Research Article

Elisabeth Gruber*, Thomas Kühtreiber

Monastic Estates in the Wachau Region: Nodes of Exchange in Past and Present Days

https://doi.org/10.1515/opar-2024-0031 received September 25, 2023; accepted November 5, 2024

Abstract: In the Lower Austrian part of the Danube region, known as the Wachau, viticulture as an agrarian form of economy was established to a large extent by monastic estates. From the ninth century onwards at the latest, numerous monasteries in Austria, Salzburg, Bavaria, and Bohemia came into possession of vineyards in the Wachau by donation or purchase. Charters, urbaria, and tax lists document the importance of these mostly far-off properties from the beginning of the thirteenth century. Viticulture played a special role in this process. This is even more remarkable because the distances between the monastery and the estates – the so-called "Lesehöfe" – were sometimes considerable, for example, in the case of the Augustinian canons' monasteries of Herrenchiemsee (Traunstein, Bavaria) and Höglwörth (Berchtesgaden, Bavaria) or the Benedictine monasteries of Prüfening (Regensburg, Bavaria) and Tegernsee (Miesbach, Bavaria) and the *Hochstift* Freising. These far-off estates served as an interface for the interests of both local and foreign actors, still visible today in the form of surviving buildings and historical documents and objects. As part of a project, the monastery estates and their historical documents were catalogued to establish a basis for an interdisciplinary analysis of the phenomenon. The essential goal of the project was to record the monastic estates as broadly as possible to create a basis for an interdisciplinary analysis of the phenomenon. Basic groundwork was laid to make the various estates available for the interests of cultural tourism within the Wachau World Heritage region.

Keywords: monastic estates, vineyard property, cultural heritage, science to public, Lower Austria

1 Introduction

In 2000, the section of the Danube in Austria between Melk and Krems known as the Wachau was inscribed on the UNESCO World Heritage List. One of the two reasons for nomination explicitly referred to the architecture, settlement, and agriculture of the Wachau, which "vividly illustrate an essentially medieval landscape form and its organic and harmonious development over the centuries" (https://www.weltkulturerbe-wachau.at/projekte/detailansicht/filter/25/project/20-jahre-weltkulturerbe-wachau-1?cHash=d369762f794d6ddf03d2ecc5acf876dd). In particular, the design of the infrastructure for wine production was perceived by the UNESCO World Heritage Convention as a significant component of the cultural landscape: "The winegrowers" farmsteads, which are oblong and either U-shaped, L-shaped, or consisting of two parallel buildings, date back to the late Middle Ages and the sixteenth–seventeenth centuries. Most of these feature lateral gate walls or integrated vaulted passages, service buildings, and smooth facades, which for the most part were altered from the eighteenth and nineteenth centuries onwards. Street fronts are often accentuated by late- and post-medieval oriels on sturdy brackets, statues in niches, wall paintings and sgraffito work, remnants of paintings, or rich Baroque facades. The steeply

^{*} Corresponding author: Elisabeth Gruber, Institut für Realienkunde des Mittelalters und der frühen Neuzeit, University of Salzburg, Körnermarkt 13, 3500 Krems/Donau, Austria, e-mail: elisabeth.gruber2@plus.ac.at

Thomas Kühtreiber: Institut für Realienkunde des Mittelalters und der frühen Neuzeit, University of Salzburg, Körnermarkt 13, 3500 Krems/Donau, Austria, e-mail: thomas.kuehtreiber@plus.ac.at

pitched, towering hipped roof occurs so frequently that it can be regarded as an architectural characteristic of the "Wachau house" (https://whc.unesco.org/en/list/970/). However, little attention was paid to the fact that a good part of the winery farmsteads characterised here was formerly in monastic ownership and often only came into the hands of winegrowers in the nineteenth century. To understand the genesis of the Wachau cultural land-scape, it is therefore of fundamental importance to deal with the involvement of monasteries in the winegrowing of the Wachau.

This interest in the history of monastic estates in the Wachau is at the centre of the "Wachauer Klosterhöfe" project carried out at IMAREAL since 2020 – the anniversary year of the granting of World Heritage status. In two sub-projects, the estates in the Wachau have so far been systematically recorded, which until the dissolution of the monasteries at the beginning of the nineteenth century had been the property of the monasteries. With this aim in mind, the sub-project "Wachauer Klosterhöfe Online. An interdisciplinary digital inventory," a survey of the monastery courtyards in the Wachau region and their records, was carried out to provide a valid database for an interdisciplinary treatment of the phenomenon (https://www. imareal.sbg.ac.at/en/imareal-projects/monastic-estates-in-the-wachau-region/). In the case studies based on this background, we are primarily interested in the interweavements and practices that can be observed in the context of the monastery courtyards and in which institutions and persons were just as involved as the material world. In parallel, in the form of a case study financed by the Saahs family as owner, the Federal Heritage Department (Bundesdenkmalamt), and the province of Lower Austria, the Nikolaihof in Mautern an der Donau (monastic estate of St. Nikola/Passau) is being researched in an interdisciplinary way regarding its building and usage history. Archaeological excavations in conjunction with a very thin written record allow the conclusion that from the ninth century onwards an early spiritual centre with church and cemetery located within the ancient fort of Favianis developed, which was converted into the estate of the monastery in the late eleventh or early twelfth century. Significant parts of the complex, which still exist, date back to the High Middle Ages using ancient building structures allowing conclusions to be drawn about the functional and spatial organisation of a vineyard on the Danube. The research at the Nikolaihof is expected to continue until 2025.

The results have been made available to the public via a web application (https://www.wachauer-klosterhoefe.at/). Both in the field of scientific research into the phenomenon of monastic estates and their manors and as an information tool for all those interested in the topic and the region, a freely accessible research tool is thus available, which is intended to invite more intensive study of the topic.

2 Monastic Estates of Foreign Monasteries in the Wachau Region

During the Middle Ages, numerous Austrian, Salzburg, Bavarian, and Bohemian monasteries as well as bishoprics in the Austrian section of the Danube, especially in the Wachau, came into possession of vineyards by donation or purchase (Englisch, 1998; Knittler, 2000; Weber, 1999). The first information about this has already been recorded for the ninth century as royal and noble deeds of donation. It is obvious to see these efforts also in connection with the expansion of local and territorial rule, which was accompanied by the development of ecclesiastical organisational structures. With the possessions, the need for wine for the liturgy, own consumption, and serving in the cloister's taverns could be covered. For the monasteries and bishoprics, the location of the vineyards on the Danube offered favourable conditions for cultivation, on the one hand; on the other hand, the waterway facilitated the transport of the yields to the mostly upstream locations. The administration of the estates, which were often located far from their centres, required a series of infrastructural measures, which are still visible today in the form of farmsteads in the Wachau region. The manorial structures, known as Prälatenhöfe or Klosterhöfe, developed into regional administrative centres in the Wachau until the secularisation of many monasteries around 1800, but at the latest with the dissolution of the landlordship in the nineteenth century (Wüst, 2003/2004). From a European perspective, this influence of foreign monasteries on a regional wine-growing area can also be observed in the wine-growing regions on the Rhine, Moselle, Main, and Neckar as well as on the Adige (Etsch) in the southern part of Tyrol (Rösener, 2007; Schich, 1992; Weber, 1999, pp. 311–355). As interfaces between regional and supra-regional exchange

processes, the estates, often located far away from their associated monasteries, represented places where actors from different social groups - spiritual and secular - met. Written sources and architectural records give an idea of their economic, social, and cultural significance. The Wachau, as part of the Austrian Danube region, with its dense legacy of historical manors, some of which are still in use today, offers ideal conditions for an investigation.

