Liam Isaac Downs-Tepper

A MIGHTY FORTRESS IS OUR GOD: UNDERSTANDING THE GEOSPATIAL LOGIC OF FORTIFIED CHURCHES IN TRANSYLVANIA

MA Thesis in Late Antique, Medieval and Early Modern Studies

Central European University Private University

Vienna

May 2021

A Mighty Fortress is Our God: Understanding the Geospatial Logic of Fortified Churches in Transylvania

by

Liam Isaac Downs-Tepper

(United States)

Thesis submitted to the Department of Medieval Studies,
Central European University Private University, Vienna, in partial fulfillment of the requirements of the Master of Arts degree in Late Antique, Medieval and Early Modern Studies.

Accepted in conformance with the standards of the CEU.

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Author's Declaration

I, the undersigned, **Liam Isaac Downs-Tepper**, candidate for the MA degree in Late Antique, Medieval and Early Modern Studies, declare herewith that the present thesis is exclusively my own work, based on my research and only such external information as properly credited in notes and bibliography. I declare that no unidentified and illegitimate use was made of the work of others, and no part of the thesis infringes on any person's or institution's copyright. I also declare that no part of the thesis has been submitted in this form to any other institution of higher education for an academic degree.

Vienna, 30 May 2021

___Liam Isaac Downs-Tepper _
Signature

Abstract

Fortified churches loom over Transylvania, heavy walls built for defense. But against whom? And why are there so many of them? Through careful review of relevant literature, this thesis identifies ten theories which seek to explain the density and/or placement of fortified churches. Six concern density and locations broadly: fear of the Mongols, fear of the Ottomans, fear of Wallachia and domestic unrest, to follow in the footsteps of the Teutonic Knights, out of Saxon pride, and for the common people as "peasant fortresses." Another four address location more specifically: placement upon hills, among foothills, as strategic watchtowers, or as part of a bigger chain of defenses. A new database was built for this project, enabling the use of geospatial analysis to probe the veracity of each theory. This research sheds new light on the fortified churches of Transylvania, highlighting the role of local community decisions in their development, and demonstrates how geospatial analysis can complement other methods to advance research in history topics.

Acknowledgements

I am deeply grateful to both of my supervisors, Professor József Laszlovszky and Professor Béla Zsolt Szakács, for vital guidance and useful feedback, without which this project would not be what it is.

Thank you as well to professors Maria Vargha and Maxim Romanov for showing me that GIS is fun and Digital Humanities is cool.

A third thank you to my family: Chip, Marla, and Harlan, for both bountiful ideas and last-minute proofreading.

One more thank you to professors Karin Velez, Eric Otremba, and Ernie Capello for their infectious love of history, and for setting me on this path.

A special thanks to Emily McGrady, for help accessing key literature, and Catinca Mănăilă, for aid with Romanian texts.

Finally, thanks to my CEU MEDS cohort and the rest of my friends who were still my friends after I brought up fortified churches for the hundredth time.

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Introduction

A mighty fortress is our God

A bulwark never failing…

(English translation of Martin Luther's hymn, "Ein feste Burg ist unser Gott")

Fortified churches are precisely what they purport to be: a hybrid of church and fortification, combining the defensive nature of a fortress with the religious and consecrated functionality of a church. As a historian, it is hard to see them and not wish to know more; even as a tourist, they are stunning. They exemplify the characteristics that the word "Medieval" evokes: massive brooding structures, crenelated and foreboding, yet beautiful.

Academic debate offers a number of different reasons for the remarkably high density of fortified churches in Transylvania, as well as their specific locations. This thesis aims to test out ten of these theories: from unique Saxon spirit through to construction of hilltop watchtowers. Understanding the development of fortified churches in their context will enable us to better understand the roles they played, the choices made by those who built them, and better inform our approach to how they can be viewed in the present.

This thesis has four goals.

1) Reviewing the existing theories to explain both the density and location of Transylvania's fortified churches.
2) Evaluating the veracity of these theories.
3) Applying digital humanities methods in a way that is both understandable and embraces the "human" aspect of the humanities.
4) Considering how the results of this thesis interact with more recent UNESCO and cultural heritage perspectives on the seven selected fortified churches.

Chapter 1: Framework

We begin with an outline of the essential concepts upon which this thesis is built.

1.1 Rationality

Choices are made with intent, for a variety of reasons – and "reason" remains, whether or not we understand it. This is true of the past as much as the present. It is easy to dismiss curious decisions made by our forebears as nothing more than the bizarre and puzzling nature of the past. In this case, for example, the site selection process for fortified and non-fortified churches would be such a choice. Richard Darnton's *The Great Cat Massacre* provides an excellent example of understanding rationality. The focus of his book is the mass murder of cats by printers' apprentices in Paris in the late 1730s. It is an event that was striking for its cruelty and the grotesquely arbitrary nature of violence that was demonstrated. Darnton's book works to show how, in the specific context of the time and place, this was not just a reasonable thing to do - it was the right thing to do.[1]

As odd as choices or events may seem, there are reasons behind them. As a framework, this is important because it allows this research to happen. If, instead, we shrug and allow the ineffable vicissitudes of the past be built on a framework of ad hoc arbitrariness, there are no guiding principles or rules of any sort; the sort of rules and guiding principles that this thesis aims to uncover. For any of this research to have value, we need to accept that what we see now are reflections of intentional choices that were made in the past.

This is not to be conflated with any whiggish, Marxist, deterministic or historicist conception of history. Understanding of choice is key, but there is no inevitability implied.

[1] Darnton, *The Great Cat Massacre*.

1.2 Borderlands History

One of the key aspects of Transylvania is its nature as a borderland region of the Kingdom of Hungary. The modern conception of border denotes a line: a hard divider, inside or outside, a clear demarcation. Understanding Transylvania as a border in this sense hinders our understanding of the region. Instead of hard lines, it was an amorphous edge, bleeding back and forth, with exchanges along the way. All the same, the Carpathians do form a natural boundary, one that was utilized as a strong frontier by different political entities, states, and kingdoms. It is not a coincidence that this was recognized by different groups as a clear boundary between east and west.

Hämäläinen and Truett draw a clear distinction between frontiers and borderlands. Frontiers are clear edges; borderlands are more amorphous and often chaotic.[2] This research follows in part the conceptual footsteps of Baud and Shendel, who note the center-focused approach of much borderlands history.[3] Thus the study of the periphery is an examination of its relevance to the core, or the strategies taken by administration in controlling the shape of borderlands. Instead, they advocate for a more outside-inward approach, considering the local realities that shape these areas.[4] Excepting where it is relevant for context, this research is not particularly interested in the Kingdom of Hungary: Transylvania itself is the object of focus.

1.3 Heritage Value

Fortified churches filled a distinct niche in the complex tapestry of medieval Transylvania. They were a refuge in times of violence, and a part of the community in times of peace. Now, with the Saxon population almost nonexistent and the Székely population diminished, they do

[2] Hämäläinen and Truett, "On Borderlands," 338.
[3] Baud and Van Schendel, "Toward a Comparative History of Borderlands," 211.
[4] Baud and Van Schendel, 241.

not have such an esteemed place. They are, at best, usually shown as a cultural oddity. The modern region of Transylvania has leaned heavily into kitsch in its push to increase tourism, with Dracula hiding around every corner. This is an intentional and strategic choice, as a method of developing tourism. "Dark Tourism," as it is termed, is a specific variety of special-interest tourism; and one in which Romania on the whole, and Transylvania specifically, has heavily invested.[5] The intentional development of Dracula as a tourist symbol was partly the work of the Transylvanian Society of Dracula, an organization explicitly dedicated to the promotion of Dracula Tourism.[6]

This "Dark Tourism" approach remains true of the seven fortified churches which are part of the "Villages with Fortified Churches in Transylvania" UNESCO World Heritage Site: Biertan, Câlnic, Dârjiu, Prejmer, Saschiz, Valea Viilor, and Viscri. Although their listing among UNESCO protected sites was not a tourism-driven decision, much of their current reputation is more connected to tourism than to their historical and cultural value. This thesis aims to explore the subject of heritage, as well as the communities to which these fortified churches are linked.

1.4 Digital Humanities

The use of Digital Humanities methodologies is a key tenet of this project and is expanded upon much more fully in Chapter Four. From the perspective of framework, however, there are two points to clarify. First, in its present state, this thesis is a medieval studies/history research work, which uses digital humanities methodologies, as opposed to a digital humanities paper, which happens to consider a historical dataset. Second, despite the heavy inclusion of digital humanities, this is intended to be a paper that can be consumed and understood by a general

[5] Minic, "Development of 'Dark' Tourism," 82.
[6] Minic, 97.

audience. This is part of an ongoing debate in the digital humanities world; between "openness and access" on one side and "specialization" or "technical knowledge" on the other.[7] This is the same type of debate that occurs in every humanities discipline – between more specialized academic work and those with a broader appeal. The difference, however, is that non-digital humanities academics (in this case, medievalists who may be unfamiliar with some digital humanities approaches) are already a broader audience, relative to those who specialize in any one method.

Tim Cole and Alberto Giordano of the Holocaust Geographies Collective put it well: "Alongside the binaries of concentration v. dispersion and absence v. presence, we work here also with a series of other productive binaries: center v. periphery, visibility v. invisibility, accessibility v. inaccessibility."[8] This philosophical layer of access adds another wrinkle. Digital Humanities projects often create sizeable databases, which are then locked up out of use for most. There are many groundbreaking Open Access DH projects – ORBIS being a particularly remarkable example.

[7] Flanders, "Time, Labor, and 'Alternate Careers' in Digital Humanities Knowledge Work"; Senchyne, "Between Knowledge and Metaknowledge"; Zriba, "The Role of Digital Humanities in the Democratization of Knowledge."
[8] The original blog post is no longer accessible. Cited by Jack Gieseking, "Where Are We?," 645.

Chapter 2: Transylvanian Context

This chapter examines the different ethnic groups present in medieval and early modern Transylvania (1100 to 1600) and lays out the relevant historical and political context for the emergence of fortified churches as a phenomenon. It functions as a brief overview of essential parts of Transylvania's history to help with understanding the multi-ethnic multi-confessional character of Transylvania in the Middle Ages and early modern period. Before progressing with spatial analysis, it is important to understand the presence of privileged minority groups, like the Saxons and Székelys. This is not intended to be an intensive overview, and all of this will be discussed again in pertinent portions of Chapter Five.

The timeline at the end of this chapter can be consulted for clarity.

Figure 1: Transylvania and Surroundings around 1500

2.1 General Overview

The medieval kingdom of Hungary extended far beyond the current borders of Hungary, reaching what is now the western portion of Romania. This is the area known as Transylvania. Bordering on Wallachia and Moldavia, Transylvania was, from very early on, remarkably diverse. Hungarians, Székelys, Saxons, Teutonic Knights, Romanians, and Cumans all have their own claims to parts of Transylvania at various times.

By the 12th century, there were settled populations of Hungarians, Székelys, and Saxons, and Transylvania belonged to the Kingdom of Hungary.[9] Perhaps because of this pluralistic population, Transylvania itself lacked a cohesive identity of its own until the later Medieval era, as indicated by neighbors referring frequently to specific groups or subregions as opposed to the broader area.[10] The religious organization of the area reflected these divisions. Alba Iulia was a diocese within the Kalocsa archdiocese, and the peasant population fell within it, but the more privileged groups, like the Saxons, were directly under the Archbishop of Esztergom.[11]

Transylvania was an atypical region of the Kingdom of Hungary. The monarchy held less sway than it did nearer to Buda, and different groups existed with relative autonomy. This led to distinct social structures and settlement patterns, as well as separate church organization for different groups. Wallachia and Transylvania had Voivodes, though the title meant different things in the two areas. In Transylvania the Voivode held a royal office courtesy of the King of Hungary; in Wallachia the Voivode was a more or less independent ruler. The late sixteenth century brought with it major changes, as Transylvania emerged as a new political entity, separate from the Kingdom of Hungary.

[9] Pop, "Religiones and Nationes in Transylvania During the 16th Century."
[10] Coman, "A Game of Rhetoric:"
[11] Weber, "An Introduction to the Study of Saxon Settlement in Transylvania During the Middle Ages," 55–57.

Among the many parts of infrastructure and development by different ethnic and social groups in Transylvania were fortified churches. These fortified churches are not a uniquely Transylvanian phenomenon: they can be found throughout Europe, in Slovenia, France, and Germany, among other areas.[12] Transylvania, however, has perhaps the densest and most complex systems of fortified churches, and is thus deserving of further scrutiny.[13]

2.2 Ethnic Composition of Transylvania

Throughout the medieval era Transylvania was a remarkably multicultural area. The impetus for this began with the struggles involved in securing the borders of the Kingdom of Hungary. In the twelfth and thirteenth centuries the Cumans to the east grew more aggressive, with frequent raids. Other threats were seen coming from further east as well.[14] Hungary elected to create buffer zones of other groups to protect its borders. These groups were offered land on the condition that they helped reinforce the border. The Saxons, Székelys, and Teutonic Knights, were among those who settled in Transylvania in the twelfth through sixteenth centuries.[15]

These groups coexisted in relative harmony punctuated by occasional tensions. Underlying religious tensions were at play as well. Through the 1500s, Transylvania was officially a Catholic region of the Kingdom of Hungary, although there was already an appreciable Romanian Orthodox population.[16] They were not as privileged as the Saxons or Székelys and thus built wooden Romanian Orthodox chapels on the estates of Hungarian noblemen.[17] There

[12] Bonde, *Fortress-Churches of Languedoc Architecture, Religion and Conflict in the High Middle Ages.*; Lazar, "The Slovenian Lands as the Armed Frontier of the Holy Roman Empire"; Pietschmann, *"Church Castles". A Photodokumentation of the Federal State of Baden-Württemberg and Selected Districts of the Surrounding Federal States of Bayern, Hessen, Rheinland-Pfalz and Thüringen (within the Years 2006 – 2012).*
[13] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 5.
[14] Stoica, Stoica, and Popa, *Following the Traces of the Teutonic Knights in Transylvania*, 34.
[15] Sălăgean, *Transylvania in the Second Half of the Thirteenth Century*; Makkai, *History of Transylvania*.
[16] Prioteasa, *Medieval Wall Paintings in Transylvanian Orthodox Churches*.
[17] Makkai, *History of Transylvania*, 1.574.

