale into consideration.

While the urban remains, largely dating back to the 18th

Figure 3: D – Wargentiner Tor Malchin. The double-gate was removed for “city beautification” in the 1870s. Reconstruction based on GIS data and historic photographs.



and 19th century, were removed and replaced by four-storey concrete blocks, the underlying plot structure remained largely intact. Since all properties were practically owned by the state between 1949 and 1990, no efforts were made to adjust the medieval plot structure to accommodate the industrial building methods. Due to this fortunate circumstance the plot structure of 1945 was “frozen” in time and can still be read in modern digital cadastre maps.

Archaeological excavations on the plots north of the market in Woldegk in 2001, 2004 and 2018 (Jänicke 2019) (Jänicke 2003) proved the historical continuity of the plot geometry since the Middle Ages. As a result, the analysis of the plot structure gives valuable clues about the early phase of town planting in these two towns.

The studies of Malchin and Woldegk was made possible by the aid of historical documents such as the map sets from 1727 (Brückmann 1727), plot plans from about 1900 kindly provided by Torsten Gertz (Malchin), and conversations with Elke Schanz and Ralf Jänicke at the regional conservation authority in Mecklenburg-Vorpommern.

After executing the analysis of Malchin and Woldegk with the method presented in this paper, two exemplary findings illustrate the value of systematic research.

1. Position in the landscape

For the purposes of the study, the medieval footprint in section B3 was graphically separated from the post-medieval

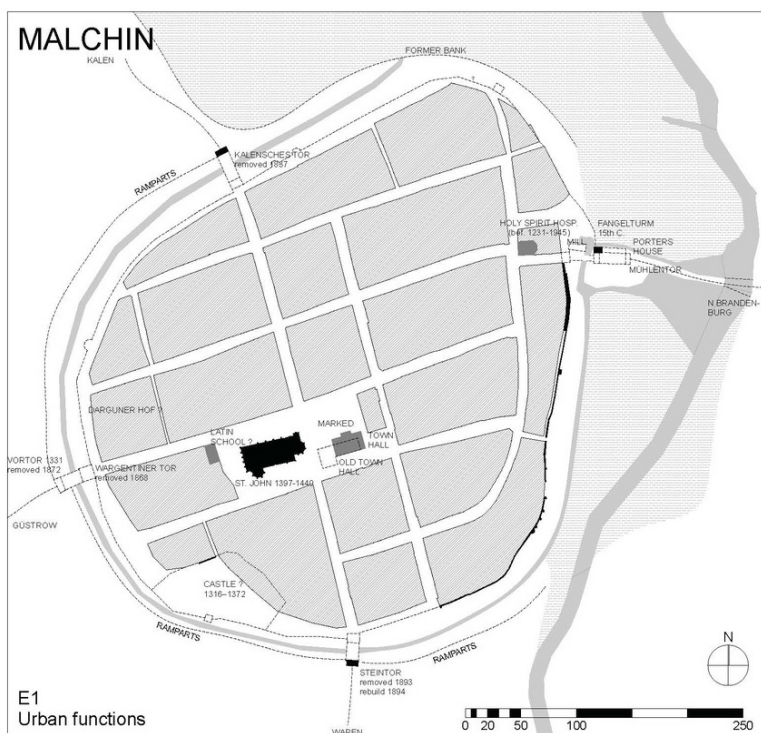


Figure 4: E - Malchin: Mapping of urban functions.

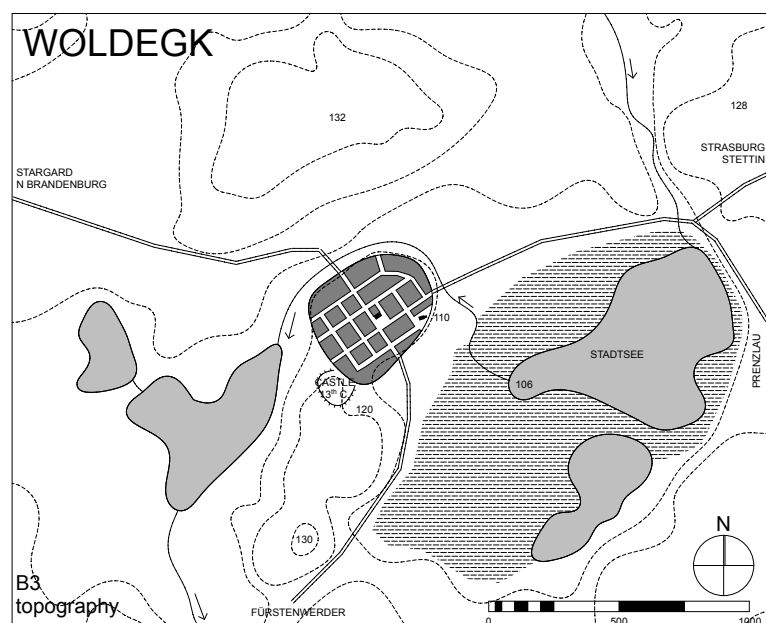
structures outside the city walls. By overlaying the generated geometries with the topological data, the structural intention of the planted town became very clear. Both towns sit on the north-east end of ridges that cut in into surrounding wetlands. The geometry of both towns utilise the terrain to reinforce the city walls by using natural terrain slopes, small streams and wetlands. Both town have a circular geometry, and their street systems largely ignore landscape formations. The spatial structure of northern Germany lacks the trade on ridge routes Carlotti describes for the Latium (Carlotti 2016). His observation that small regional towns appear on the crossings of regional valley-based trade routes and ridge-based local routes, is therefore not fully applicable for the towns of the Mecklenburg sample. But it must still be noted that the market of both Malchin and Woldegk is placed where valley-based (main) trade routes cross the ridges the towns are placed on.