2.1 Wachauer Klosterhöfe Online. An Interdisciplinary Digital Inventory

As part of the project "Wachauer Klosterhöfe Online. An interdisciplinary digital inventory," a systematic data collection of ownership and building history was carried out, which, where possible, also included an inspection of the object, during which those structures relevant to the history of building and use as a monastery courtyard were documented. The data obtained from the initial building analysis surveys and the archival research now form the basis for a database that is available online for further use. Based on the previously known number of 85 estates in Wachau at the beginning of the project, a systematic search was first carried out in the research literature, which was expanded to include information from local knowledge and local historiography. The aim was to collect information on existing or already defunct monastic manors and to check existing data. Parallel to this, targeted archival research was carried out both in the archives of the monasteries as former owners of the estates and in the local market and municipal archives to collect data on ownership (purchase, sale, lease), on the management of the estates, and on its structural changes (building accounts). The degree of research conditions of the different archives sometimes varies considerably. For example, while the collections of the Stiftsarchiv Niedernburg near Passau in the Bayerische Hauptstaatsarchiv (BayHStA) can already be searched and accessed digitally, in the case of the scattered collection of Freising – also in the BayHStA – several registers must be consulted to have a good overview of the records. The problem of widely scattered documents mainly concerns the dissolved (Freising or Chiemsee) or transformed (Salzburg) bishoprics, while still-existing monasteries usually have an almost complete documentation (Göttweig, Michaelbeuern, St. Peter in Salzburg, Kremsmünster, etc.). It should also be noted that the degree to which the monastery's properties in the Wachau are considered in the archival inventories differs considerably. While the estates in the Wachau were often part of a "foreign possessions" section, these archival records were sometimes even given their own unit of distortion, but sometimes not. As unfavourable as the latter circumstance is, conclusions can be drawn from the presence of the Wachau estates in the archival index with regard to their importance for the monastic economy. No matter how the records are shaped, the structure of the written sources conveys a very lively picture of the activities and relationships that were established between the monasteries, their estates and manors in the Wachau, and the actors involved.

At present and based on archival and literature research, 139 estates in the Wachau region owned by foreign monasteries until the nineteenth century have been recorded so far. Of these, 83 estates are still preserved in the building stock, for which there is also archival evidence of monastic use. A further 55 estates could be recorded on the basis of written records. After localisation and with the consent of the owners, most of whom are now private, it has been possible to carry out an initial archaeological survey of 38 building complexes. A further 45 objects were subjected to an initial inspection in the form of an inspection of the exterior areas and façades, and secondary literature and historical views were evaluated. For the building archaeological inventory, manors still existing in their building fabric are subjected to a survey. This usually includes an inspection of the entire building and the photographic and textual recording of visible building details. Finally, all initial information is collected and systematically made available in the digital inventory.

To meet the project's requirement of recording complex architectural archaeological and historical properties as well as associated sources of a large number of objects by an interdisciplinary as well as spatially disparate team of different disciplines and subsequently "linking" them with each other, a CRUD (Create, Read, Update, Delete) web application was developed that uses the open object-relational database management system PostgreSQL and PostGIS for processing spatial data in the backend. The PHP web framework Laravel

(https://laravel.com/) was chosen as the development environment. The object-relational database structure is initially structured around the main entity of the so-called manor objects (*Höfe*), each of which represents a monastery estate and can be linked to entries from the following entities: Archival record – Actor – Event – Literature – Geodata – Image data. These entities are provided with their own input and editing masks for individual editing in the database backend. According to the common relational database schema PostgreSQL, the data of each of these entities are modelled in tabular form (with further associated sub-tables) and linked to each other. Image data are associated with and retrievable from the final project servers via external links. All other data units, such as dating or monastery information, are structured around these main tables. Spatial data can be included and displayed in the database in the form of polygon, polyline, point, and raster data.

To make the project data available to different user groups (research, interested public) in the long term, a database structure was developed that allows several users to create, read, update, and delete data records simultaneously online from any terminal device. The automated versioning of the data records at regular intervals is a key feature. In the final web application, users with different access rights (viewer, editor, and administrator) can now interact with the data sets on different levels without having to access several domains or applications. The publication of datasets takes place seamlessly within the same application by means of approvals, which can be granted as required by the administrators or specific users with appropriate usage rights. Spatial information can be entered and displayed using the map view/digitisation mask (open-source Library Leaflet https://leafletjs.com/).

All systems to be created are based on open-source standards and fulfil the requirements of the Time Machine Europe project (https://www.timemachine.eu/about-us/).

The start page offers information about the project and the use of the database. Searches are possible via the names of the estates, the affiliation to the ecclesiastical rulers (monasteries), and the location of the monastic manors in the communities, via a map view as well as via an image viewer (Figure 1).

Various search criteria can be queried by means of a free text search or a detailed search. Filtering by means of a timeline or a selection list of monasteries offers additional fine-tuning (Figure 2).

The individual data set offers structured information on historical data, building history, and archaeology as well as literature and source bases. Care has been taken to address questions of ownership and economic history, to describe topography and location as well as the existing building fabric, and to provide an initial architectural-archaeological interpretation. The respective authors of the texts are explicitly named and can be cited according to the guidelines of scientific work. Information on the research literature as well as an overview of the archival situation is provided under the heading Literature and Sources. The menu on the right offers the opportunity for a quick overview of the state of preservation, the manorial affiliation, dating, and localisation as well as public accessibility. A selection of photographs, either freely accessible or released by the owners, provide a first visual impression of the entire object (Figure 3).

3 The Monastic Estate as Interface

The administration of the estates, which were often located far from their headquarters (monasteries in southern Bavaria, Salzburg, Upper Austria, Lower Austria, and Styria), required a series of measures that have left traces in the numerous vine estates in the Wachau region to this day (Figure 4).

With the establishment of the *Hofmeister* office, a permanent representative of the monastery was on site. This person organised the cultivation of the vineyards and ensured the preservation of the monasteries' seigneurial rights.

The question of the transfer of ownership was a particular focus of the project. Surprisingly, neither architectural archaeological evidence nor written sources have been found to indicate that manors were completely newly constructed. Although this is possible in principle, there is as yet no evidence of it, although it is conceivable for some objects, such as the manor houses of the Salzburg archbishopric and the Abbey of St Peter in Arnsdorf, or the Mieslinghof in Spitz (Gruber & Kuhn, 2023). The much more frequent form of establishing a monastic estate was through the purchase, donation, or takeover of existing building complexes, which were structurally adapted for

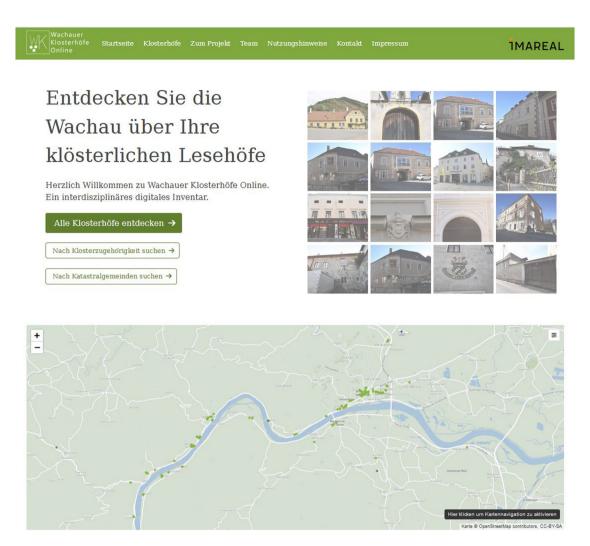


Figure 1: Wachauer Klosterhöfe Online, Landing Page.

specific needs. This is also shown by the numerous conversion stages that could be identified. These transfers were documented in deeds, land registers, and property lists. If there were conflicts, there is a particularly large amount of information about the circumstances surrounding the change of ownership.