are no remains left of any of these wooden churches: "What is certain is that, from the 14th century onward, Transylvania's Romanian folk art gave rise to wooden churches whose distinctive style has disappeared without trace."[18] There were, however, some stone churches, often elaborately decorated, built by the Orthodox population.[19]

The mid/late 1500s brought dramatic changes, with Lutheranism, Calvinism, and Unitarianism gaining popularity. Thus, the region has a Romanian Orthodox population, Lutherans, Calvinists, Unitarians, and Catholics.[20] A letter from 1600, sent from the Sibiu Saxons to the Székelys condemned their aid of Michael the Brave, as he was intent on "filling this beautiful land with Romanians."[21]

The Teutonic Knights

In 1211 King Andrew II offered Burzenland – a territory on the southeastern edge of Transylvania – to the Teutonic Order, placing them as a bastion against continued harassment by the Cumans.[22] This was encouraged by the Papacy, which saw the placement of Catholic Knights as an opportunity to reconcile the Catholic and Orthodox Churches.[23] King Andrew II was understandably wary; he needed border protection, and the Knights were renowned for their military prowess. But he feared losing control, adding explicit conditions and allowances for their settlement in Transylvania. One vital clause in their written permissions stated that they were allowed wooden fortifications, but nothing made of stone.[24] This was seen as a compromise: King Andrew II needed the Knights strong enough to defend the border but weak enough to be no threat to him. The Knights did not heed this condition, and when eventually

[18] Makkai, 1.575.
[19] Prioteasa, *Medieval Wall Paintings in Transylvanian Orthodox Churches*.
[20] Pop, "The Discrimination of Romanians in Transylvania in the 16th Century," 26.
[21] Pop, 17.
[22] Stoica, Stoica, and Popa, *Following the Traces of the Teutonic Knights in Transylvania*, 162.
[23] Sweeney, "Innocent III, Hungary and the Bulgarian Coronation: A Study in Medieval Papal Diplomacy."
[24] Stoica, Stoica, and Popa, *Following the Traces of the Teutonic Knights in Transylvania*, 53.

they gained new permissions to build stone structures, they had already constructed multiple fortresses, much to the consternation of those in power.[25]

Further, the Cumans, who had been considered an implacable foe—and were viewed as the imminent threat that the Knights were to face—crumbled after the Battle of Kalka in 1223.[26] Political machinations within the Catholic church added to the tensions between the Knights and Hungary, as Pope Honorious III demanded Burzenland be taken away from the jurisdiction of Alba-Iulia.[27] The Grand Master of the Knights exacerbated the fraught situation further when he swore direct allegiance to the Pope, abandoning his oaths to the Hungarian monarchy. In short, by the middle of the 1220s, the Knights had violated the terms of their settlement, reneged on their Hungarian ties, and were operating a small autonomous territory within the Kingdom of Hungary, modeled after the crusader states in the Holy Land.[28]

The Knights campaigned further east, gaining more territory. In 1225 King Andrew II, with the help of his military, expelled the Teutonic Order from the Kingdom of Hungary.[29] Despite the presence of the military, it was a bloodless expulsion. Theories vary on why the Knights left without a fight. Internal military disputes among Catholics were forbidden; perhaps this was sufficient. As a result, sixteen years before the Mongols swept through, the best military in Transylvania were expelled.

In the first half of the fifteenth century, the Knights returned to the area, aiming to reinforce the Iron Gate region of the Kingdom of Hungary. This was part of a much broader push for increased fortification against the encroachments of the Ottoman Empire, including

[25] Sălăgean, *Transylvania in the Second Half of the Thirteenth Century*, 19.
[26] Sălăgean, 11–14.
[27] Stoica, Stoica, and Popa, *Following the Traces of the Teutonic Knights in Transylvania*, 162.
[28] Makkai, *History of Transylvania*, 1.425.
[29] Stoica, Stoica, and Popa, *Following the Traces of the Teutonic Knights in Transylvania*, 163; Sălăgean, *Transylvania in the Second Half of the Thirteenth Century*, 18.

negotiations with the Teutonic Knights for aid.[30] Some of this was concrete military aid in the form of people; expertise in construction was also part of their support.[31] However, their return was an unsuccessful endeavor, and they left the area again after in 1435 after a string of defeats at the hands of the Ottomans.[32]

The Saxons

The Saxons, despite the name, were not exclusively from Saxony. They were a mix of Walloons, Saxons, and Flemish, who became a single community within Transylvania.[33] Earlier documents refer to "priores Flandrenses," "Teutonicii," "Latini," and "Saxones."[34] Prevailing scholarship dates the beginning of the Saxon migration to Transylvania to the early thirteenth century, linked to the Teutonic Knights and the Golden Bull of 1224. More recent archaeological finds indicate that the Saxons or another German-speaking population arrived somewhat earlier—during the twelfth century. The first documents about them, however, come only in the thirteenth century—and the vast majority of material finds indicate that the population of Saxons was significantly larger during the thirteenth century than the twelfth.[35] This may also be a linguistic distinction; an earlier wave of Germanic migrants had been offered land by King Géza II in the mid-twelfth century.[36] Nonetheless, the majority of the German-speaking population of Transylvania came in the thirteenth and fourteenth centuries.

The Diploma Andreanum, also known as the Goldener Freibrief der Siebenbürger Sachsen or the Golden Bull of 1224, afforded a number of privileges to the Saxons in Transylvania. Self-

[30] Whelan, "Sigismund of Luxemburg and the Imperial Response to the Ottoman Turkish Threat, c. 1410-1437," 152.
[31] Snider, "A Military Analysis of the Iron Gates."
[32] Whelan, "Sigismund of Luxemburg and the Imperial Response to the Ottoman Turkish Threat, c. 1410-1437," 179–85.
[33] Crîngaci-Ţiplic, "Weapons and Military Equipment," 74.
[34] Machat, "Settlement Patterns of the German Colonisation in Transylvania /Romania," 37.
[35] Crîngaci-Ţiplic, "Weapons and Military Equipment," 73, 77.
[36] Makkai, *History of Transylvania*, 1.421.

governance and land rights were both important, but far more attractive was unfettered, untaxed, free trade.[37] In return, however, the Saxons owed the Hungarian monarchy a few things—specific payments, and vitally, military aid.[38] The Saxons were obligated to provide armed soldiers for both internal and external conflicts at the behest of Hungary. Andrew II had offered them land with excellent salt and silver mines, and the Saxons were known to be good miners.[39] They were to be a buffer zone, the furthest reaches of the Christian West pushing further and further east.[40]

This remained their role throughout the medieval era. Saxon settlements evolved from a resource to commerce economy during the fourteenth century.[41] A failed Saxon revolt in 1324 led to the administrative division of the Saxon-populated areas of Transylvania, but cohesive kinship and ethnic identity remained.[42] There was an understanding nonetheless that the Saxons were part of a greater whole. After the fall of Constantinople in 1453, the mayor of Brașov stated that they were "not only a shield for the Hungarian Empire but for all of Christianity."[43] The sixteenth century brought with it two major changes. The first was the defeat of Hungary by the Ottoman Empire at Mohács in 1526, the second the shift of the Saxons from Catholic to Lutheran in 1545.[44] The Saxons were thus pressed between the Christian Hungarians (with whom they frequently sided) and the Ottoman Empire – a tense buffer to maintain.

[37] Full text included in: Gündisch, *Siebenbürgen und die Siebenbürger Sachsen*.
[38] Zimmermann, "Das 'Andreanum' und seine Probleme: Alte und Neue Überlegungen," 38.
[39] Crîngaci-Ţiplic, "Weapons and Military Equipment," 76.
[40] For a more comprehensive discussion of this notion of Hungary as the Christian Frontier—including the Saxon role in this notion—see Berend, *At the Gate of Christendom*.
[41] Gündisch, *Siebenbürgen und die Siebenbürger Sachsen*.
[42] Makkai, *History of Transylvania,* 2.187.
[43] „Nicht allein des Königreichs Ungarn, sondern auch der ganzen Christenheit Schild und Schirm" in: Gündisch, *Siebenbürgen und die Siebenbürger Sachsen*.
[44] Britannica, "Transylvanian Saxons."

The Székelys

More challenging to analyze, the Székelys shared a language with the Hungarians—excepting some dialect—but maintained a distinct identity. Even that fact is disputed: Elek Benkő, arguably the foremost scholar on the Székelys, argues that they had their own form of writing, closer to Turkish, which was systematically expunged.[45] His recent work on the subject, *The Szekler Land in the Middle Ages*, seeks to problematize what he sees as archaic ideas surrounding the Székelys. His work uses archaeology to circumvent gaps in written history, further fleshing out the subject.[46]

While among the groups that moved further to the periphery at the behest of Andrew II and Béla IV, their origins are murky.[47] Recent genetic research shows links to west Eurasian populations, but without any clear origin.[48] It has been suggested that they had already inhabited they area and were simply enveloped within Hungary; and that their resistance to assimilation made them ideal candidates to be pushed further to the periphery.[49] Nonetheless, they were a privileged group; like the Saxons, they were exempted from many of the typical taxes and dues levied upon Transylvania.[50] The ethnic distinctions of the Székelys eroded over time; in 1461 the Count of the Székelys was attached to the voivode.[51]

[45] Benkő, "A Székely Irás Középkori és Kora újkori Emlékei. Régészeti és Történeti Megjegyzések."
[46] Text is in Hungarian; information about the book from review and grant proposal information. Laszlovszky, "Review: The Szekler Land in the Middle Ages I–II"; Benkő, "Research Proposal: The Szekler Land in the Middle Ages."
[47] Stoica, Stoica, and Popa, *Following the Traces of the Teutonic Knights in Transylvania*, 36.
[48] Brandstätter et al., "Migration Rates and Genetic Structure," 800.
[49] Pop suggests that the fact that the Szeklers are not included in twelfth- and fourteenth-century narratives about Hungarian conquest indicates that they had been present earlier. Pop, "Testimonies on the Ethno-Confessional Structure of Medieval Transylvania and Hungary (9th-14th Centuries)," 15.
[50] Kovács, "The Participation of the Medieval Transylvanian Counties in Tax Collection," 674.
[51] Hegyi, "The Relation of Sălaj with Transylvania in the Middle Ages," 68, 85.

A full study of the truth and myths surrounding the Székelys would be its own research project. For this research it is sufficient to understand that in the Middle Ages in Transylvania there was a Hungarian speaking privileged group, and that they too built their own fortified churches.

The Hungarians

The Hungarians themselves were another important group. The abuses of privileges granted the Teutonic Knights had illuminated how risky it was to have autonomous regions within Hungary, and the thirteenth century monarchy responded to this threat.

What followed was a brief period of consolidation of powers. Prince Béla, the "Young King," gained papal backing as the Catholic Church saw the potential to gain an ally and regain the territory of the Teutonic Knights. [52] The Cumans, hoping for support from the West against the Mongols, converted to Christianity; new alliances were formed. When the Papacy criticized the new connections with the Cumans, and noted their slow adoption of Christian practice, Bela IV responded, "'For the good of Christendom ... we defend our kingdom today by pagans, humiliating our royal majesty, and we tread the enemies of the church underfoot with the aid of pagans."[53]

Immediately following the expulsion of the Teutonic Knights, with Prince Bela as Duke of Transylvania, royal power in Transylvania was more centralized than it had been. This reversed rapidly following the Mongol invasion in 1241-1242, following the destruction which followed.

[52] Sălăgean, *Transylvania in the Second Half of the Thirteenth Century*, 12.
[53] Berend, *At the Gate of Christendom*, 167.

Hungarian military strategy contributed to this as well. The protection of the kingdom was based upon the border. The border defenses were intended to slow any invaders, allowing supporting military forces to arrive.[54]

Hungarian influence in Transylvania varied over the centuries. Broadly speaking, the Hungarians administered primarily over the areas considered "noble soil," as opposed to Saxon or Székely territory.[55] One of the most influential monarchs was Sigismund of Luxemburg, king from 1387-1437. A staunch opponent of the Ottomans, Sigismund promoted and encouraged extensive fortification projects throughout both Transylvania and Hungary more broadly.[56]

In 1526, following the battle of Mohács and the death of King Louis II of Hungary, Transylvania became independent, no longer falling under the control of Hungary.[57]

2.3 Decentralization of Fortifications

In 1241 and 1242 the Mongol Empire swept through Eastern Europe and effectively trampled all opposition. There are countless images of brutality, scenes of "little children on lances, like fish on a spit."[58] Beyond the horrors, one of the noteworthy aspects is that no one was spared: rich, poor, noble, or common; the Mongols did not care. They were particularly diligent in crushing the county seats of the Hungarian monarchy, its outposts in Transylvania. These massive fortresses served as the administrative seat of power for the local representative of the ruler, the center of military operations in the area, and as a refuge (if needed) for the local

[54] Stoica, Stoica, and Popa, *Following the Traces of the Teutonic Knights in Transylvania*, 53.
[55] Stollberg, *Kirchenburgen in Siebenbürgen*, 28.
[56] Whelan, "Sigismund of Luxemburg and the Imperial Response to the Ottoman Turkish Threat, c. 1410-1437."
[57] Stollberg, *Kirchenburgen in Siebenbürgen*, 29.
[58] Spalatensis, *Historia Salonitanorum Atque Spalatinorum Pontificum*, 279.

populace. In creating a single location for all these needs, the Hungarians had inadvertently built a perfect target for an invading army.[59]

Massive changes reverberated through Transylvania with the departure of the Mongols. These include demographic shifts: precipitous depopulation as a result of the invasion, resettling into better defended areas, and the arrival of new immigrants to take the place of those who had been lost.[60] Another short term effect of the redistribution of power and population following the Mongol invasion was the rise of warlords and banditry throughout Hungary and in Transylvania.[61]

At the same time, a decentralization project progressed. Lessons learned from the crushing blows dealt at major fortresses and focal points made it clear that a consolidated, multi-purpose, centralized fortress would always present an attractive target to invaders. The monarchy proceeded to separate its military, bureaucratic, and civilian populations, granting rights to nobles to build their own fortresses.[62] This led to an increase in fortifications in the western and northern reaches of Hungary; the nobility were not to encroach upon the land privileges of the Saxons and Székelys.[63] They endeavored to maintain the *unio trium nationum,* the Union of Three Nations, to stand against the Ottoman threat.[64]

The Teutonic Knights, Saxons and Székelys communities were each expected to defend the borderlands of the Kingdom of Hungary and each developed fortifications to support their defense. While the Teutonic Knights settled – and left – before the Mongol invasion of 1241,

[59] Sălăgean, *Transylvania in the Second Half of the Thirteenth Century*, 39.
[60] Sălăgean, 34–38.
[61] Sălăgean, 38.
[62] Sălăgean, 40–44.
[63] Berend, *At the Gate of Christendom*, 33.
[64] Stollberg, *Kirchenburgen in Siebenbürgen*, 29.

the Saxon and Székelys presence expanded greatly in the following centuries, both before and after the fall of Constantinople to the Ottomans.