In both cases the castle is located where the highest point of the city wall crosses the protective ridge line of the terrain. The castles effectively shielded the town's footprint from access from higher ground. Even though both castles were removed in the Middle Ages, their outline left visible traces in the structure of both cities.

2. Mass examination of geometric patterns in Medieval Towns

The morphological examination of the remaining plot geometry under chapter C4 also contained a survey of the remaining plot geometry inside the city walls. For that purpose, the plots inside blocks C1, C2, R2, and R10 were

Figure 5: Woldegk in its local topography.



measured in modern metrical units and later translated into medieval measuring units (1 Mecklenburg foot = 29.1 cm). Only a limited number of blocks were suited for this survey, since the plot structure of some blocks had been radically restructured in the 20th century. To avoid skewing the probe, no plots of the restructured blocks were included. The plot depth was not examined at this stage.

The results of the probe show that certain plot widths occur more frequently than others. The results of the measurements were plotted on a graph with the measured plot widths and the number of plots on both axes. The graph shows that there are some greater occurrences of plots with the plot width 24/25, 33, 48 and 66 foot. These results are remarkable, as they coincide with Conzen's findings, later refined by Slater's metrological analysis of Lower Broad Street in Ludlow (Slater 1990) and Fore Street in Totnes (Slater 1981). Slater's analysis concludes that the distance of 16.5 foot = 1 perch and its multiplicities are basic for the width of plots in the analysed medieval plot patterns.

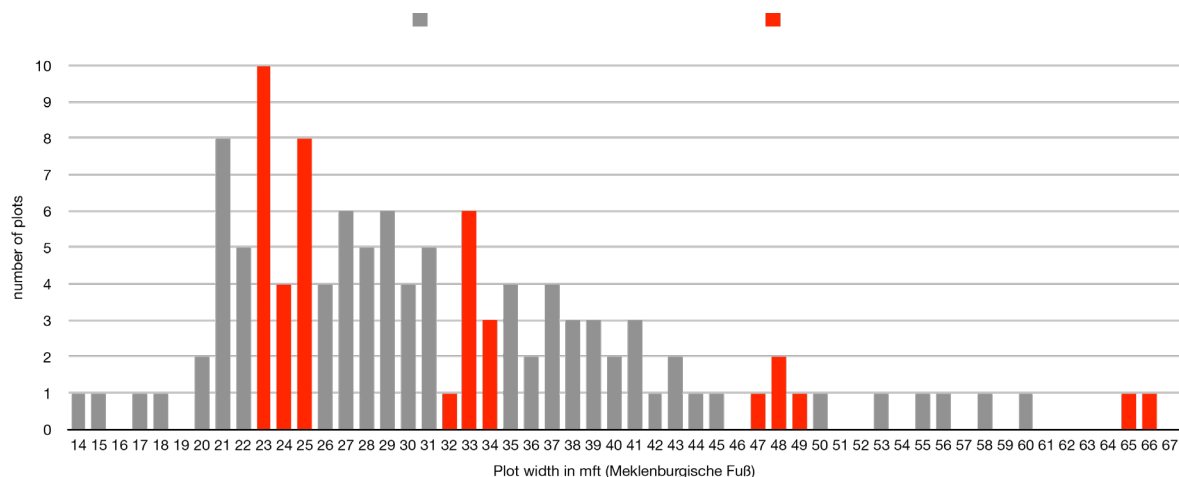
Even though the similarities between Slater's analysis from Ludlow in Shropshire (founded in 1138) and the findings in Malchin, a town of similar size planted in 1236, are striking, it is far too early to conclude the observation by analysing only 120 plots in a single town. By mass examination of a larger number of instances, the suspicion of underlying standards inside the Mecklenburg sample will be tested as part of this project.

Conclusion

The article presents a methodical approach to document data sets from difference sources such as

- written historical documents of medieval origin
- archaeological findings
- morphological examination with statistical and

Figure 6: Malchin plot widths measured in foot.



geometrical methods

The presented method has proven to be suited to tabulate data. Organising the harvested data sets in a matrix structure makes the data both generally accessible and comparable. By tabulating similar information in comparable formats, data can be processed and generalised, for example by measuring and quantifying instances of plot width in different locations. The method was used to process the data sets of Malchin and Woldegk, which gave useful results. The matrix structure is flexible and can be expanded so it can evolve further by adding new categories or sub-chapters if needed. It has therefore proven to be a useful method of analysing 13th century planted towns in Mecklenburg based on data sets provided by historians, archaeologists, and urban morphologists.

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