The takeover of already existing secular buildings is probably the most common way in which monasteries came into possession of their manors. One example is Florianihof No. 3 in Krems/Weinzierl at Hohensteinstraße 44: in 1652, Provost Mathias Gotter acquired the newly built house of Karl Konstantin Ulrici von Genghoven, Vicedom in Austria under the Enns, and had it adapted to the functional needs of a monastic estate (Langendorf, 2023).

Conversely, monasteries whose economic situation required it sold their estates to citizens, for example, in 1571, when Admont Monastery sold its estate in Wösendorf to the municipality to increase the hospital income by 3,300 gulden (present object Wösendorf 56). The combination monastery–secular–monastery is also possible: the Schlägl estate in Wösendorf (Hauptstraße 24) was originally owned by Zwettl Abbey and was sold to seculars in 1365, who sold the property again 30 years later to Schlägl Abbey (Kuhn, 2023; Schönfellner-Lechner, 2023).

The numerous transactions between the monasteries appear particularly interesting: Manors were bought or redeemed by other orders and monasteries. An example of this is the Ranshofener Hof in Stein (Wassergasse 1): in 1344, the prior and convent of Gaming acquired the properties with today's addresses Steiner Landstraße 25 and 23 as well as Wassergasse 1. In 1422, the Gaming properties became the property of Melk Abbey by sale. Around 1550, Melk Abbey parted with that part of the property which lay beyond

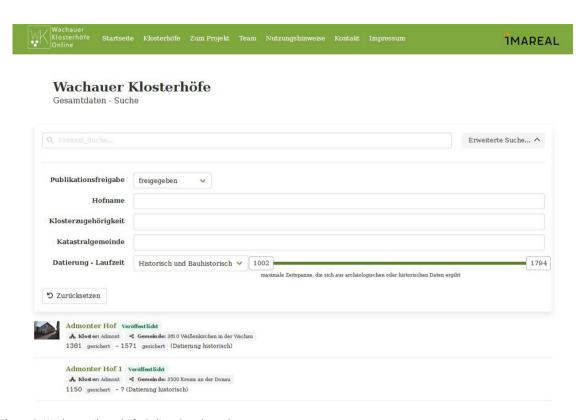


Figure 2: Wachauer Klosterhöfe Online, Search mask.

Wassergasse. Ranshofen Abbey was the buyer of the manor, which was now detached from the Melk estate (Schönfellner-Lechner, 2023). The exemplary cases stand for numerous property transactions that can be easily grasped, especially in archival records, which *de facto* do not suggest a definitive "building type" of monastic manors. The buildings were expected to be highly flexible, which did not allow for an overly distinctive type of purely monastic properties. Of course, the possibility of alterations and adaptations was always present, so the manor must have served both monastic and secular needs, otherwise, the numerous changes of ownership, often at short intervals, cannot be explained.

Another result of the study concerns the location of monastic estates and brings spatial aspects to the fore (Figure 5).

First, the focus of the settlement of monastic estates is in the area north of the Danube. Moreover, monastic manors are primarily located within the settlements. Only very few examples can be found outside the villages, cities, and their fortifications, and these are mostly manors of very prominently represented orders with massive cubature. The monastic buildings located in the local area tend to be smaller in size due to urban conditions. Krems and Stein offer a clearly exceptional situation, where entire "monastery estate quarters" can be found. In addition, there is a significant concentration of monastic manors near the Danube. This can be explained by the shorter manipulation distance of the barrels to the ships for transport to the monasteries via water.

Some findings were also obtained with regard to functional aspects. The manors, which in the local context are usually referred to as Wine estates (*Lesehöfe*), only rarely served exclusively for vinification. Cereal cultivation and storage, timber extraction, and livestock farming are also documented in the written sources.

For the monasteries, the *Lesehöfe* in the Wachau were an important source of income until well into the eighteenth century. However, with the reorganisation of the church system and the liquidation of a large number of monasteries by Joseph II from 1783 and in Bavaria in 1802/03 under Prince Max Joseph, ownership changed significantly. During the military conflicts between Austria and Bavaria in the eighteenth century, the properties of the Bavarian monasteries in the Wachau region were placed under forced administration several times and were eventually seized by the Imperial and Royal State Property Administration and assigned to the



Figure 3: Single data set Erlahof; Overview website.

DE GRUYTER

Bavarians. Finally, they were transferred to the k.k. estate administration and sold to local interested parties. This is also reflected in the building stock, with the High to Late Baroque furnishings of this last, still intensive, phase of monastic use being most strongly represented in the building remains.

3.1 Vineyard Ownership as Economic and Cultural Capital

Unlike, for example, further up the Danube, in Upper Austria, where viticulture experienced a heyday in the fourteenth and fifteenth centuries but declined significantly in the following centuries, the climate of the

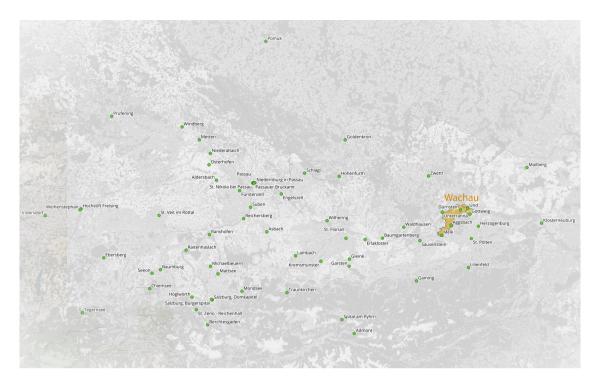


Figure 4: Monasteries with vineyards in the Wachau region. Graphic: A. Langendorf.

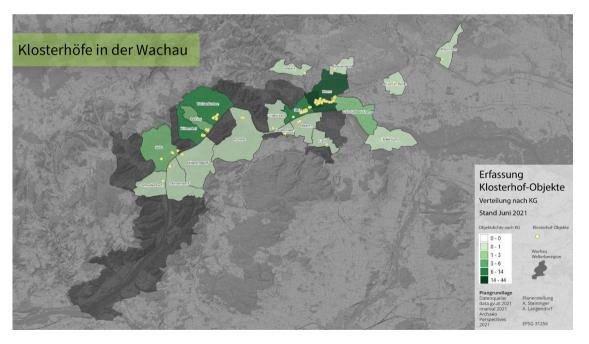


Figure 5: Distribution of monastic estates in the Wachau region. Graphic: A. Langendorf.

Wachau still offers suitable conditions to produce wine today. Numerous place and house names, but also field names such as *Weinzierl* or *Weinberg*, remind us that the cultivation, processing, and distribution of wine shaped the economic structure of the Wachau for a long time and still does (Arnberger, 2017; Klinger & Vocelka, 2020). This is also evident in the historical building structure: numerous winery farms still in operation today have medieval and/or modern elements. Thus, this form of agricultural production shapes a specific section along the Austrian course of the Danube in many ways.

If one follows the narrative of the Vita of St. Severin, a Roman official who converted to Christianity, wine was already being cultivated in the Danube region in Roman times. Severin was based in Mautern (Favianis) in the fifth century and taught his disciples ad vineas – at the vineyards; at least this is how it is reported in the biography of Severin written about 30 years later. From the ninth century onwards, there were written documents for the existence of viticulture, which give the first indication that the ownership of vineyards was an important asset. When the area east of the Enns in what is now Lower Austria was conquered by the Hungarians and was difficult for the Bavarians and Franks to access, monasteries were endowed with vineyard ownership and thus an economic basis up the Danube. For the monasteries, however, wine was more: as an important element in the liturgy, continuous access to wine was essential. For example, the monasteries of Mondsee and Kremsmünster received vineyards in Aschach on the Danube as well as on the Rodl in the Lower Mühlviertel (Schweiger, 2004; Werneck & Kohl, 1974).