A precise chronology of development can be hard to isolate; early records often exist only for those sites which have undergone rigorous archaeological investigations.[65] Papal tithe lists can be useful for this, though they bring different difficulties for study. The first is that the tithe lists are good for finding the era of construction of some churches, but not of their fortifications. The second is more practical: the best work done on mapping medieval Hungary to date has been by Pál Engel, and the publicly available version of his work does not allow use of this data.[66]

There are only a handful of written records of Transylvanian stone churches that existed before the Mongols arrived. A few of these are of note: one church was described by Rogerius in his account of the destruction following the Mongols, as having a stone belltower; one noted in a charter from 1223; and four mentioned in another document from 1240.[67] Some archaeological research suggests that there may have been other more basic fortifications in some areas: short, freestanding stone walls and small towers, possibly built in the twelfth century. These were not, however, the more substantial fortified churches that come during the following centuries, primarily the fifteenth and sixteenth.[68] Of those still standing today, the oldest fortified church is in Cisnădioara, built and fortified in the first half of the thirteenth century.[69] The fifteenth and sixteenth centuries bring better documentation. In some cases, style is sufficient to

[65] Predovnik, *The Castle as Social Space*, 194.
[66] An impressive and self-contained program with all of the information is available, but any use of the information is disabled beyond exporting spreadsheets without coordinates. Viktor, "Korszerűsítették Engel Pál középkori Magyarországról készített digitális atlaszát."
[67] Fabini and Fabini, *Kirchenburgen in Siebenbürgen*, 60.
[68] Makkai, *History of Transylvania*, 1.514.
[69] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 8.

determine a broad timeframe for construction, for others, specific records from the time show when each part of a church was constructed.[70]

[70] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*

Timeline

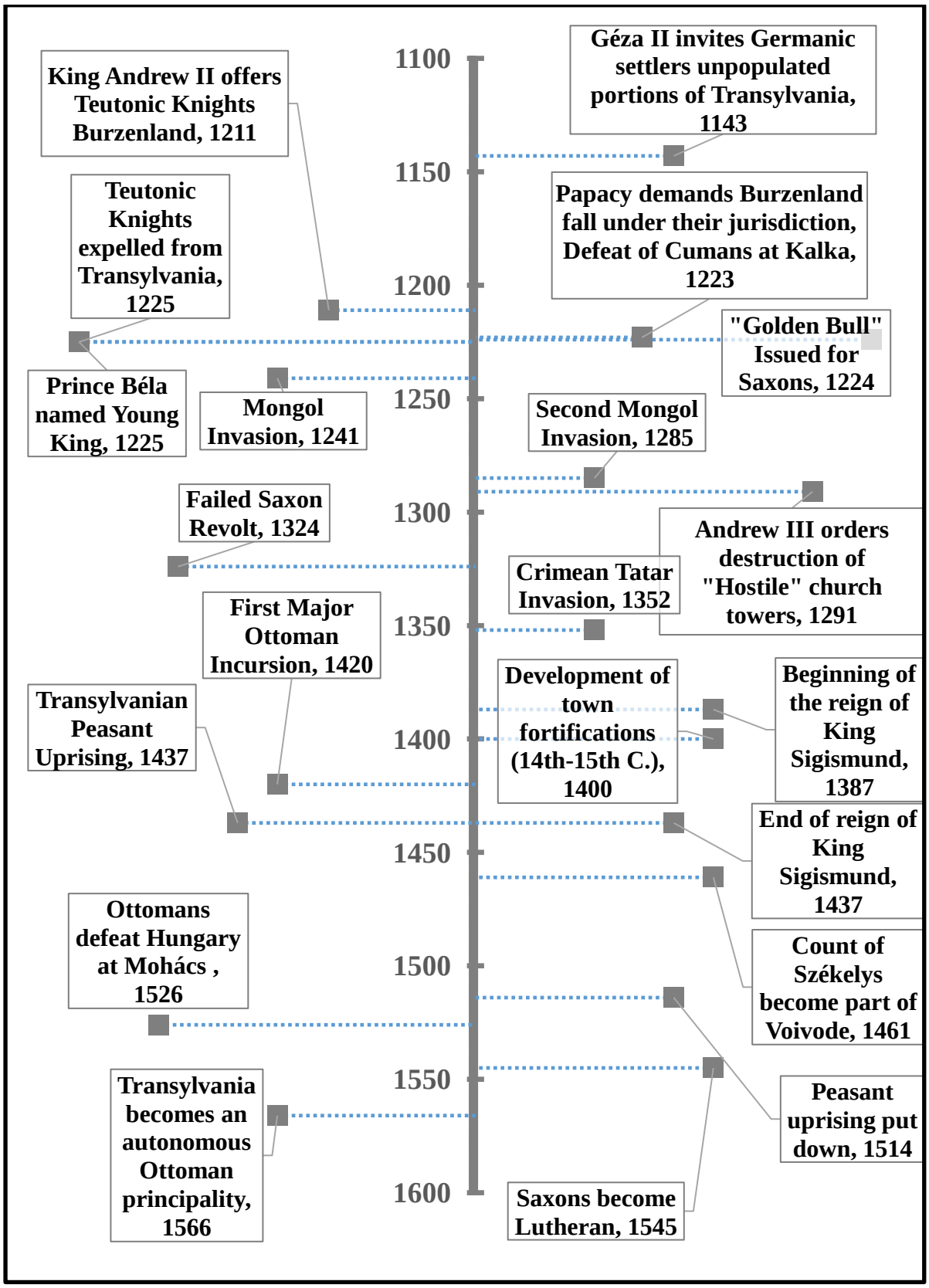


Figure 2: Timeline of Transylvanian History

Chapter 3: Historiography

Existing research on Transylvania's fortified churches can be divided into four broad categories: cultural histories, architectural histories, geospatial studies, and a few truly expansive projects that could be viewed as comprehensive studies.

3.1 Architectural and Archaeological Histories

One portion of existing scholarship focuses on architecture and construction of Transylvania's churches broadly, frequently centered upon the Saxons, and includes fortified churches as part of this analysis. Adrian Nicolescu's "Gothic Church Architecture in Romania" aims to isolate the features typical of Transylvania Gothic and pulls together eight defining characteristics:

1. Hall churches and aisleless churches, all with remarkable spatial unity.
2. Rectangular plan. No transepts, with very few exceptions (e.g., St Bartholomew's, Brașov; St Mary's Cathedral, Sibiu).
3. Moderately sized.
4. Absence of western twin towers, with or without spires. Square tower on the north or south side. Central tower, a rarity (e.g., St. Michael's, Cluj).
5. Single western portal, but side-entrances are fairly common (e.g., the Black Church in Brașov).
6. Absence of large rose windows.
7. Fortified churches with castellar look. More Solids than voids.
8. No flying buttresses.[71]

[71] List is a verbatim quote. Nicolescu, "Gothic Church Architecture in Romania," 22–23.

These characteristics are useful to note, but arguably an oversimplification. Cluj, for example, was planned to have two towers, and is large enough that it has five entrances. These characteristics also do not mention the changing nature of many of these structures. Nicolescu's work tries to draw out uniformity where none may exist.

"German Church Architecture," a 2018 article by Boștenaru Dan Maria and Meilă Alexandra, uses Transylvania's Saxons and their churches, including those which are fortified, as foils for Swabian church design. The distinctions they draw stem from what they depict as the central difference between the Saxons and Swabians: militaristic versus peaceful, leading to urban as opposed to agrarian settlements.

> The Saxons, who brought to Romania an urban civilisation, where [sic] warriors from that time Western Germany, and the heritage has little to do with the heritage in today's Germany, for example the Evangelical Frauenkirche in Dresden, restored recently after bombing. The Swabians on the opposite brought a rather agricultural village culture.[72]

Other scholars challenge the notion that the Saxons were particularly militaristic. Harald Zimmerman describes the Saxons as "Wehrbauern," or "Defense Peasants."[73] More nuanced works dive into specific case studies. Some, like Cosmin Ignat's "Romanesque Ecclesiastical Architecture on the Periphery of the Catholic World: Round Churches and Basilicas in Transylvania," provide surveys of multiple locations by summarizing archaeological and historical findings of other researchers.[74] This is among the few sources that offers concrete dating on various locations, but that information is only available because of the research

[72] While some of the sources cited by Dan Maria and Alexandra have messages of Saxon superiority, I believe this specific excerpt may be a question of translation: they do not aim to suggest that the Saxons civilized Romania in a colonial sense, rather that they came with a culture of urban settlement, and thus made more of the same. Dan and Meilă, "German Church Architecture," 94.
[73] Zimmermann, "850 Jahre Siebenbürger Sachsen," 3.
[74] Ignat, "Romanesque Ecclesiastical Architecture."

projects accomplished at each location. Ignat further notes the abundance of architectural history on the subject as highlighting the lack of other approaches.[75]

Another outlier is Alfred Prox's study of Székely fortified churches. This includes some direct comparisons with the style and construction of Saxon fortified churches. Prox concludes that Saxons prioritized fortifications, building heavier, more monumental walls and defenses, overshadowing the church itself; while the Székelys still emphasized the church itself, even when building other fortifications.[76] He also clarifies that these should not be seen as isolated structures; rather, they are parts of a linked chain of fortified churches.[77]

Other even more granular works present single case studies: 39 separate architectural pamphlets on fortified churches published by the "Monumenta Verlag" demonstrating just how much can be written on each.[78] Often these singular pieces focus on more remarkable structures: Petre Beşliu Munteanu, for example, examined a Transylvanian church which had suffered damages, and thus his interest is in the restoration process as well.[79] Susanne Fischer's "Neue Beobachtungen an der Wehrkirche von Birthälm," in a similar vein, explores Biertan in much more depth, including discussions of renovations.[80] Adding some more complications to consider, Monica Neacșu offers a particularly substantial study of Slimnic Castle which highlights the changing nature of some of these buildings. Her work demonstrates that not only were many of these churches not initially constructed as fortified, but that secular structures can also be converted to religious ones, and from there, fortified.[81] This is a more involved sequence of events than most, illustrating how varied these buildings may be.

[75] Ignat, 197.
[76] Prox, "Székely Kirchenburgen," 28.
[77] Original German: "Sie gehören vielmehr in den großen Zusammenhang einer Kette mittelalterlicher Wehrkirchen" Prox, "Székely Kirchenburgen," 30.
[78] Fabini, "Monumenta Verlag."
[79] Munteanu, "Die Kirche des mittelalterlichen Eppeschdorf."
[80] Fischer, "Neue Beobachtungen an der Wehrkirche von Birthälm."
[81] Neacșu, "Slimnic Castle and Its Position in the Development of Military Architecture."

Pushing the boundaries further, Cristini, García-Soriano, and Vegas's recent work on 3D modeling of the UNESCO listed fortified churches (and some of the surrounding villages) demonstrates how novel methods can be used to help preservation and understanding of context.[82]

3.2 Cultural Histories

A significant amount of scholarship is focused on specific groups within Transylvania, usually the Saxons, and includes fortified churches as an adjacent subject. Both of Adinel C. Dincă's works on books and literacy in medieval Transylvania, for example, explore the cultural roots of reading in the area, as well as the locations of books and libraries. Fortified churches are never discussed as such, but a number of the churches and libraries mentioned are themselves fortified.[83] A number of works aim to disentangle the legal jurisdiction within which the Saxons - or occasionally another minority group - fell. Paul Binder works through a chronology of settlement, including different allowances on establishment of towns, but falls short of analyzing fortified churches.[84]

Ioan-Aurel Pop has written extensively on the subject, discussing the interplay of different ethnic groups within Transylvania. Some of this includes work on quantifying different groups within Transylvania, as well as working to explain the power structure and interplay involved in societal organization, all within a broader project of analyzing the integration and homogenization of medieval Hungary.[85] He ultimately concludes that assimilation was itself not a goal of the Kingdom of Hungary in Transylvania until after the 1400s.[86] Conflict and

[82] Cristini, García-Soriano, and Vegas, "Villages with Fortified Churches in Transylvania."
[83] Dincă, "The Medieval Book in Early Modern Transylvania"; Dincă, "Medieval Literacy in Transylvania."
[84] Binder, "Ethnische Verschiebungen."
[85] Pop, "Testimonies on the Ethno-Confessional Structure of Medieval Transylvania and Hungary (9th-14th Centuries)," 10.
[86] There are also some odd choices of phrasing within this article, which raise some questions as to the agenda of the author. Of particular note: "In spite of some gross violations of rights and in spite of the monopolization of lands to the detriment of the local population, ethnic discriminations were few and insignificant." Pop, 35.

tensions are at the forefront of this research, yet fortified churches remain conspicuously absent. Similar considerations of the ethnic composition of Transylvania appear in much of Pop's work, although often his intent is to shine a light on the place of medieval Romanians, as opposed to other ethnic groups.[87]

Broader works also shed light on fortified churches. Tudor Sălăgean's *Transylvania in the Second Half of the Thirteenth Century: The Rise of the Congregational System* analyzes the context and events that led to the creation of fortified churches. He briefly discusses "fortified ecclesiastical institutions," but his focus is much broader; the societal shifts and power restructuring ushered in by the Mongols.[88] Of particular import for this research is Sălăgean's inclusion of considerations of papal mandates on defense of Christians, which he argues were essential to the democratization and proliferation of dispersed fortified churches, as well as other fortified structures.