From the second half of the tenth century onwards, the Babenberg margraviate was again extended beyond the Enns further down the Danube towards the east. This was accompanied by the granting of vineyard possessions in what is now Lower Austria and the Wachau. During the Middle Ages, numerous Austrian, Salzburg, Bavarian, and Bohemian monasteries as well as Bishoprics came into possession of vineyards in the Wachau by donation or purchase. The first information about this has already been handed down for the ninth century in the form of royal deeds of donation. This is primarily connected with the expansion of local and territorial lordship, which was accompanied by the expansion of ecclesiastical structures. With the possessions, the need for wine for liturgy, personal use, and hospitality could be covered. Wine, as the main component of the celebration of mass, had to be provided in sufficient quantities for both monasteries and parishes. For the monasteries and bishoprics, the location of the vineyards on the Danube offered favourable production conditions, on the one hand; on the other hand, the waterway facilitated the transport of the yields to the mostly upstream locations. For example, the bishops of Passau owned vineyards in St. Michael in the Wachau, the bishops of Salzburg in Traismauer, Arnsdorf, and Oberloiben, or the Bavarian monastery of Niederaltaich in Spitz. As a profitable source of income, the expansion of ownership was intensified, especially in the twelfth century, and existing entitlements were reactivated. Around 1500, 15 Lower Austrian, 6 Upper Austrian, 25 Bavarian, 4 Salzburg, 1 Styrian, and 4 Bohemian monasteries owned vineyards in and around Krems. In a European comparison, this influence of foreign monasteries on a regional wine-growing area can also be observed in the wine-growing areas on the Rhine, the Moselle, the Main, and the Neckar, as well as on the Etsch in the southern part of Tyrol (Weber, 1999).

The developments of vineyard ownership by foreign monasteries in the Wachau can be well outlined using the example of the villages grouped together as the Tal Wachau municipality (Bauer, 2004, 2008). Until the end of the eighteenth century, it was the ecclesiastical institutions that owned nearly half of the vineyard property that was given to "foreign" owners. The bishopric of Freising and monasteries such as St. Florian, Tegernsee, St. Pölten, Michaelbeuern, Melk, Garsten, Ranna, and Aggsbach had relatively stable cultivation areas throughout the period. An analysis of the relevant tax books between 1521 and 1785 indicates property sizes between 2,850 (1521) and 2,146 (1785) Tagwerke. The Tagwerk was the measure of vineyards in the Wachau and corresponded to 400 m; 25 Tagwerke therefore corresponded to 1 ha.

The monastic vineyard property was cultivated in a form of lease known as sharecropping (Teilbau), in which the cultivator of the vineyard had to hand over part of the yield – half or a third – to the owner. For the non-resident landowners, this type of lease was of great advantage, because it created incentives for prudent and high-yield cultivation by sharing the yield (Bauer, 2008).

3.2 Monastic Vine Estates: Functions and Infrastructure

The administration of the estates, which were often located far away from their centres, required a series of measures that are still visible today in the numerous Lesehöfe in the Wachau area as well as in other winegrowing regions of eastern Austria. The manors represented the spatial administrative centres in Wachau. In the twelfth century, Krems developed into the hub of viticulture and trade. Here, too, the most important monasteries built houses and acquired land for cultivation. By the end of the fifteenth century, 49 monasteries

(13 of them from the area of present-day Bavaria) had acquired 65 estates in Krems. Around 1750, one-third of the vineyard area around Krems was still in the hands of foreign monasteries – this is roughly the same area that the citizens of Krems owned. Today, the share of church and monastic ownership of vineyards in the Wachau is only small. The old manors have long since ceased to be operated as such, but some of them are still preserved as buildings today (Englisch, 1998).

From an infrastructural point of view, usually there were presses and halls, later also cellars, for processing and storing the harvest on the estates. Residential wings for the administrative staff and guests were also provided. In addition to the administration of the estates, the manors served the respective monastery and diocesan rulers as a place of residence and supply when this was needed. In keeping with this use, chapels, bedrooms, and representation rooms were part of the furnishings of the manors. This mixture of tasks led to a specific type of building – the Lesehof (Vinery manor). Although the idea of a manorial building complex around a central, eponymous inner courtyard – and accordingly referred to in the sources as a Hof. Latin curia – is not a monastic invention but has also occurred in similar form since the Carolingian period, along with castles as noble residences (Zehetmayer, 2017, pp. 390-391), some specific features can nevertheless be identified: For example, many monastic manors have a large, long-rectangular structure, which at first glance is reminiscent of the palace in castles: in both cases, there is a hall on the upper floor and at least large rooms for public receptions, which were usually accessed via a high portal and an external staircase. However, while the basement at ground level in the palace usually served subordinate supply purposes, the large carriage entrance on the courtyard side in the hall building of monastery courtyards indicates that the wine press and, in early times, often also the cellar were located here (Kühtreiber, 2016, p. 100; Krause & Reichhalter, 2009, 2011/2012). This can be observed particularly well in the so-called "Nikolaihof" in Mautern on the Danube, where a massive and functional "eighteenth-century tree press" can still be found today in a hall building from the early thirteenth century (Figure 6).

In the former "Passauer Hof" of Klosterneuburg, archaeological excavations not only found evidence of the footprints of the wine press (Neugebauer et al., 1998, p. 24, Figure 6a); in the lintel of the building, which was destroyed in the first half of the sixteenth century, there was a large number of glazed floor tiles with animal motifs from around 1300, with which the floor of the hall above was decorated. In terms of motifs, these belong to the symbolic world from the so-called "Physiologus" manuscripts, in which ancient ideas about animal behaviour were interpreted in the Christian sense as a struggle between good and evil (Neugebauer & Neugebauer-Maresch, 1998). The wall paintings with scenes from Aesop's animal fables that have been



Figure 6: Mautern an der Donau, Nikolaihof. Interior view of the Romanesque press house with the pressing tree. Photo: T. Kühtreiber.

partially preserved in the hall of the "Passauer Hof" in Krems on the Danube were also interpreted theologically in a similar sense in the Middle Ages and are both again examples of how medieval education in monasteries or their manors drew from ancient sources. Significantly, the pictorial cycle was continued on the south side in Physiologus motifs (Lanc, 1983, p. 138; Tietze, 1908, pp. 232–240; Vavra, 1981/82). Although the Kremser "Passauer Hof", with its mixed function as a parish house and manor of the of Passau bishopric, was a special case – also disputed between the parish and the diocese – the building plan, which is identical to the "Passauer Hof" of Klosterneuburg and consists of a hall/press house, chapel, residential building, and a narrow tower, shows that there was probably a common building idea behind these two complexes (Figure 7) (Kühtreiber, 2016, pp. 100–104).

While we have no medieval building descriptions from the Wachau, corresponding information can be obtained from early documents from other areas of present-day Lower Austria: In an exchange contract between the Styrian monasteries of St. Lambrecht and Rein regarding possessions in southern Lower Austria from 1147, two monastic manors are described in relative detail for this early period of writing in connection with vineyard possessions (Zehetmayer et al., 2013, no. 28/2; Zehetmayer, 2017, pp. 391–392): Both manors – one located in Muthmannsdorf and the other near Neunkirchen – had a *cellarium*. While the building from Muthmannsdorf (district of Wiener Neustadt-Bezirk) is explicitly identified as a stone building (*cellarium petrinum*), the one from Neunkirchen is listed among the wooden buildings (*edificiis ligneis*), although the latter had a heatable and thus habitable upper storey (*caminata*). This and the fact that a confirmation document from 1159, written in the twelfth century but with falsified content, lists mobile chattels such as vats and barrels but also household goods such as knives, jugs, and other tableware in connection with the *cellarium* of Muthmannsdorf, suggest an interpretation of the term *cellarium* with the hall buildings described above with a press house/cellar on the ground floor and representative (living) rooms on the upper floor (Zehetmayer et al., 2013, no. + 3² (1159); Zehetmayer, 2017, p. 392).

Within the palisaded enclosure of the courtyard in Neunkirchen, which was provided with pointed stakes or thorns, there were, in addition to a vegetable garden, further buildings such as a vestibule, a barn, or granary (*horreum*) measuring approximately 30 m × 9 m, a horse stable, and a *stupa*. This is one of the oldest

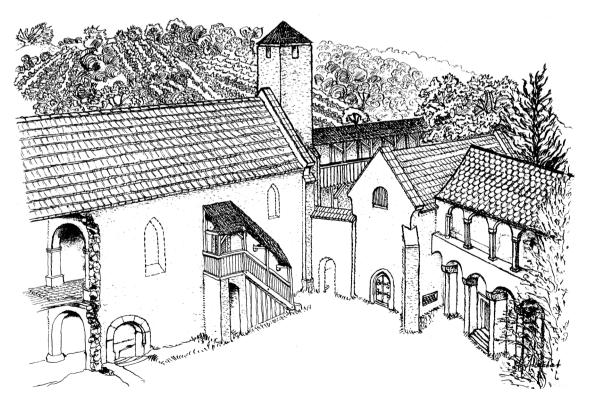


Figure 7: Reconstruction model of the "Passauer Hof" in Klosterneuburg. Graphic: L. Leitner.

written records of a parlour, i.e., a room that could presumably be heated with a smoke-free stove. It is difficult to decide whether this was a living room or perhaps a bathing room, as was recorded a few centuries later for the manor of the Göttweig Abbey in Furth (Hähnel, 1975, pp. 17–18; 344). Outside the enclosure, a farmer's house (*hospitium rustici*) was also part of the property.

While these manors evidently had enough space and capital for structurally and functionally differentiated economic facilities, another document from the late twelfth century indicates that monasteries in already more densely built-up towns, such as Krems, had to come to terms with much more cramped conditions: around 1180/90 the monastery of Garsten owned a house in the manor of a nobleman and was occupied by *fratres*, i.e., monks or lay brothers from Garsten. Whether this house functioned as a manorial complex *in senso strictu* or rather served as a residential house is beyond our knowledge (Zehetmayer et al., 2013, no. 7/25; Zehetmayer, 2017, p. 392).

The situation is different for the manor of the nearby Benedictine monastery of Göttweig, located in Stein an der Donau. Here, an inventory from the first third of the sixteenth century provides detailed information. At that time, 21 rooms were in use. A representative parlour, an office room, a bed chamber with an additional guest room as well as the associated antechamber, and a number of other guest rooms indicate that part of the rooms were used by the abbot – if he was present. In the remaining area, there were living quarters for the servants, administrative, utility, and storage rooms for the operation of the estate. The chapel, built around 1300 and decorated with rich wall paintings, is an impressive example of the high quality of the furnishings (Figure 8) (Landkammer et al., 2018).

Its location above the portal to the inner monastery courtyard is also found in a similar form at the Göttweigerhof in Furth south of the Danube (Aichinger-Rosenberger et al., 2003, pp. 466–467): on the one hand, this positioning expressed the spiritual landlordship, but similarly to some castle chapels, the gate was placed under the protection of God or the holy chapel patrons. Chapels were part of the structural furnishings in many monastic manors and thus also indicate that their importance clearly went beyond their economic functions (Figure 9).

The widespread absence of medieval cellars in the monastic manors of the Wachau is conspicuous. There may be several reasons for this: first, as already mentioned, the oldest estates are positioned close to the Danube for logistical reasons, which makes them vulnerable to floods. The rapid recovery of goods of all kinds was and is much easier at ground level than from the cellar, especially when full wine barrels are involved. On the other hand, it had long been the practice of the monasteries to ship the freshly pressed must immediately, which made the need for large wine cellars obsolete. Significantly, the regional monastic landlords were exceptions, such as Göttweig Abbey, which had a large and a smaller cellar built in their manorial complex in Stein as early as around 1300 (Kühtreiber, 2023a). It was not until the seventeenth/eighteenth century that more and more wine cellars can be found, which suggests vinification and wine distribution on site. From the late Middle Ages onwards, conflicts and regulations concerning the sale of wine are recorded in particular in the towns of Krems and Stein (see below, c. 3.3). In both towns, another circumstance comes into play: the installation of larger wine cellars was not possible in many town houses due to lack of space. Therefore, separated cellar alleys were established, partly in the city ditches on the mountain side. Similar solutions are also to be considered in some of the more densely built-up rural wine-growing villages of the Wachau; without written evidence, however, many a preserved cellar tube can hardly be attributed to its former owners.

3.3 Monastic Vine Estates as Nodes of Social Networks

In 1203, the Bishop of Passau, Wolfger von Erla, undertook a visitation trip down the Danube, which led him to the Passau possessions. A unique source – a notebook filled with invoices – provides an example of this journey. On 12 November of this year, he stayed with his entourage in Zeiselmauer, which was the administrative centre of the Passau possessions in the Tullnerfeld region of Lower Austria. The monastic court of the High Chapter of Passau, which belonged to it, was located in the structural remains of the former Roman fort, comparable to the Nikolaihof in Mautern on the Danube, as can still be seen today on the Roman Gate of Zeiselmauer (*Kastentor*), which was converted into a granary as part of the court complex in the Middle Ages (Kühtreiber, 2016, p. 98). As part of this stay, Wolfger remunerated the "singer" (*cantor*) Walther von der



Figure 8: Man of Sorrows, Göttweigerhof-Kapelle, Oratorium, western window niche of the north wall. Photo: P. Böttcher.

Vogelweide with money for a fur coat (pro pellicio). This note is the only extra-literary evidence for this famous poet (Reichert, 2005, pp. 470-483; Heger, 1970, pp. 13-17, 224-237 [discussion] and p. 96 [transcription]). Even though this has not been handed down, we can assume that the gift of money to Walther did not take place without a corresponding demonstration of the art of poetry and song. In any case, this also highlights the importance of the monastic estates as cultural and communicative hubs in the regions.

The social network of institutions and people connected to the courts will also be traced on an economic level: The management of the estate of foreign monasteries and convents was not always free of conflict. Numerous documents report disputes about rights to vineyards, about exceeding quantities of tax-free wine for the monasteries' own needs, or about the maintenance obligations of adjoining buildings and walls (Landsteiner, 2001, pp. 196–197). For example, the already mentioned Göttweiger Hof in Stein was only granted tax exemption if the adjacent city wall did not require any maintenance measures. The disputes flared up when in the fifteenth century the Abbot of Göttweig had a tower of the town wall adjacent to the manor demolished to construct a new wing for residential purposes and made no provision to rebuild it. Conversely, the burghers of Stein held up a wagonload of wine at the city gate, which was destined for the Göttweig court, as in their opinion the permitted amount of wine to be imported tax-free had already been exceeded (Brunner, 1953, p. 7, no. 15 (1286); pp. 91–92, no. 163a (1443); pp. 92–93, no. 163b (1443)).

For the estate of the Augustinian Canons' Monastery of Klosterneuburg, other ways of cooperation with the burghers of Stein were sought and a burgher was entrusted with the care of the property for life (Holubar, 1994, pp. 69-70). As in other cases, his duties included both the care of the vineyards and the structural maintenance of the manor.