László Makkai substantial chapters in the *History of Transylvania* touch on the social and historical aspects of Saxon and Székely churches in a number of chapters. He notes the addition of spires for protection following the Mongol invasion, as well as subsequent internal tensions involving local fortifications.[89]

Peasant Fortifications

Much has been written on fortified churches as "peasant fortresses," built for and by the common people. This trend has a particularly strong current in Romanian historiography and continues to appear in contemporary English-language research out of Romania. In his 1972 *Voievodatul Transilvaniei,* Stefan Pascu explains that, "many of the fortified settlements were

[87] Pop, "Some Observations Concerning the Medieval History of Transylvania."
[88] Sălăgean, *Transylvania in the Second Half of the Thirteenth Century*, 42.
[89] Makkai, *History of Transylvania*, 1.554.

in the beginning 'peasant fortifications'; some of them became, later on, royal or feudal fortifications..."[90] This sentiment resonates in academic work on cultural heritage, describing Viscri as "one of the most beautiful Saxon peasant fortresses."[91] The same phrasing appears in Andreea Stroe's "The Consumption Decision in Rural Tourism and Models of Rural Tourism in South Transylvania,"[92] Ana Ispas and Elena Untaru's "Identifying A Representative Souvenir For A Romanian Tourist Destination: The Case Of Rupea,"[93] and Marioara Pascu's "Saxon Settlements in Brașov - A Declining Cultural Landscape?"[94] Peasant fortresses are also depicted as a unique offer from Transylvania. Drăguț explains in 1979 that, "peasant fortifications of the fortified-church type are the most significant and original contribution of Transylvanian medieval stone architecture to the European artistic patrimony."[95] A central aspect of histories written on peasant fortresses is their decline - the expulsion of the peasantry from fortifications and protected areas, as society became more stratified. Thus, peasant fortresses become bastions for the elite, to the detriment of the common people of medieval Transylvania.[96]

Adrian Andrei Rusu challenges the idea of peasant fortifications, arguing that the whole concept emerges from anachronistically applying a Marxist lens to medieval Transylvania.[97] The permission to construct fortifications was itself a privilege, and one granted only to specific elite groups. In effect, Rusu's main contention is that the only group that could be accurately defined as peasantry in Transylvania were the Romanians, and that while they may have been involved in construction of fortified churches and other fortresses, they were not the ones for

[90] Pascu, cited in: Predovnik, *The Castle as Social Space*, 191.
[91] Ciuhu (Dobre) et al., "Cultural Tourism in Central Region of Romania," 984.
[92] Stroe, "The Consumption Decision in Rural Tourism and Models of Rural Tourism in South Transylvania," 383.
[93] Ispas, Untaru, and Iesanu, "Identifying A Representative Souvenir," 194.
[94] Pascu, "Saxon Settlements in Brașov-a Declining Cultural Landscape?," 359.
[95] Drăguț, cited in: Rusu, "A Critical Approach to 'Peasant Fortifications' in Medieval Transylvania," 190.
[96] Rusu, 189.
[97] Rusu, 191–92.

whom they were intended, nor the group receiving the allowances for fortress construction. It was thus "the politically and socially (not ethnically) privileged Saxons who have built such fortifications."[98]

Some research sidesteps this issue of "peasant fortifications" by simply discussing the role of the community in their use and development. Harald Zimmerman's "850 Jahre Siebenbürger Sachsen" discusses the expulsion of the Teutonic Knights, noting that it meant that the Saxon populations had to work themselves to change their churches into fortresses for protection.[99]

3.3 Geospatial Studies

A final grouping of scholarship on Transylvania's fortified churches directly addresses geospatial issues. For the sake of clarity: in many cases, these studies overlap with either or both of the previous categories; they are grouped here, however, because of their more direct pertinence to the questions that this thesis aims to address.

Maria Crîngaci Ţiplic and Ioan Marian Ţiplic's chapter "The Archaeology of Romanesque Churches in Transylvania (11th–13th Centuries)" addresses a number of subjects within the realm of Transylvania's churches, providing a meta-examination of the general state of archaeological research in the area. In doing so, they include some mapping, showing the locations and densities of Saxon churches. Their conclusions here, however, do not go further than noting the spread of churches in Southern Transylvania.[100] They also draw attention to a number of projects attempting to map ecclesiastical monuments, and conclude that, "The creation of databases for each ensemble, the linking of these databases and the publishing of

[98] Rusu, 195.
[99] Zimmermann, "850 Jahre Siebenbürger Sachsen," 6.
[100] Tiplic and Tiplic, "The Archaeology of Romanesque Churches in Transylvania," 116.

monument monographic studies ought to be processes that those who aim to research the ecclesiastical monuments should carefully consider."[101]

A further chapter by Maria Crîngaci Ţiplic, "The Rise of the Parish System in Transylvania as Reflected by the Archaeological Discoveries," offers perspectives on, among other topics, the clustering and increasing density of churches in Transylvania. Ţiplic draws attention to the densest cluster of churches, which is in the Sibiu area, as well as noting some of the geographic ambiguity related to the Teutonic Knights and their locations within Transylvania.[102]

A 2018 paper by Christoph Machat, "Settlement Patterns of the German Colonisation in Transylvania/Romania," examines the layout and geospatial choices made by the Saxon settlers of the region. Machat has one specific note on churches:

> In Transylvania all the settlements of the Saxons have the church in the centre of the village (or settlement; even in towns); for defence reasons it is located on a hill or in marshland, in the event of enemy attacks offering short refuge distances for all families.[103]

James Berry's 1919 article for The Royal Geographical Society notes the same, "the Germans placed their fortified settlements on the tops of high hills, especially among the foothills and on the slopes of the mountains towards Wallachia and Moldavia."[104] This idea of selecting foothills is reiterated by Streitfeld, who adds that this may be for fleeing into the mountains and into mountain fortresses – a defensive reason for a hilly location.[105] A more militaristic reason for a higher elevation location is offered by Fodor et al. in their article on the border

[101] Tiplic and Tiplic, 116.
[102] Ţiplic, "The Rise of the Parish System in Transylvania as Reflected by the Archaeological Discoveries," 89, 91.
[103] Machat, "Settlement Patterns of the German Colonisation in Transylvania /Romania," 38.
[104] Berry, "Transylvania and Its Relations," 140.
[105] Streitfeld, "Mittelalterliche Vorhöhenburgen im Südwestlichen Siebenbürgen," 125.

strife between Hungary and the Ottoman Empire, where they note that "the churches of the villages were used as watch-towers."[106]

The most substantial recent work on mapping of fortified churches is David Morgan's 2008 doctoral thesis, "Examining Transylvanian Saxon Fortified Churches from the 13th to the 16th Centuries; the History and Archaeology of the Saxon Rural Church in Romania: Roles and Identities."

The goal of Morgan's research is "to explore the relationship between the activity of colonization and the attainment of a stable identity by means of a regional study of the Saxon Fortified Church in Transylvania."[107] Morgan examines land use and topography of Saxon settlements, posing and answering a number of questions: What makes one area better than another for a settlement? How does one prioritize land use? How did the Saxons choose where to put down roots? His work further explores the specifics of in-town land use; where one can find administration, how the Church functions in this context, and how these factors impact defense. Morgan then evaluates architecture, discussing each element of a church and its purpose. This shifts into a further exploration of different types and styles of church.

His final two chapters crystalize his earlier arguments, aiming to explain how the church functioned to both reflect and influence cultural identity for the Saxon community within Romania. His project, despite some superficial similarities to this work, is more focused on exploring and explaining settlement patterns and choices made by the initial Saxon colonization project.

[106] Fodor, Oborni, and Pal, "Cross and Crescent: History."
[107] Morgan, "Examining Transylvanian Saxon Fortified Churches from the 13th to the 16th Centuries: The History and Archaeology of the Saxon Rural Church in Romania: Roles and Identities," 12.

3.4 Comprehensive Studies

Two authors have done the most extensive work to date on Transylvania's fortified churches.

Arguably the single most authoritative text on Transylvania's fortified churches is Hermann Fabini's *Atlas der Siebenbürgisch-Sächsischen Kirchenburgen und Dorfkirchen.* This two volume set weighs five kilograms and is a remarkable and exhaustive scholarly endeavor. Fabini and his team aimed to map and detail the architecture and history of all of the Saxon villages, churches, and fortified churches in Transylvania. The end result is both atlas and encyclopedia, with detailed entries on each location. Fabini's work is the cornerstone upon which many other projects on fortified churches must be built.[108] He and his collaborator, Alida Fabini, also wrote another work looking more in depth at the architecture of fortified churches, *Kirchenburgen in Siebenbürgen: Abbild und Selbstdarstellung Siebenbürgisch-Sächsischer Dorfgemeinschaften.*[109] This second book also offers a bit more analysis, including more explanatory sections on their views of the fortified churches as a whole and a thorough state of the field.

Fabritius-Dancu's *Sächsische Kirchenburgen aus Siebenbürgen* is much like Fabini's *Atlas,* and predates it by a decade and a half. Over the course of dozens of site visits she compiled a remarkable amount of more specific chronological information. This information accompanies each of her entries. Her work is again more about the construction and design of different churches; where Fabini's *Atlas* offers a map of the town to place each church in its context, Fabritius-Dancu instead includes a diagram of the church with each era of construction marked by a century or year. She also includes some useful background and context information. This

[108] Fabini, *Atlas der siebenbürgisch-sächsischen Kirchenburgen und Dorfkirchen*.
[109] Fabini and Fabini, *Kirchenburgen in Siebenbürgen*.

is useful, among other things, in clarifying some German terminology related to fortified churches – distinctions which are meaningful, but do not exist in English.

She notes that fear following the Mongol invasion was the first motivation in building up fortifications, first of mud and wood, later of stone.[110] Her main emphasis, however, is on the Ottoman threat. As she puts it: "Erected by the Saxon farmers of Transylvania to protect their lives, the fortified churches were for centuries Europe's protective wall against the Ottoman flood."[111]

The main quirk of Fabritius-Dancu's work is its framing: *Sächsische Kirchenburgen aus Siebenbürgen*, as well as some of her other works, go to great lengths to explain the place of the Saxons in Ceausescu's Romania.[112] On the other hand, she is also a staunch supporter of Saxon superiority, that these are unique structures of a group proudly bringing western culture to the East.[113] None of this is intended to cast aspersions upon the quality of her work, which is astounding in its breadth and depth; rather, to indicate that some of the cultural notes should be taken with a grain of salt.

Though it is not on the same tier as the above authors, Sabina Stanila Madgearu's "The Figuretive Language of Holy Defences in Transylvania - Fortified Churches of the Fourteenth to Sixteenth Centuries" offers a succinct distillation of a number of the theories other scholars have used to explain the locations of fortified churches.[114]

[110] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 7.
[111] Original in German: Zum Schutze ihres Lebens von den sächsischen Bauern Siebenbürgens errichtet, waren die Kirchenburgen zugleich jahrhundertelang ein Schutzwall Europas gegen die ottomanische Sturzflut. Fabritius-Dancu, 14.
[112] Fabritius-Dancu, 3.
[113] Fabritius-Dancu, "Die Kirchenburg - Identifikationssymbol der Siebenbürger Sachsen," 32.
[114] The number of unanswered questions posed by this paper was one of the initial motivators behind this research project. Madgearu, "The Figuretive Language of Holy Defences in Transylvania - Fortified Churches of the Fourteenth to Sixteenth Centuries."

Databases

There are two databases worth mentioning here, both projects with similar goals to this research. The first project, ARHIN (Architecture and Computer Science), offers a partial list of fortified churches, drawn from Fabini's *Atlas.* Information about these locations is accessible, including links to websites for specific churches, when applicable. However, the list is incomplete (around 100 entries, compared to the 580+ locations, fortified and not, included in Fabini's work) and the current implementation of locations, via Google Maps plugin, does not function; a blank map appears instead.[115]

A second database, Várak.hu,[116] has a comprehensive list of locations of castles and fortified locations throughout Medieval Hungary, including those in Transylvania. This information is offered with coordinates, all of which can be freely downloaded. At present, however, all of these locations are accurate on a town level, not on a building level. Thus, the coordinates given would work for driving directions or something similar, but lack the precision needed for rigorous topographical analysis.[117] This is nonetheless a remarkable endeavor: made even more so by its origins as a community project, maintained by those hoping to encourage tourism and exploration of these historic locations.[118]

3.5 Summary of Explanations for Density and Placement

The authors discussed in this chapter posit plentiful explanations for both the placement and abundance of Transylvania's fortified churches. Following are the relevant arguments to

[115] ArhIn, "Arhin Database."
[116] Várak means "Castles."
[117] This is likely a consequence of "Geocoding" - automatically generating coordinates by searching for the name of a location, as opposed to manually finding the fortified church building in each town. When this project is finished, I will send them an updated list with more accurate and precise coordinates, both to ensure that the information is available and to help their project.
[118] varak.hu, "Monument Coordinate List."

explain the uniquely high density and locations of Transylvania's fortified churches, and which are tested in this project:

The uniquely high density of Transylvania's fortified churches can be understood:

1. As a direct response to the Mongol Invasion of 1241-1242.[119]
2. Out of fear of Ottoman incursions.[120]
3. As a representation of unique Saxon culture, spirit, and identity.[121]
4. To provide local protection against Wallachia or "domestic" threats.[122]
5. As a continuation of the legacy of the Teutonic Knights.[123]
6. As a demonstration of "peasant fortifications" - intended for use by common people.[124]

The specific locations of the churches themselves were determined by:

1. Placement on hills.[125]
2. Placement in foothills.[126]
3. The desire to use church towers as watchtowers.[127]
4. Strategic placement to create a barrier/chain against incursion.[128]

[119] Sălăgean, *Transylvania in the Second Half of the Thirteenth Century*, 41–42; Makkai, *History of Transylvania*, 1.554; Madgearu, "The Figuretive Language of Holy Defences in Transylvania - Fortified Churches of the Fourteenth to Sixteenth Centuries," 16–17; Stollberg, *Kirchenburgen in Siebenbürgen*, 12; Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 7.
[120] Madgearu, "The Figuretive Language of Holy Defences in Transylvania - Fortified Churches of the Fourteenth to Sixteenth Centuries," 17; Makkai, *History of Transylvania*, 1.514.
[121] Madgearu, "The Figuretive Language of Holy Defences in Transylvania - Fortified Churches of the Fourteenth to Sixteenth Centuries," 18; Machat, "Zunftwesen und Baukunst Siebenbürgens im Mittelalter," 133.
[122] Makkai, *History of Transylvania*, 1.554.
[123] Madgearu, "The Figuretive Language of Holy Defences in Transylvania - Fortified Churches of the Fourteenth to Sixteenth Centuries," 17; Makkai, *History of Transylvania*, 1.557.
[124] Rusu, "A Critical Approach to 'Peasant Fortifications' in Medieval Transylvania."
[125] Machat, "Settlement Patterns of the German Colonisation in Transylvania /Romania," 38; Berry, "Transylvania and Its Relations," 140.
[126] Streitfeld, "Mittelalterliche Vorhöhenburgen im Südwestlichen Siebenbürgen," 125; Berry, "Transylvania and Its Relations," 140.
[127] Fodor, Oborni, and Pal, "Cross and Crescent: History."
[128] Prox, "Székely Kirchenburgen," 30.

Chapter Five examines the veracity of each of these theories using the methods outlined in the following chapter.

Chapter 4: Methodology and Methodological Considerations

This chapter has two goals. First, to present the conceptual basis of GIS methods applied to history by examining the issues involved with Digital Humanities more broadly. Second, to discuss GIS methods as they pertain to this project, including an outline of the workflow applied.

4.1 Core Issues of Digital Humanities

GIS methods fall within the broad umbrella of Digital Humanities, which has its proponents and detractors.

In 1963, Carl Brindenbaugh, then-president of the American Historical Association, delivered a strongly worded condemnation of new-fangled statistical methodology in the study of history:

> The finest historians will not be those who succumb to the dehumanizing methods of social sciences, whatever their uses and values, which I hasten to acknowledge. Nor will the historian worship at the shrine of that Bitch-goddess, QUANTIFICATION. History offers radically different values and methods. It concerns itself with the "mutable, rank-scented many," but it fails if it does not show them as individuals whenever it can.[129]

His specific line about the "Bitch-goddess" is often quoted in Digital Humanities works without further context, used to mock the doddering and foolish old guard historians, stuck in their ways.[130] Inclusion of the full quotation reframes Brindenbaugh's position: it is not that the methods are themselves bad. It is instead the insidious tendency of quantitative analysis to remove the individual from the equation, to make history once again a question of aggregates and groups, to erase the human part of humanities.[131] This is a fair critique - and applies equally

[129] Brindenbaugh, "AHA Presidential Address."
[130] See, for example: Tosh and Lang, *The Pursuit of History*; Röhle, "'A Sedate, Hesitant, Circumspect, Little Behavioral Revolution'"; Kousser, "Historian's Guide to Statistics."
[131] Sunyer, "Big Data Meets the Bard."

well now as it did 60 years ago. Methods of this sort work from bigger data, from groups. It is evident that few individual people are named within this thesis itself: perhaps this truly is emblematic of an endemic issue with digital humanities.

In addition to the philosophical issue noted here with digital methods, there are a variety of more practical problems related to the field. These methods are extremely reliant upon data availability. Insufficient data can lead to egregiously problematic conclusions.[132] A lack of specific data can also make certain avenues untenable, meaning that some results are impossible to determine. This is part of a broader issue: the incorrect application of methods. Digital Humanities methods are excellent for certain situations, not for all. Beyond simply leading to erroneous conclusions, the added "scientific" nature of digital humanities work makes it rife for misinterpretation and abuse.[133]

Digital Humanities for Humans

This research is built upon the fundamental understanding that humans in the past made coherent and intelligent choices. The purpose is not to undermine that; rather, it is to respect that and understand why these choices were made. GIS methods here can do what other research cannot; they can fill in the holes left in the historical record. These holes are the reason that research on these fortified churches has stalled; there are only so many documents that have survived, and many have already been examined and reexamined by innumerable generations of researchers.

[132] Fletcher, "Spurious Correlations."
[133] For an examination of some aspects of this issue, see: Kondor and Littler, "Invented Nostalgia."

GIS, then, is able to build upon the foundation laid by previous researchers and go further. It allows us to deepen our understanding of the rational choices made by individuals in the past, in their own contexts, circumventing a lack of some of the necessary documents.

4.2 Concepts, Methods, and Data

The methods selected for this research have been dictated by available data - the collection of which was impacted by COVID-19 – and the specific questions about site selection and intent that are the focus of this research.

Broad Concepts

This study uses GIS methods to analyze data on fortified churches. GIS, or Geographic Information Systems, can be most simply understood as computer mapping. The capabilities, however, go much further. A map is the image; GIS is the underlying data - and so much more can be done with it. A map is the product; GIS is what enables its production. A topographical map, of the variety typically used for hiking, shows a few things: elevation lines, trails colored by difficulty, and perhaps a viewpoint or two. Lurking behind the paper map is a massive amount of information: the altitudes of not only the lines marked, but of every single point. The trails on it are not just lines: coloring and scaling of difficulty is drawn from calculations of length, slope, water access, target elevation, and so on. While it is probably not marked on this hypothetical map, the GIS data behind it likely knows exactly how far one can see from the viewpoint.

GIS can be broken down into two broad categories: visualization and analytics.

Visualization

Visualization methods allow the display of data and information in ways that make it easier for a person to understand. A topographic map makes it easier to understand the different

elevations in a given area, while one that had urban areas in red, for example, would make it easier to spot the difference between city and country. This applies to any map - Google Maps placing a point at a searched-for location is a matter of visualizing that spot. The focus of visualizations is to convey data for a person to understand and interpret.

Analysis

Analytical methods are those that take advantage of the computer to process and analyze information itself. A topographic map simply displays elevation; applying analytical methods could get a researcher precise slope calculations throughout. Looking up a route on a mapping service is an analytical method; the computer takes into account your start and end point, distances, traffic, and so on. Both are invaluable in research; analytical methods with incomprehensible visualization are incredibly challenging to understand - and ultimately, the goal of any GIS method is to give information that can be interpreted and therefore contribute to broader knowledge.

Specific Methods Applied

Terrain analysis

A number of methods fall under the broad umbrella of terrain analysis: any and all methods that deal with topography and require three dimensional models of the area. These methods require a model to include elevation, not just a flat image.

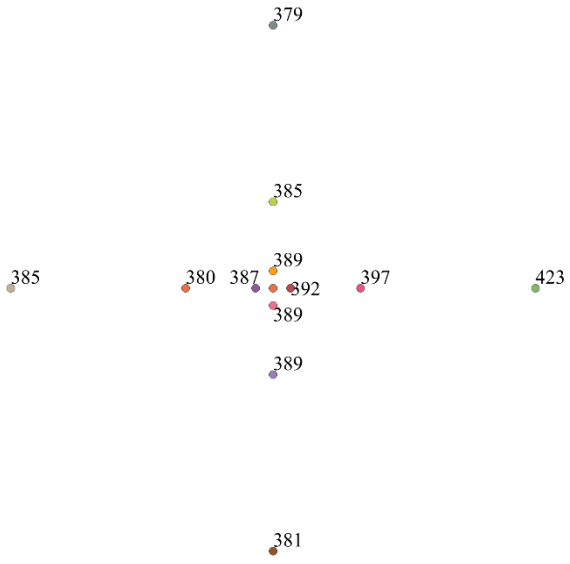
Slope Analysis

Using 3D models of the area, the terrain is analyzed for slope. This enables a better understanding of locations in relation to the incline of the area. This is useful in two main ways. First, it clarifies some basic placement choices: some clusters exist because it is too steep for a

church to be built elsewhere. Second, it shows how the choice to fortify or not fortify a church was impacted by the proximity of hills or mountains.

Cruciform Hill Analysis

This is a simple but effective way of getting closer examinations of the surroundings of a given point. A sampling of points is selected in each cardinal direction at various distances. For this project, the distances chosen were 15, 75, and 230 meters away. These provide a rough sketch of the area within that radius. Thus, when compared to the location of each central point, in this case, the fortified church, variations in local topography become clear. The diagram below shows this cross-shaped point sampling for a single spot, with altitude in meters.



This is a useful way of getting an easy snapshot of the surrounding area, including some useful quantification.

Georeferencing

A map is a flat image. It represents a specific area, but the map itself is just a picture. Many GIS methods do not work on an image - they require the map and locations to be put within context. This process, of reconnecting a map with the places it represents, is called

georeferencing. This type of overlaying is necessary for more complex work: it allows, for example, the aligning of historic maps with topography, or overlapping multiple maps from multiple eras. Georeferencing in its simplest form is the digital process of pushing pins through flat maps to adhere it to a globe. This is a necessary step in preparing historically accurate maps - it is jarring to see historical data displayed on a current map from OpenStreetMap or Google Maps.

Digitization of Data

A lot of mapping work has been done over the decades, the vast majority of which has no accessible digital dataset. Digitizing is the process of rebuilding and combining datasets from extant data. This is a deceptively complex practice: flawed digitization or bad data can cripple a project like this.

Viewshed Analysis

The viewshed of a given point is the total area that is visible from that spot. The reverse is also true: it is the area from which a given point is visible to other observers. If an observer were atop a tower, everything they could see would be within the viewshed. If the view was obstructed by a tree, anything behind that is not within the viewshed. Watchtowers typically have large viewsheds: they are designed to view wide areas, and thus be able to see anyone approaching from a greater distance. Churches are also often designed with large viewsheds, for the opposite reason: a church tower is meant to be visible from a wide area as a landmark and defining feature of a settlement.

Intervisibility Networks

While viewsheds answer questions of areas, intervisibility shows the connections between specific points. These are visualizations of which spots are able to see one another. A row of

watchtowers, for example, tend to be linked by visibility - allowing a given observer to receive signals from one and pass them on to the next.

These methods, paired with grouping based upon different characteristics - style of church, style of fortification, and the like - form the backbone of this research. These three methods were selected for two reasons. First, data availability. All of these are possible with data currently available either online or within a number of accessible books. Second, applicability to the study at hand. The above methods have all proven their worth in extant geospatial research on fortifications.

4.3 Methodological Proving Grounds

The previous chapter was a thematic historiography, focused upon Transylvania and fortified churches. Given the key role played by methodology in this research, the following is a brief consideration of relevant past research showcasing some of the methods discussed above. This is not intended as a systematic overview or history of GIS in history; rather, as a demonstration of methodological viability as proven by past research.[134]

A 2018 paper by Aaron Pattee, Armin Volkmann, Katharina Anders, and Hubert Mara examines the geospatial logic behind six castles in the Palatinate region of Germany. Three main methods are used: viewshed analysis, intervisibility networks, and least cost path analysis. Pattee et al. demonstrate that rugged landscape can lead to deceptive results; viewsheds that seem to overlap, and appear to form intervisibility networks, can be unconnected. The mountainous nature of the area in question, much like Transylvania, led to the surprising conclusion that none of the six cases selected were visible to one another.[135] Topouzi and Sarris

[134] For a particularly concise overview of GIS in the study of history, see: Alhasanat et al., "Spatial Analysis of a Historical Phenomenon," 351.
[135] Pattee, Volkmann, and Untermann, "Integrative GIS-Based Investigation of the Medieval Fortress Architecture of Pfalz, Incorporating Photogrammetry, Geoinformatics and Landscape Analysis."

used similar methods to examine a possible network of fortifications in ancient Mantineia, and added remote sensing for some more detailed data. Their results show the strategic use of overlapping viewsheds and intervisibility networks to control key access points to the area. Slope analysis was used as well, showing that watchtowers were placed atop steeper slopes, indicating that they were designed to be a particular challenge to assailants.[136]

Mahmoud Bashir Alhasanat, Shahid Kabir, Wan Muhd Aminuddin Wan Hussin, and Erin Addison incorporated terrain analysis, clustering, and visibility analysis into their study of the Umayyad desert palaces. Their examined offers an excellent contrast to Transylvania's fortified churches. The prevailing understanding of the palaces upon which they focus their study was that they were bastions of excess, nothing more than scattered pleasure palaces. This stands in opposition to earlier understandings of the fortified churches: that they form a network. Alhasanat et al. show the intervisibility networks that link these palaces, as well as the strategic nature of their placement regarding terrain: intentionally selected to be defensible. They also use quadrant counts to highlight clustering - effectively breaking up the map into discrete segments to show areas of greater and lesser density.[137]

There are a number of other works that use geospatial methods and prove their viability. Ponticelli examined fortress viewsheds in Jordan, demonstrating the likely area of protection.[138] Cociș considered the Roman frontier in Transylvania and used intervisibility networks to target more effective archaeological efforts. Zarifs et al. showed the intervisibility links between fortifications in the Mediterranean.[139] Ermine Sokmen's 2016 thesis is one of the best demonstrations of this type of study, incorporating more involved topographical

[136] Topouzi and Sarris, "Ancient Mantineia's Defence Network Reconsidered Through a GIS Approach," 561–63.
[137] Alhasanat et al., "Spatial Analysis of a Historical Phenomenon," 357.
[138] Ponticelli, "The View from 'Pre-Crusader' Shawbak," 165.
[139] Zarifis and Brokou, "GIS and Space Analysis in the Study of the Hospitallers' Fortifications in the Dodecanese."

analysis (ruggedness, slope, and aspect), access to water, clustering, viewsheds, least cost path analysis of historic road networks, all to provide a holistic examination of Mithradatid fortresses.

Looking specifically at Transylvania, two other studies are worth noting. The first is Alexandra-Maria Colcer and Ioan-Aurel Irimus's 2020 study of the geospatial factors impacting the location of Roman settlements and fortifications in Transylvania. They focus on settlement location in relation to the Roman Limes, as well as the hydrology of the area.[140] Ünige Bencze's work on differing landscapes surrounding monasteries in Transylvania has a very different goal but offers a clear process for more granular comparative study of location logic.[141]

On a conceptual level, much of the approach taken by this thesis was informed by Beatrix F. Romhányi's extensive and varied use of geospatial methods in examining medieval Transylvania and Hungary. The structural model of evaluating different theories as a strategy to guide scrutiny was demonstrated in "Church and Salt: Monasteries and Salt in the Medieval Kingdom of Hungary (11th–13th Centuries)."[142] Also relevant is her 2019 paper, "The Banat Region as Reflected in the Mirror of the Changing Ecclesiastical Network," where she applies geospatial methods to an ecclesiastical network as a strategy for filling in gaps in written records.[143] And finally, her work with József Laszlovszky, Stephen Pow, László Ferenczi, and Zsolt Pinke on "Contextualizing the Mongol Invasion of Hungary in 1241–42: Short- and

[140] Colcer and Irimuș, "Roman Fortifications in Northern Transylvania."
[141] Bencze, "Similarities and Differences of a Benedictine and a Cistercian Abbey as Reflected in the Landscape. Beginnings of a Comparative Approach."
[142] Romhányi, "Church and Salt. Monasteries and Salt in the Medieval Kingdom of Hungary (11th–13th Centuries)."
[143] Romhányi, "The Banat Region as Reflected in the Mirror of the Changing Ecclesiastic Network."