Figure 9: Stein an der Donau, Göttweiger Hof. Gate chapel from the entrance side. Photo: T. Kühtreiber.

Toll registers from Sarmingstein in Upper Austria or from Stein give an impression of the quantities that were transported up the Danube without tolls at the beginning of the sixteenth century – i.e., for the own needs of some monasteries. The quantities range from just under 100 (Salzburg Cathedral Chapter) to just under 3,000 (Melk) *Eimer* of wine; a Viennese *Eimer* corresponds to about 56 L (Hoffmann, 1955).

Especially for the modern period, toll lists and monastery records suggest lively traffic between the monasteries and their vinery estates. The grape harvest of the monastic harvesting yards upstream of the Danube was carried out by water over the Danube by ship trains pulled by horses. This elaborate form of transport developed into an important branch of trade, which included shipmasters as organisers of the transports, *Naufergen* who guided the ships and rafts down the Danube, as well as auxiliary workers (Landsteiner, 2015, pp. 233–234; Weber, 1999, p. 364).

The so-called Thirty Years' War (1618–1648) caused a massive collapse of wine production in the Wachau. Especially in the areas north of the Danube, there were high losses of property, for example, in Eggenburg by 85% of the vineyard property. This can also be seen in the price development. Between 1,480 and 1,570, one could still buy 4–6 *Metzen* of rye for an *Eimer* of wine; from the 1680s onwards, one bucket of wine only bought one or at most two *Metzen* of rye. A *Metzen* of rye held between 61 and 75 L, depending on regional tradition; a bucket of wine held about 57 L (Landsteiner, 1996).

For the monasteries, the estates in the Wachau represented an important source of income until well into the eighteenth century. However, with the reorganisation of the church system and the abolition of a large number of monasteries by Joseph II at the end of the eighteenth century and in Bavaria in 1802/03, ownership changed significantly (Krausen, 1964). The monasteries were now replaced by those winegrowers who had previously cultivated the vineyards on behalf of the landlords. An impressive number of the important winegrowing companies in Wachau today have their headquarters in one of the former monastery estates.

4 Case Study: The Estate of the Monastery St. Nikola in Passau in Mautern/Donau

A sub-project financed by the Saahs family, the Federal Heritage Department, the Department of Archaeology, and the Department of Art and Culture of the Lower Austrian Provincial Government is dealing with the

history of the construction and use of the Nikolaihof in Mautern on the Danube. The picturesque Nikolaihof, which is known beyond the region as one of the oldest wine-growing estates according to biodynamic guidelines and, with the "Weinstube," as an excellent organic restaurant, integrates buildings whose history is a good 1,800 years old. This makes the Nikolaihof one of the oldest building complexes in Austria that is still inhabited and managed today. Its location within the Roman Limes fort of Favianis aroused the interest of archaeologists early on, so that excavations have repeatedly taken place on the site for over 50 years. Although it is known that there is an upright tower of the late antique camp wall in the cellars of the northern wing, which is still standing today, and that the Roman building remains must therefore also have had a role in the later history of use, there has been no research so far that has connected the secrets hidden under the ground with those found in the buildings that still exist today and in the archives. First, however, it was necessary to re-contextualise the largely small-scale and poorly documented excavations of earlier decades. Therefore, georadar prospections in the courtyard and in the garden of the site were carried out (Lindinger & Steinhauser, unpublished). These prospections made it possible to determine the further course of the former castellum wall towards the Danube and to locate the foundations of a previously unknown tower.

Already in 2017–2018, excavations in the west wing of the manor revealed that not only remains of the Roman military camp of the second to fourth century AD but also a so-called burgus – a small-sized fort within the bigger fort - of the fifth century could be located in the area of the Nikolaihof (Zimmermann, 2018). In connection with the construction research by one of the two authors, this assumption could not only be confirmed, but also it was shown that this smaller fort, measuring 30 m × 30 m in circumference, still survives in large parts in the form of walls that extend to under the present roof. This complex is an exceptional witness from the time when the Roman Empire was less and less able to provide security for its population living on the borders of the Empire. With the withdrawal of troops, the large military forts were used by the civilian population as shelters, within which the remaining administration and its soldiers were now to ensure the maintenance of peace and order in small new forts (burgi). The description of the life of Saint Severin, written in the early sixth century, but interpreting the situation of the second half of the fifth century hagiographically, is a unique written testimony to the difficult living conditions in this region (Noll, 1981). Severin of Noricum stands for Christian persons and institutions that took care of the provision and protection of the Romans instead of the Roman administration that had left (Wolfram, 2003, pp. 46–53). From a chronological point of view, it is possible that this saint regularly went in and out of this residual fort, even if this is not explicitly stated in his vita.

According to the biography written by his pupil Eugippius, after Severin's death in 482, the Romans left for Italy together with the monks of the monastery founded by the saint. Favianis probably remained uninhabited at least until the eighth/ninth century. It was not until the Carolingian Frankish Empire that the place played a role again as a royal toll station – hence the new name "Mautern" (Kühtreiber & Obenaus, 2017, pp. 160–163). The repeated discovery of graves from the ninth/tenth century in the area of the Nikolaihof and the neighbouring alleys provided the first indication that an early ecclesiastical centre may have developed in the area of the late antique small fort. Indeed, in the written tradition of the bishopric of Passau, to which Mautern belonged, there is written evidence that in the late tenth century, a so-called "synod" – an assembly under episcopal direction – was held in a church (basilica) dedicated to St. Agapit in Mautern (Weltin & Zehetmayer, 2008, p. 128, no. 12b). Since the chapel of the Nikolaihof that still exists today is dedicated to this seldommentioned saint, there is much to be said for looking here for the early church as a predecessor facility.

Even though it has long been known from documentary evidence that this manor was given a new purpose for a good 800 years with the founding of the Passau canons' monastery of St. Nikola in the eleventh century, it was not known until now what significance this facility played for the mother monastery, on the one hand, but also for the town of Mautern and the region, on the other hand. Successively, the estate became the hub of St. Nikola's economic interests: until the sixteenth century, the monastery succeeded in expanding its regional possessions in the Wachau, in the Dunkelsteinerwald (Southwest to Mautern), and in the Weinviertel (Northeast to Mautern) through further donations and acquisitions, thus developing the Nikolaihof into an important administrative and economic centre (Kuhn, 2023).

This was also reflected in the successive structural expansion, which could be confirmed by dating the preserved timbers using dendrochronology: within the small fort of late antiquity, the core complex, consisting of the Agapit chapel and a two-storey, hall-like stone building, was built in the eleventh to early thirteenth

centuries. The 800-year continuous use of the ground floor as a press house is outstanding, as can be seen from the huge press tree from 1769 that is still preserved today (Kühtreiber, 2023b) (Figure 6). When the remains of the Roman fort wall were demolished in the fifteenth century in favour of a new town wall built further east (Schicht, 2022, p. 313), the manorial complex was gradually extended to its present size. Not even the dissolution of the monastery in 1803 and its sale to private individuals could harm its use as a site for wine production. The development of the monastic economy in a remote location can thus be traced more clearly in the Nikolaihof than in almost any other building complex in Wachau.

5 What Remained of the Monastic Estates?

The secularisation of many monasteries or the confiscation of their properties in the late eighteenth and early nineteenth centuries represented a caesura in the social and economic development of many wine-growing regions. Even though some monastic manors and the estates associated with them are still managed by renowned private wineries today, the small-scale nature of vineyard ownership in the Wachau in particular is a consequence of the end of monastic land ownership in the region. Thanks to early written records in monastery archives, many field names of vineyards and even individual vineyards can be traced back to the Middle Ages. In addition to the surviving deeds of donation, exchange, and purchase, this is primarily due to the monastery's administrative records, such as land registers and service books (Arnberger, 2017).