Long-Term Perspectives" demonstrates how one can use a variety of approaches in conjunction with geospatial analysis to draw meaningful conclusions out of disparate sources.[144]

4.4 Workflow: Methodology and Steps Taken

1. Digitization of Locations (Google MyMaps)
2. Spreadsheet Development (Google Sheets)
3. Geospatial Analysis (QGIS)
4. Repeat

Digitization of Locations

The analysis of the locations of fortified churches in Transylvania is based on a digital dataset created for this project. The data here is drawn, for the most part, from Fabini's *Atlas*. Fabini's work is remarkable in many ways, with historical analysis of hundreds of locations. It also includes a number of different maps, each providing different categorical information. Yet Fabini's work is not intended to be reproducible; among the noteworthy omissions are any form of coordinate system which could be used to locate individual churches or settlements. Instead, each church has an included map, placing it within its town context. Thus, locating each church involves manually pinpointing it on a digital map. Even town names can be problematic, as a number of locations in Romania have the same name. The correct village can be identified by matching the street layout offered by Fabini with current road layouts. For most towns, the main road is essentially the same now as it was thirty years ago. Sometimes a simple search is sufficient, particularly for any of the well-known locations. Searching for Biertan, for example, will immediately show the location of the fortified church. This is often not the case.

The example below shows the process for one of these less-known churches.

[144] Laszlovszky et al., "Contextualizing the Mongol Invasion of Hungary in 1241-42."

Searching for “Reteag” shows the correct town, with matching streets. It even has a church marked. However, it is the Romanian Orthodox church located further Southwest. The Saxon church is not highlighted on the map at all, as at present there is no community supporting it. Instead, a combination of satellite images, street maps, on-site photos, and luck are needed.

In this specific case, it was clear that the Orthodox church was not correct, as it sits south of the twist in the road. Thus the church had to be one of the buildings just north of the jog in the road. For this church, the angle of sunlight offers a clear shadow of the church spire. Other buildings can have towers, but the top view shows a building at the same angle as Fabini indicates in the *Atlas*.

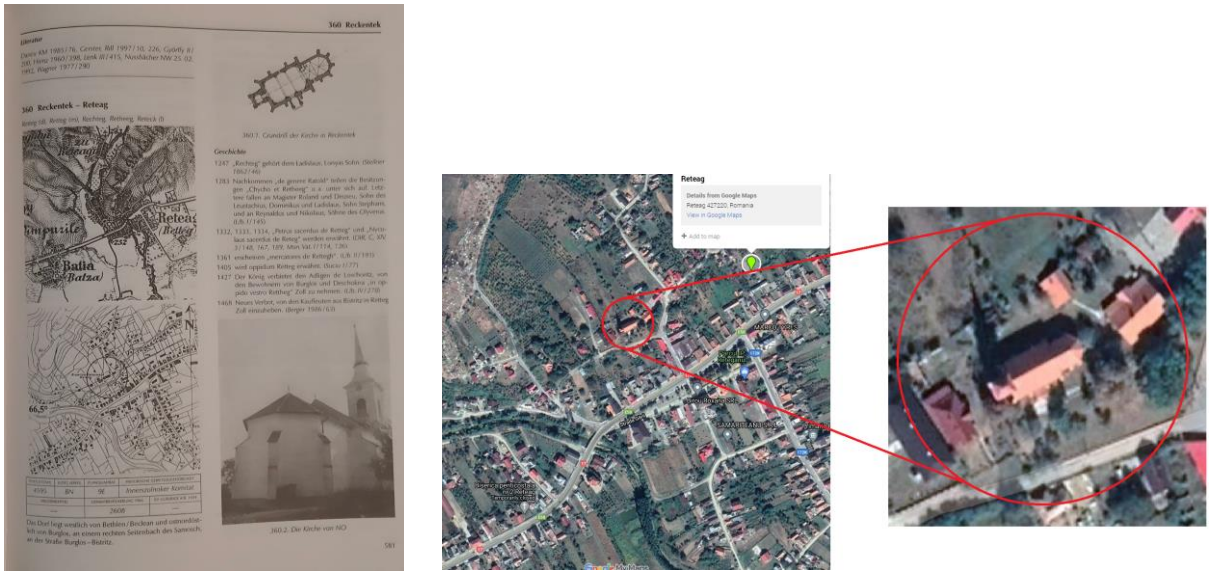


Figure 3: Identification of a Church via Satellite Image

There are just over 580 settlements included in Fabini’s *Atlas*. Digitizing this was an essential, if time-consuming step to begin any more complex geospatial analysis, given the noted shortcomings with digitizing attempts thus far.

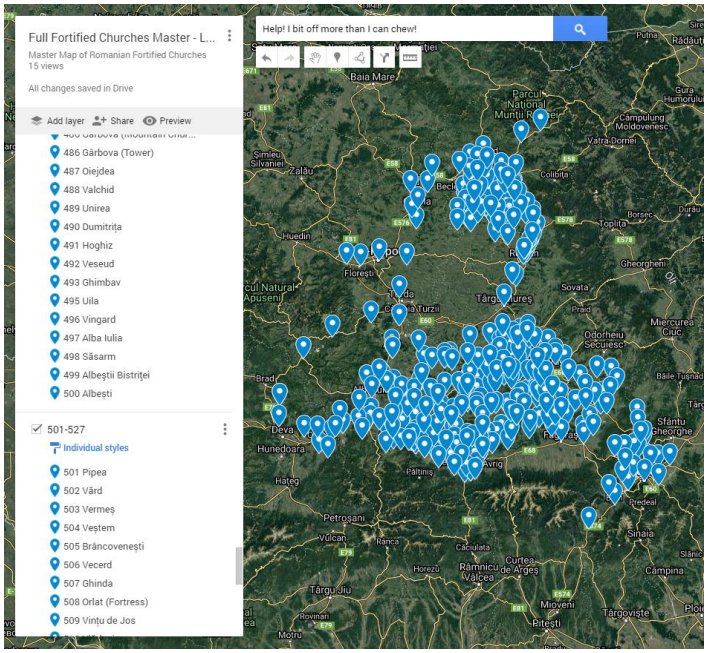


Figure 4: Full Saxon Settlement Dataset built in MyMaps.

Spreadsheet Development (Google Sheets)

The first step only gathered location information: necessary, but insufficient. To add further information and thus enable more involved analysis, all of the location needed to be entered into a spreadsheet. This itself is a straightforward process in QGIS: importing points, then exporting a sheet with coordinates.

Fabini has a number of maps which visualize different categories of church: different designs of fortifications, whether or not the churches are fortified, style of church itself, and a number of other characteristics. Unfortunately, there are no lists of these divisions. Thus, including his categories is a matter of manually copying over from his maps to the spreadsheet, one division at a time.

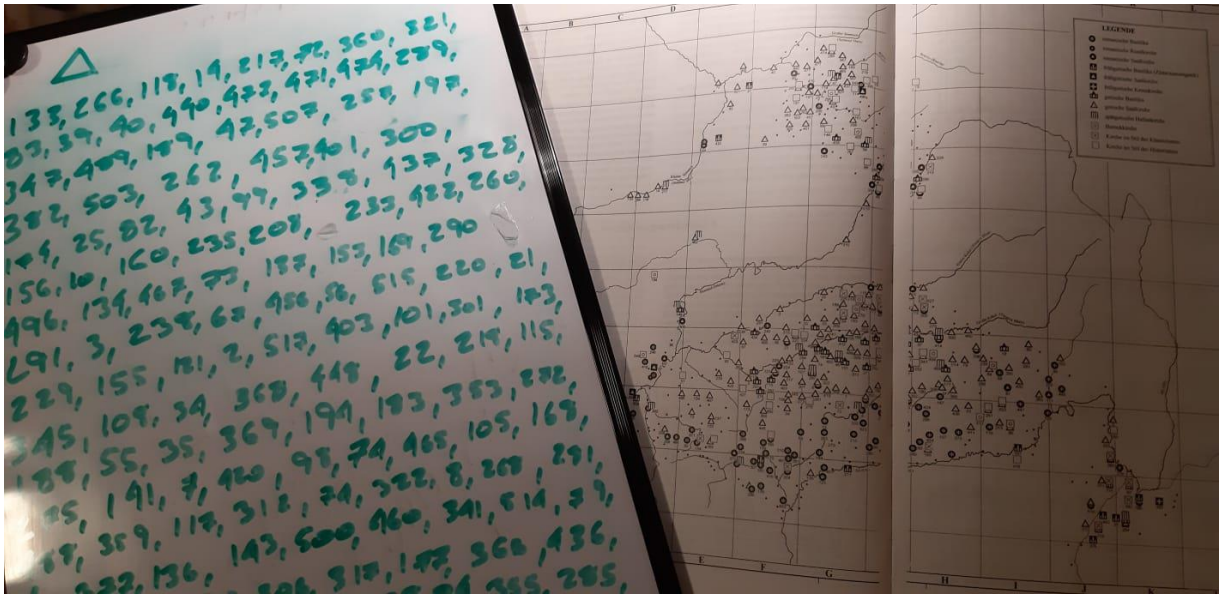


Figure 5: Manually Categorizing Churches

As time intensive as the process may be, the resulting spreadsheets allow greater flexibility in research, as different categorizations can be examined side by side.

The previous two steps apply to any other maps or categorizations: the Székely Fortified Churches, for example, have a different source, but lack coordinates as well.

Geospatial Analysis (QGIS)

With a fully organized and formatted spreadsheet ready, QGIS was the next step. Initial analysis - visualizing categorization and the like - are simple tasks. More complex work required more data. Viewsheds, for example, require adding a 3D map as the base, then setting points to be "observers," before visualizing the viewshed itself. This step grows continuously in complexity, as certain methods suggest others.

Repeat All of the Above

Adding new locations from other maps, for example the Székely Fortified Churches, requires working through all of the above steps. This type of work is necessarily iterative; new data requires reworking information from the beginning and new analysis necessitates more tests in

QGIS. This thesis has a significant number of maps in it, but they are a but a sampling of the dozens of hours of mapping work that was done. Even something as simple as adding elevation data to a point requires processing – pulling the data from the maps that have that information and adding it to the church point layers.

Chapter 5: Theories Tested

This chapter applies the previously discussed geospatial methods in conjunction with more traditional historical analysis to examine the various explanations offered as to the density and locations of Transylvania's fortified churches. This chapter is divided into three sections: first considering those theories that address their presence and density in Transylvania; second, addressing those which offer explanations for specific location selections, and third, adding some further thoughts on placement.

All maps included here feature churches fortified during the medieval and early modern era.

5.1 Density of Fortified Churches in Transylvania

As a Direct Response to the Mongol Invasion of 1241-1242

One of the most prevalent theories of fortified church construction is that they were built as an answer to the Mongol invasion. This appears in academic works as well as in the UNESCO proposal for the Villages with Fortified Churches protected sites. It is usually written without much nuance: offering a simple assertion that fortified churches were built to prepare for a second Mongol attack.

Absent specific chronological information on the development timeline of the majority of fortifications in Transylvania, this is a difficult theory to directly prove or disprove. Most groups in Transylvania did not have the explicit permission to build their own stone fortifications before the Mongols arrived in 1241. This was a very specific permission and associated with a few particularly privileged groups; most towns could not simply opt for fortification. Textual evidence shows how infrequent these structures were. More accurately, there is a lack of descriptions of such edifices. The noticeable omission of accounts of survivors

weathering Mongol attacks in fortified churches makes this particularly clear. Thomas of Spalato's account of the Mongol invasion includes specific mention of the fortified Dominican Convent of Saint Anthony in Pest, noting that Hungarians sought refuge within its walls, though they were ultimately slaughtered. He wrote that, "the fortified site availed them not when divine protection was lacking."[145] The well documented success of Saint Andrew's Church in Kraków in resisting Mongol attacks, including explicit mention of the fortifications on the hill surrounding the church, further highlights the lack of comparable accounts out of Transylvania.[146] In both cases the idea of the perversion of a holy place through violence is as important as the physical existence of fortifications. Simply put, such locations were important and exceptional enough to merit description in accounts from the time, and such accounts do not exist of Transylvania's fortified churches. Some researchers suggest that some form of early fortified church existed in Sibiu as early as 1200, but even if this is so, it is not representative of the majority of fortified churches throughout Transylvania.[147]

This sets an early bound on fortified churches: they were not present, or at least not in any significant quantity, when the Mongols arrived in 1241.

The restructuring of Transylvania's protective system after 1241, the decentralization of fortifications, and the papal mandate to protect local Christians, all facilitated development post-invasion. By 1291 there were undoubtedly fortified churches, as King Andrew III felt the need to order the destruction of "any towers or fortifications built with hostile intent onto churches or in any other place..."[148] There cannot, however, have been a particularly large number: a significant portion of settlements were founded in the late thirteenth century, and it

[145] Spalatensis, *Historia Salonitanorum Atque Spalatinorum Pontificum*, 277–79.
[146] Niemiec, "13th-Century Fortifications of Kraków," 183–85.
[147] Albu, *Inschriften der Stadt Hermannstadt aus dem Mittelalter und der Frühen Neuzeit*, VII–VIII.
[148] Translation by Makkai, Mócsy, et al., *History of Transylvania*, 1.554; Original in Latin: Praeterea turres sive castra super ecclesiis aedificata aut locis aliis pro nocumento constructa penitus evellantur. Franz Zimmermann, *Urkundenbuch zur Geschichte der Deutschen in Siebenbuürgen*, 174.

often took decades to construct a church, let alone a fully fortified one.[149] This would place many, at the earliest, half a century after the Mongol invasion, a time when the greater fear was internal struggle.[150]

In addition, if the purpose of fortifying churches was to protect against a second Mongol invasion, the most heavily fortified areas would logically be those through which the Mongols entered Transylvania, to avoid the same volume of casualties. The map below shows a rough outline of the Mongol routes through Transylvania. The density of fortified churches does not correspond to these routes, particularly the approach through Bistrița to Cluj-Napoca, which has a notable lack of fortifications. Nearer to Cluj-Napoca this could be explained by the significantly lower density of settlements more broadly. The Bistrița area, in contrast, offers the lowest ratio of fortified to non-fortified churches anywhere in Saxon Transylvania.

[149] Niedermaier, "Sieben Thesen zur Ansiedlung der Siebenbürger Sachsen," 169, 179–80.
[150] Makkai, *History of Transylvania*, 1.554.

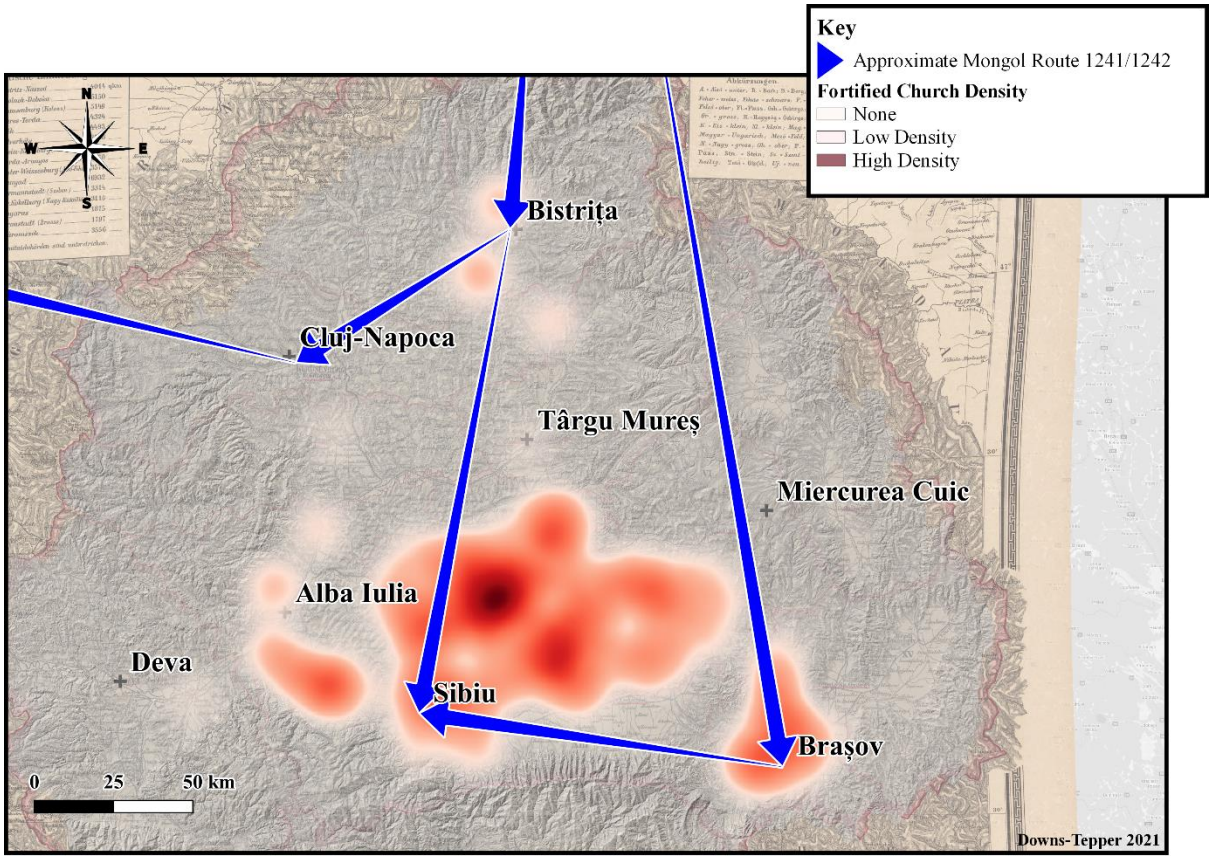


Figure 6: Mongol Invasion Routes and Fortified Church Density

This map provides a somewhat deceptive view of the routing of the Mongols by dint of its straight lines. Their actual routing was likely a north-leaning curve between Brașov and Sibiu, following a lower cost path between mountains. Owing to the less mountainous terrain, this is also the location of the majority of the settlements in the area. As such, the majority of fortified churches between Sibiu and Brașov may be closer to the actual routing; nonetheless, these are still later developments.

The notable exception, highlighted by Fabritius-Dancu, is the Cisnădioara church, which was built in the first half of the thirteenth century, before the Mongols arrived. It is also one of the few examples of a church built at the same time as its fortifications.[151]

[151] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 6.

Some research on other fortifications throughout Hungary shows a different link between the Mongols and construction: that those areas which were least impacted were therefore the quickest to rebound, and thus were more prosperous in the long run.[152] There is ongoing debate about the true extent of Mongol destruction, though more recent work suggests that it was, broadly speaking, less dramatic than some of the more hyperbolic accounts may indicate.[153] There is general consensus that Transylvania was not impacted as severely as much of the rest of the Kingdom of Hungary, usually attributed to the less accessible nature of its terrain.[154] This theory is also supported by recent research done on place-names and their significance throughout Hungary.[155]

It would be accurate to say that the Mongol invasion of 1241-1242 created the necessary context and legal situation for the development of fortified churches, but the chronological and geospatial evidence available does not indicate that this was the primary reason for their development.

Out of Fear of Ottoman Incursions

There is little doubt that Hungary viewed itself as the protector of Christendom.[156] Explicit statements from Transylvania indicate that they viewed themself as the protector of both Hungary and the rest of the Christian West.[157] Locations confirm this fear: significantly higher densities of fortified churches appear in the southern and eastern portions of Transylvania, bordering the Ottoman Empire and their sometimes-allies, Wallachia. Most researchers agree that the fifteenth century, with its growing tension between the Ottoman Empire and Hungary,

[152] Laszlovszky et al., "Contextualizing the Mongol Invasion of Hungary in 1241-42," 440.
[153] Laszlovszky et al., 441.
[154] Dobrei, "The Expansion of the Hungarians," 36.
[155] Romhányi and Laszlovszky, "A Tatárjárás Pusztítása És a Templomok."
[156] Berend, *At the Gate of Christendom*.
[157] Gündisch, *Siebenbürgen und die Siebenbürger Sachsen*.

is also a period of more substantial fortifying.[158] Most point very specifically to the period of 1387-1438, the reign of Emperor Sigismund. Aiming to gain allies in his conflict with the Ottomans without destabilizing his local power base, Sigismund delivered the following speech in Paris:

> Your friend and cousin sends us to you in order that you might know of the deplorable situation of Hungary, and to inform you that we will have been brought to the greatest distress, if your powerful protection, which was never missed by the unfortunate, does not come to our aid at once. It is a notorious fact that Bayezid, the crudest of tyrants, has reduced into captivity almost all of the Christians of Bulgaria, Wallachia, and Pannonia, that., .they languish in the misery of slavery. These towns, otherwise under the rule of the King of Hungary and devoted to the Christian faith, are for the most part placed under lasting servitude to the Turks. Who has not heard, without crying, the recitation of their atrocities? They despoil churches and their sacred ornaments, kidnap children to instruct in their superstitious beliefs...or to slaughter like sacrifices....Their sacrilegious fury respects no one and spares no one. They outrage preachers, dishonor young girls, and exercise all of their brutality on those women whom age itself ought to protect....All of the world knows that to take vengeance for all of the outrages committed by this nation of miscreants, which is of the greatest strength and bravery, we have more than one time fought them with varying degrees of success, and that our king has taken part in several of the battles, the result of which has nearly always been his defeat....Our master pleads to you, most serene prince, that you and your princes, that you would do well, in consideration of those debts given to you by the love of God, and asks you to give him your assistance. He promises that henceforth no one will be more devoted and faithful to you than him.[159]

The period of the most expansive fortification efforts in Transylvania coincides approximately with this same era, and Ottoman attacks continued before and after. "From 1394 on - when Sultan Baiazid I "the Blitz" conquered Wallachia - there were large Ottoman invasions in the following years: 1420, 1421, 1432, 1437, 1438, 1442, 1479, 1493, 1511, 1551, 1611, 1613, 1658."[160]

[158] Radvan, "The Emergence of Towns in Wallachia," 7.
[159] Mitchell, "Emperor Sigismund and Eastern Europe," 11.
[160] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 8.

This is also the main era for the quintessential Transylvanian Gothic fortified church, which Barta links with broader fortification of towns as well.[161] The map below shows only gothic churches (early gothic through late gothic) which have fortifications. More than half of all fortified churches fall in the broad umbrella of Gothic, which Fabini categorizes as stretching from the 1300s through the start of the 1500s.

Fabritius-Dancu's work adds more specific dates to a number of fortified churches. Of the 75 included in *Sächsische Kirchenburgen aus Siebenbürgen,* only a handful of fortifications fall outside of this same time period. An important distinction here is that while Fabini offers dates on church construction, Fabritius-Dancu gives them for the development of the walls and protections themselves.[162]

[161] Barta, *Kurze Geschichte Siebenbürgens*, 226.
[162] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*

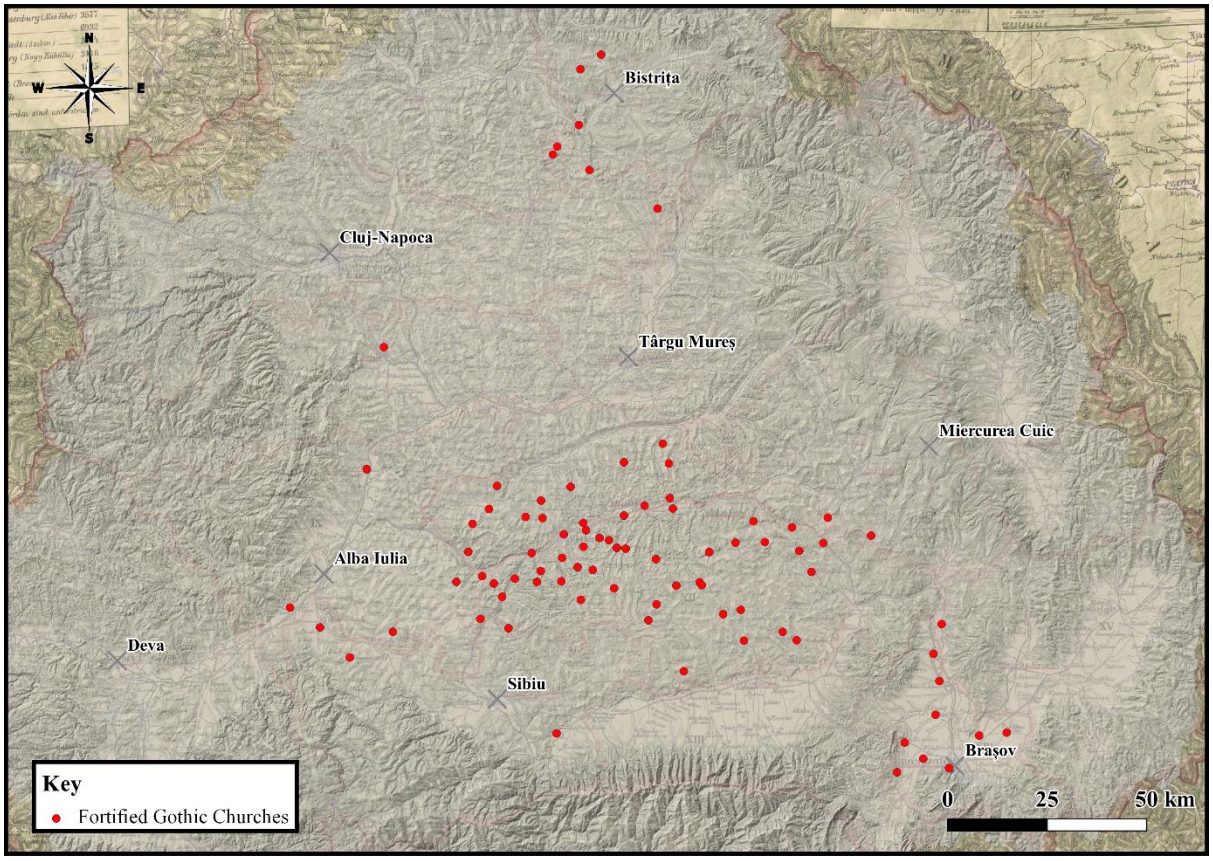


Figure 7: Fortified Gothic Churches

Records of attitudes of the time certainly indicate that the presence of the Ottoman Empire was seen as an existential threat to the Kingdom of Hungary, given the frequency of attacks, and that Transylvanians viewed themselves as a vital bastion against this threat.

Further issues with Mongols and Ottomans

Additionally, it is worth noting the muddled nature of historical sources and their discussions of both the Ottomans and Mongols. A significant number of sources combine the two into an ambiguous singular entity representing the perceived foreign nature of "the East" and everything it contained. A traveler's account from 1878 describes the picturesque towns of Transylvania. The author explains that, "The origin of this form of architecture is very obvious; it was necessary to have a defence against the incursions of the Tartars and Turks, who for

centuries troubled the peace of this fair land."[163] Other authors use the term "Tatar" to describe both Ottomans and Mongols. Depending on perspective this ambiguous language creates a situation where isolating a single responsible group is difficult. Seen otherwise, however, it indicates that the specific groups to be feared were seen as a whole: the foreign Other to the east.

A 2016 paper explained how this confusion came to exist: "Turk acquired a much broader meaning in the Islamic world… [M]edieval Muslim writers, who tended to regard Inner Asian tribes as forming a single entity regardless of their linguistic affiliation, commonly used Turk as a generic term."[164] Further, that "It is noteworthy that the term Tatar designating the Mongols was also used as a synonym for the term Turk."[165]

This continues to be true through much more recent scholarship, leading to large swathes of scholarship written with terms mixed into a strange amalgamation - where Mongols and Ottomans can both be Turks and Tatars. A 2010 paper on the subject opens: "It is important to distinguish between the so-called 'Tatar Invasion,' which was actually the great Mongol invasion of 1241-2, and the lesser Tatar invasions of the Turkish occupation period."[166] Following a similar pattern, a readily available timeline of Transylvania's history notes Tatar invasions in 1241, 1285, 1352, and 1658.

Another tier of confusion comes with the addition of the Crimean Tatars. Their attacks, often coordinated with the Ottomans, kept the link to earlier "Tatar" attacks present and thus maintained a chain of connection between earlier and later destruction.[167]

[163] Crosse, *Round About the Carpathians*, 178–81.
[164] Lee, "The Historical Meaning of the Term Turk and the Nature of the Turkic Identity of the Chinggisid and Timurid Elites in Post-Mongol Central Asia," 108.
[165] Lee, 131.
[166] Tatár, "A Transylvanian Folk Legend about the Tatars," 1.
[167] Szabó, "'Splendid Isolation'?"