The vineyard terraces of the Wachau represent a further heritage: In contrast to viticulture along the Rhine, wine in the Wachau is grown on horizontally laid out terraces. This method of cultivation has shaped the landscape for centuries and is one of its most important distinguishing features as a World Heritage region. These terraces make modern mechanical cultivation difficult, as the cultivation areas are relatively small due to the steepness of the slopes. However, they have great ecological advantages: The walls running across the slope prevent erosion during heavy downpours and at the same time store the water that slowly drains away through the dry-set walls. In addition, the stone walls act as natural heat reservoirs, releasing solar energy to the vines in the evening and night hours. It is crucial to know how to build dry stone walls, as they should be able to withstand the pressure of the slope, on the one hand, and help prevent waterlogging, on the other hand. This requires regular maintenance of the walls so that they do not deteriorate, and erosion sets in. Today, this technique is again highly valued and taught in courses (Schmatz, 2020).

Dealing with the manors of foreign monasteries in the course of the project so far has not only attracted scientific interest but also the attention of the local population – especially the owners – and strengthened awareness of their cultural heritage. In this way, it has been possible to repeatedly draw attention to the cultural–historical significance of the estates within the framework of visits and public information events. Conversely, the owners supported us with internal family information on ownership and building history. With the online database, we hope that even more people from the region will become aware of this special cultural heritage. Feedback from the region also makes it possible to incorporate new findings. We have received particular encouragement from the municipal administrations of Krems/Stein and Weißenkirchen, which are not only responsible for housing the archival records of the administrative documents but are also interested in raising awareness among the population due to their function as building authorities.

Thus, further inspections of the manorial complexes that have not yet been visited are planned. It is also planned to embed the database in the cultural tourism use, analogous to the online presentation of the sacred buildings of the Wachau (https://www.kirchen-am-fluss.at/).

Acknoledgements: The successful completion of the Wachauer Klosterhöfe Online project was made possible by the dedicated efforts of the project team, our cooperation partners and the owners of the properties, who provided crucial insights and allowed for a comprehensive investigation of the historic structures. Our sincere thanks go to all involved for their support in advancing this research. https://www.wachauer-klosterhoefe.at/uber/team.

Funding information: This essay was written within the project Wachauer Klosterhöfe Online. An interdisciplinary digital inventory, funded by the Lower Austrian regional administration 2021–2022. The OA publication of this article was supported by funding from the University of Salzburg.

Author contributions: All authors have accepted responsibility for the entire content of this manuscript and approved its submission. Both authors have contributed to the article. E.G. is above all responsible for the historical research, especially the history of properties. T.K. is responsible for building archaeology and the initial project idea.

Conflict of interest: Authors state no conflict of interest.

Data availability statement: The datasets analysed during the current study are partly available in the Wachauer Klosterhöfe Online-Application (https://www.wachauer-klosterhoefe.at/).

References

Aichinger-Rosenberger, P., Benesch, E., Bleicher, K., Grün, S., Holzschuh-Hofer, R., Huber, W., Karner, H., Packpfeifer, K., Piuk, A., Russwurm-Biró, G., Rychlik, O., Szendey, A., Wanek, F. P. (Eds.). (2003). Dehio-Handbuch. Die Kunstdenkmäler Österreichs. Niederösterreich südlich der Donau 1. Berger.

Arnberger, E. (2017). Flurnamen erzählen: Über Riednamen aus den Weinbaugebieten Wachau, Kremstal und Kamptal, ihre Herkunft und ihre Bedeutung. Vinea Wachau Nobilis Districtus.

Bauer, M. (2004). Die Besitzverhältnisse im Tal Wachau in der frühen Neuzeit (1500-1820). Österreich in Geschichte und Literatur (mit Geografie), 48(5), 285-307.

Bauer, M. (2008). Sonderweg Wachau? Weinbaumonokultur, Produktionsverhältnisse und Gemeindeautonomie im niederösterreichischen Donautal in der Frühen Neuzeit. Jahrbuch für Regionalgeschichte, 26, 59-84.

Brunner, O. (Ed.). (1953). Die Rechtsquellen der Städte Krems und Stein. Böhlau.

Englisch, E. (1998). Der Kremser Wein und die klösterlichen Lesehöfe. Erste Österr. Weinbruderschaft Krems.

Gruber, E., & Kuhn, S. (2023). Klosterhöfe in der Wachau. Jahrbuch für Salzburger Landeskunde, 2023, 115-129.

Hähnel, J. (1975). Stube - Wort und sachgeschichtliche Beiträge zur historischen Hausforschung. Aschendorff.

Heger, H. (1970). Das Lebenszeugnis Walthers von der Vogelweide. Die Reiserechnungen des Passauer Bischofs Wolfger von Erla. Schendl.

Hoffmann, A. (1955). Die Weinfuhren auf der österreichischen Donau in den Jahren 1480-87. In Aus Verfassungs- und Landesgeschichte. Festschrift zum 70. Geburtstag von Theodor Mayer 2: Geschichtliche Landesforschung, Wirtschaftsgeschichte, Hilfswissenschaften, dargebracht von seinen Freunden und Schülern (pp. 329-345). Thorbecke.

Holubar, K. (1994). Der stiftliche Lesehof in Krems. In K. Holubar & W. C. Huber (Eds.), Von Rebstock und Riesenfass. Ein Buch über Weinbau und Kellerwirtschaft in alter Zeit (pp. 69-73). Mayer.

Klinger, W., & Vocelka, K. (Eds.). (2020). Wein in Österreich. Die Geschichte. Brandstätter.

Knittler. H. (2000). Die Wachau als historischer Begriff. In G. Hajós (Ed.), Denkmal-Ensemble Kulturlandschaft am Beispiel Wachau. Internationales Symposion vom 12. bis 15. Oktober 1998 in Dürnstein (Österreich) (pp. 161–166). Berger.

Krause, H., & Reichhalter, G. (2009). Der "Perchhof" zu Heiligenstadt. Ein klösterlicher Profanbau und Kleinadelssitz. Fundort Wien. Berichte zur Archäologie, 12, 124-175.

Krause, H., & Reichhalter, G. (2011/2012). Der Berghof zu Heiligenstadt. Ein klösterlicher Profanbau und Kleinadelssitz. Jahrbuch für Landeskunde von Niederösterreich N.F, 77/78, 95-152.

Krausen, E. (1964). Die Sequestrierung bayerischer Weingüter um Krems. Mitteilungen des Kremser Stadtarchivs, 4, 107-115.

Kuhn, S. (2023). Nikolaihof – Besitzgeschichte. In Wachauer Klosterhöfe Online. https://www.wachauer-klosterhoefe.at/klosterhof/36nikolaihof#Besitzgeschichte (last access 10.9.2024).

Kühtreiber, K., & Obenaus, M. (2017). Burgen des 9. bis zur Mitte des 11. Jahrhunderts in Niederösterreich – eine Bestandsaufnahme. Verlag des Römisch-Germanischen Nationalmuseums.

Kühtreiber, T. (2016). Adelssitze im Tullnerfeld – Eine Spurensuche. In K. Brunner & T. Kühtreiber (Eds.), Adelskultur in der "Provinz": Das niederösterreichische Tullnerfeld als mittelalterliche Kulturlandschaft (12.–14. Jh.) (pp. 80–105). Medium Aevum Quotidianum.

Kühtreiber, T. (2023a). Göttweiger Hof – Bauhistorische Interpretation. In Wachauer Klosterhöfe Online. https://www.wachauerklosterhoefe.at/klosterhof/15-gottweiger-hof#Bauhistorische%20Interpretation (last access 10.9.2024).

Kühtreiber, T. (2023b). Nikolaihof – Bauhistorische Interpretation. In Wachauer Klosterhöfe Online. https://www.wachauer-klosterhoefe. at/klosterhof/36-nikolaihof#Bauhistorische%20Interpretation (last access 10.9.2024).

- Lanc, E. (1983). *Die mittelalterlichen Wandmalereien in Wien und Niederösterreich*. Verlag der Österreichischen Akademie der Wissenschaften.
- Landkammer, M., Tarcsay, G., & Zorko, M. (2018). Bilder, die Räume erschließen. Historische und digitale Erkundung der Wandmalereien in der Göttweigerhof-Kapelle (Krems/Stein). *MEMO Medieval and Early Modern Material Culture Online*, *2*, 122–150. doi: 10.25536/20180207
- Landsteiner, E. (1996). Weinbau und bürgerliche Hantierung. Weinproduktion und Weinhandel in den landesfürstlichen Städten und Märkten Niederösterreichs in der frühen Neuzeit. In F. Opll (Ed.), *Stadt und Wein* (pp. 17–50). Österreichischer Arbeitskreis für Stadtgeschichtsforschung.
- Landsteiner, E. (2001). Teilbau und Lohnbau. Über zwei Formen der Arbeitsorganisation im Weinbau des Kremser Raumes. In W. Rosner (Ed.), 1000 Jahre Krems am Fluß der Zeit (pp. 186–220). NÖ Institut für Landeskunde.
- Landsteiner, E. (2015). Der Güterverkehr auf der österreichischen Donau. In P. Rauscher & A. Serles (Eds.), Wiegen Zählen Registrieren. Handelsgeschichtliche Massenquellen und die Erforschung mitteleuropäischer Märkte (13.–18. Jahrhundert) (pp. 217–253). StudienVerlag.
- Langendorf, A. (2023). "Florianihof 3" (Besitzgeschichte). In Wachauer Klosterhöfe Online. https://wachauer-klosterhoefe.at/klosterhof/2-florianihof-3 (last access 9.9.2024).
- Lindinger, V., & Steinhauer, D. (unpublished). Bericht zur archäologischen Maßnahme Geophysikalische Prospektion Mautern Nikolaihof 2020 (unpublished).
- Neugebauer, J. W., & Neugebauer-Maresch, C. (1998). Zum figuralverzierten Fliesenboden der Kapelle des Lesehofes. In J. W. Neugebauer (Ed.). Von der Herren Hof von Passau. Vom römischen Lagerdorf zum mittelalterlichen Lesehof (pp. 93–132). Stadtmuseum Klosterneuburg.
- Neugebauer, J. W., Neugebauer-Maresch, C., & Preinfalk, F. (1998). Die archäologischen Ausgrabungen am Kardinal-Piffl-Platz Nr. 8. In J.-W. Neugebauer (Ed.), *Von der Herren Hof von Passau. Vom römischen Lagerdorf zum mittelalterlichen Lesehof* (pp. 23–32). Stadtmuseum Klosterneuburg.
- Noll, R. (Ed.). (1981). Eugippius. Das Leben des Heiligen Severin. Lateinisch und Deutsch. Passavia Universitätsverlag.
- Reichert, H. (2005). Walther: Schaf im Wolfspelz oder Wolf im Schafspelz? In H. Birkhan & A. Cotten (Ed.), *Der achthundertjährige Pelzrock.*Walther von der Vogelweide Wolfgang von Erla Zeiselmauer (pp. 449–506). Verlag der Österreichischen Akademie der Wissenschaften.
- Rösener, W. (2007). Die Stadthöfe der Zisterzienser im Spannungsfeld der Stadt-Land-Beziehungen des Hochmittelalters. In C. Dobrinski, B. Gedderth, & K. Wipfler (Eds.), *Kloster und Wirtschaftswelt im Mittelalter* (pp. 85–99). Fink.
- Schich, W. (1992). Der Handel der rheinischen Zisterzienserklöster und die Einrichtung ihrer Stadthöfe im 12. und 13. Jahrhundert. In R. Kottje (Ed.), *Die niederrheinischen Zisterzienser im späten Mittelalter. Reformbemühungen, Wirtschaft und Kultur* (pp. 49–73). Rheinland-Verlag.
- Schicht, P. (2022). Katalog. In H. Fuchsberger & P. Schicht (Eds.), *Stadtmauern in Niederösterreich. Markt- und Stadtbefestigungen* (pp. 158–464). Ferdinand Berger & Söhne.
- Schmatz, P. (2020). Das Fundament, auf dem die Wachau (an-)baut. In H. Dikowitsch (Ed.), *Die Wachau. 20 Jahre UNESCO-Welterbe* (pp. 41–43). Amt der NÖ Landesregierung, Abt. Kunst und Kultur.
- Schönfellner-Lechner, H. (2023). Ranshofener Hof Besitzgeschichte. In *Wachauer Klosterhöfe Online*. https://wachauer-klosterhoefe.at/klosterhof/40-ranshofener-hof (last access 10.9.2024).
- Schweiger, A. (2004). Weinbau im alten Linz. In W. Schuster, M. Schirmböck, & A. Schweiger (Eds.), Stadtarchiv und Stadtgeschichte. Forschungen und Innovationen. Festschrift für Fritz Mayrhofer zur Vollendung seines 60. Lebensjahres (pp. 341–348). Archiv der Stadt Linz. Tietze, H. (1908). Die Denkmale des politischen Bezirkes Krems. Schroll.
- Vavra, E. (1981/82). Ein früher Beleg für die Darstellung von Tierfabeln in der mittelalterlichen Monumentalmalerei Österreichs. Der Freskenzyklus im Passauer Hof zu Krems. *Mitteilungen des Kremser Stadtarchivs*, 21/22, 1–20.
- Weber, A. O. (1999). Studien zum Weinbau der altbayerischen Klöster im Mittelalter. Altbayern, österreichischer Donauraum, Südtirol. Steiner. Weltin M., & Zehetmayer, R. (2008). Niederösterreichisches Urkundenbuch 1: 777 bis 1076. Niederösterreichisches Landesarchiv.
- Werneck, H., & Kohl, H. (1974). Karte des historischen Weinbaues in Oberösterreich. *Jahrbuch des Oberösterreichischen Musealvereines*, 119(1), 131–144.
- Wolfram, H. (2003). Grenzen und Räume. Geschichte Österreichs vor seiner Entstehung. Ueberreuter.
- Wüst, W. (2003/2004). Die geistlichen Staaten im Südwesten des Alten Reichs am Vorabend der Säkularisation. *Blätter für deutsche Landesgeschichte*, 139/140, 45–72.
- Zehetmayer, R., Weltin, D., & Weltin, M. (2013). *Niederösterreichisches Urkundenbuch 2: 1078–1158*. Niederösterreichisches Landesarchiv. Zehetmayer, R. (2017). Beschreibungen von Gebäuden in niederösterreichischen Urkunden bis zum Ende des 12. Jahrhunderts. In F. Pieler & P. Trebsche (Eds.), *Festschrift für Ernst Lauermann. Beiträge zum Tag der Niederösterreichischen Landesarchäologie 2017* (pp. 389–395). Amt der Niederösterreichischen Landesregierung, Abteilung Kunst und Kultur.
- Zimmermann, U. (2018). Grabungen im Westtrakt des Nikolaihofs/Mautern. Bericht. *Fundberichte aus Österreich, Digitaler Teil*, *57*, D2251–D2264