A 2013 study of popular memory of the Tatars within a town in Transylvania draws some striking conclusions. After conducting interviews with current residents, the author explains, "Who the Tatars were or why they had come does not preoccupy the mind of the inhabitants…"[168] Historical fact was of little relevance to the perspective of those interviewed:

> Indeed, to the nowadays inhabitants..., the Tatars represent their essential different human, the alter, who is even antithetic. The enemy, who defines the identity contours of the inhabitants, outlines inherited and uncontested by the descendents. The same identity landmarks are set in other regions of Transylvania, where the heroes who dared face the belligerent eastern neighbours or the victims of their kin are either celebrated or commemorated on particular days.[169]

The conflation of Tatar, Mongol, and Turk into a representative "Other" also contributes to the difficulties involved in isolating motivation. Though evidence seems clear that Ottomans were a much more present motivation for constructing church fortifications, the fact that the two are mixed could lead to attributing later Ottoman fears to the Mongols.

As a Representation of Unique Saxon Culture, Spirit, and Identity

The idea that fortified churches are a unique Saxon creation takes two forms. The first is that churches were designed (and fortified) in a cohesive manner simply to create a "binding commonality" between different Saxon villages.[170] The second is that they were built to be visible monuments of Saxon prestige, a proselytizing tool to convert others.[171] Both are predicated upon the idea that these are a uniquely Saxon creation.

If the existence of fortified churches elsewhere in Europe is not enough to disprove this hypothesis, the contemporaneous development of them in Transylvania by the Székelys should

[168] Fodor, "The Tatars in the Collective Memory of the Szekely Inhabitants of the Sic Settlement, Transylvania," 109.
[169] Fodor, 111.
[170] Machat, "Zunftwesen und Baukunst Siebenbürgens im Mittelalter," 133.
[171] Madgearu, "The Figuretive Language of Holy Defences in Transylvania - Fortified Churches of the Fourteenth to Sixteenth Centuries," 17.

be.[172] At present, a remarkable quantity of literature places the fortification of Saxon churches before those of the Székelys. Barta's *Short History of Transylvania,* for example, makes the claim twice in one paragraph:

> To provide a better defense against Turkish attacks, over the course of the 15th century, first the Saxon and then the Székely churches were fortified in the Csík chair, giving the Transylvanian architecture a unique, individual color… A little later, when Turkish invasions from Vltava were expected, the fortification of the Székely churches in the Csík chair began, also with characteristic local shapes…[173]

The idea that the Saxons were architectural pioneers often ends up mixed with other arguments that place the Saxons as superior to their contemporaries. This is perhaps best exhibited in articles about Saxon neighborhoods, such as Mariana Borcoman's "Community Structures - Expressions of the Transylvanian Saxon Identity." She explains, "These elements of the Saxon structures lasted a long time after 1876, thus providing a unique model of community life to their Romanian and Székely neighbors."[174] The structures in question are community organizations and church groups – which certainly had parallels among other populations. Eugen Strautiu's "The Traditional Model of Human Security to Transylvanian Saxons" is similar. His model of Saxon community security is built upon two tenets:

1. Organization, cohesion and solidarity in the community;

[172] Tóth, Botar, and Grynaeus, "Dendrochronological Analyses and Architectural History," 2.
[173] Original in German: "Zur besseren Verteidigung gegen die Türkenangriffe befestigte man im Laufe des 15. Jahrhunderts zuerst die sächsischen und dann die Szekler Kirchen im Stuhl Csík und gab dadurch der siebenbürgischen Architektur ein einmaliges individuelles Kolorit. Die Kirchen, deren Altarraum um ein oder zwei Stockwerke erhöht und deren innere Umgänge mit nach außen gerichteten Schießscharten und Pechluken versehen wurden, bieten einen eigenen malerischen Anblick. So erhebt sich der Altarraum wie ein zweiter Turm gegenüber dem ähnlich umgebauten Kirchturm über dem Gebäudeblock. Von den 230 sächsischen Kirchen wurden 30 zu solchen Kirchenburgen umgebaut, und zwar im Gebiet zwischen den Flüssen Mieresch, Kleine Kokel, Alt und Homoród. Von der nördlichsten in Bogeschdorf folgen in einem großen Bogen nach Süden, Osten und wieder zurück nach Norden die Kirchenburgen von Bulkesch, Bußd, Heltau, Martinsberg, Groß-Schenk, Deutschweißkirch, Magyarkapus, Birthälm und Hesseldorf. Fast jede von ihnen ist noch von einer Rundmauer mit Türmen umgeben, und unabhängig von dieser Umgestaltung des ursprünglichen Bauwerkes haben die meisten {239.} noch eine Umfassungsmauer mit Lagerräumen an der Innenseite und darüber einem Wehrgang mit Schießscharten. Etwas später, als mit türkischen Einfällen von der Moldau her zu rechnen war, begann man auch mit der Befestigung der Szekler Kirchen im Stuhl Csík, ebenfalls mit charakteristischen lokalen Formen, wie in Csíkkarcfalva, Csíkrákos usw." Barta, *Kurze Geschichte Siebenbürgens*, 238–39.
[174] Borcoman, "Community Structures," 71.

2. Establishment and use of privileges in relation to other communities.[175]

As is clear, both of these concepts apply equally well to the other privileged minority groups within Transylvania, in particular the Székelys, a group noticeably omitted by Strautiu. More recent scientific historical research, using dendrochronology, makes a counter claim, that "the defensive level of the church of Dârjiu is contemporary to the similar historic buildings of Saxon Land."[176]

There were undeniably more Saxon churches, but they are not by definition an exclusively Saxon creation. Fortified ecclesiastical structures beyond simple churches, such as monasteries or convents, already existed elsewhere in Hungary.[177] There are two issues with the second concept. The first is the question of whom the Saxons were to be converting: the Saxons, Székelys, and Hungarians were all Catholic until the middle of the sixteenth century, and scholarship indicates that Saxon towns tended to maintain their own populations and cultural identities.

The second issue is a question of visibility; it will be addressed in the second half of this chapter, as part of the analysis of fortified churches as watchtowers.

Many older German-language sources advocate for the narrative of Saxon superiority. While it is accurate to say that the Saxons developed more fortified churches in Transylvania, it is disingenuous to claim them as a unique phenomenon.

To Provide Local Protection Against Wallachia or "Domestic" Threats

Wallachia, to the southeast of Transylvania, was another buffer zone with which they maintained a tenuous relationship. Wallachia had its own internal issues; a lack of

[175] Strautiu, "The Traditional Model of Human Security Ot Transylvanian Saxons," 144.
[176] Tóth, Botar, and Grynaeus, "Dendrochronological Analyses and Architectural History," 26.
[177] Spalatensis, *Historia Salonitanorum Atque Spalatinorum Pontificum*, 277.

primogeniture led to frequent competition for the crown, with more than two dozen regime shifts over the fifteenth century alone. In these areas, "political life was characterized by anarchy."[178] Indirect evidence also shows growing tension through the closing of the borders between Wallachia and Transylvania.[179]

More concretely, there are specific accounts of Saxon conflict with Vlad Tepes, and the use of Bistrița's fortifications as protection.[180] A century later, Michael the Brave successfully (if briefly) invaded and ruled Transylvania as well.[181] Further treaties and allegiances often bound the Wallachian Voivode to the Ottomans. These alliances formed with the same rapidity that they dissolved. An unsuccessful 1416 attempt at the Ottoman throne by "Düzme" Mustafa, supported by the Wallachian voivode, was put down by Sultan Mehmed I, who responded by clamping down and increasing Ottoman control of the area.[182] This further coincided with broader political intrigue: a secret treaty between the Polish King Ladislav, who professed to be an ally of Sigismund, and the Ottoman sultanate.[183] This added threat left the Eastern border of Hungary less protected, further spurring the need for defenses.

Further research provides clear evidence of internal strife and conflict which could motivate local fortification. The 1324 revolt of the Saxons against the Transylvanian Voivode was a more acute outbreak of tension, but not the only such example.[184]

The loss of Wallachia as a vassal to the Ottoman Empire increased the need for fortification within Transylvania. In response, the Ottomans circled around from the south, often attacking Hungary by way of Belgrade.[185] The shift of Wallachia to the Ottomans can be seen in the map

[178] Brusanowski, "Between Orient and Occident," 405.
[179] Coman, "From an Open to a Closed Frontier," 132–33.
[180] Hendrickson, "A Reinterpretation of Prince Vlad the Impaler," 44–45.
[181] Berry, "Transylvania and Its Relations," 143–44.
[182] Zachariadou, "Ottoman Diplomacy and the Danube Frontier (1420-1424)," 681.
[183] Altmann, *Die Urkunden Kaiser Sigmunds, 1410-1437*, 4206.
[184] Fabini and Fabini, *Kirchenburgen in Siebenbürgen*, 15.
[185] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 14.

below. Instead of a clash on the eastern edge of Transylvania, the location of one of the most substantial clashes between the Ottomans and the Hungarians, at the Battle of Breadfield (1479) near Șibot, is in an area with relatively few fortified churches. In this instance, the Ottoman army did not push through from the East. Rather, they marched from South to North, avoiding the majority of the fortified churches between Brașov, Sibiu, and Alba Iulia. Overall there is a noticeably greater density of fortified churches in the portions of Transylvania bordering Wallachia.

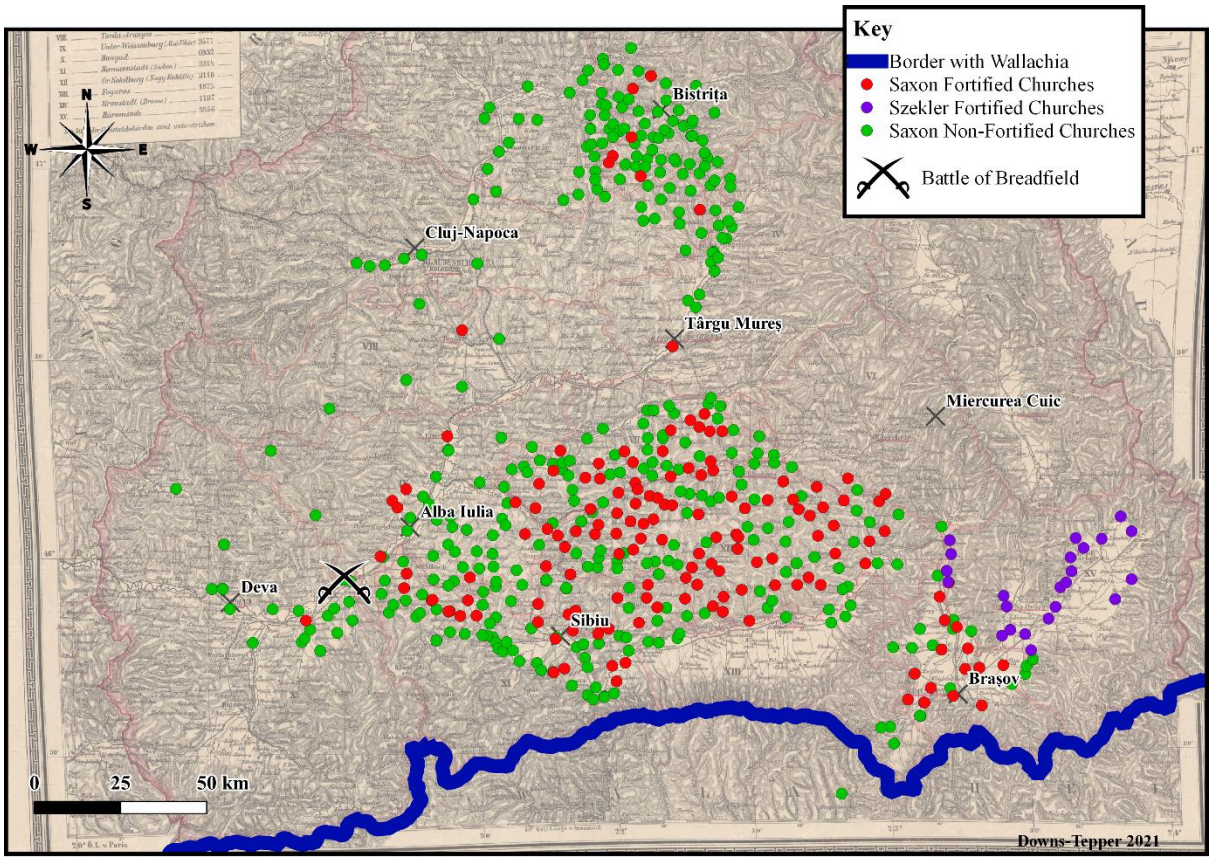


Figure 8: Fortified Churches and the Border with Wallachia

As a Continuation of the Legacy of the Teutonic Knights

There is clear evidence of the presence of Teutonic Knights in Transylvania, including the remains of some of their fortifications. The lack of abundant concrete records offers ongoing challenges to academics studying the group. One of the issues is that their fortifications were,

for the most part, subsumed by new settlers. Traces do remain: later fortifications, built after the departure of the Knights, also show signs of Teutonic-style construction.[186]

There are some slight disagreements among academics regarding the Hungarian monarchy's precise need for the Teutonic Knights. While most argue that their presence was intended to counter the Cumans, a second current argues that they may have been brought in as outsiders to quell unruly nobility.[187] A third contends that their inclusion was part of an intentional expansionist push by the Hungarian monarchy.[188] Regardless of precise reason for their presence, they constructed substantial fortifications – and were constructing these lasting stone fortifications before permissions for fortified churches or other stone fortifications had been granted. When they left, the common people stayed, which explains how some building techniques remained consistent from the Teutonic Knights through the Saxons.[189]

The map below shows the locations of five Teutonic fortifications in relation to Transylvania's fortified churches. As these Teutonic constructions predate the other fortifications, it would follow that they were designed in a fashion followed by later fortifications, given their proximity to a fair number.[190]

[186] Laszlovszky, Soos, and Studies, "Historical Monuments of the Teutonic Order in Transylvania"; Madgearu, "The Figuretive Language of Holy Defences in Transylvania - Fortified Churches of the Fourteenth to Sixteenth Centuries," 18.
[187] Berry, "Transylvania and Its Relations," 140.
[188] Weber, "An Introduction to the Study of Saxon Settlement in Transylvania During the Middle Ages," 55.
[189] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 5.
[190] Laszlovszky, Soos, and Studies, "Historical Monuments of the Teutonic Order in Transylvania," 331.

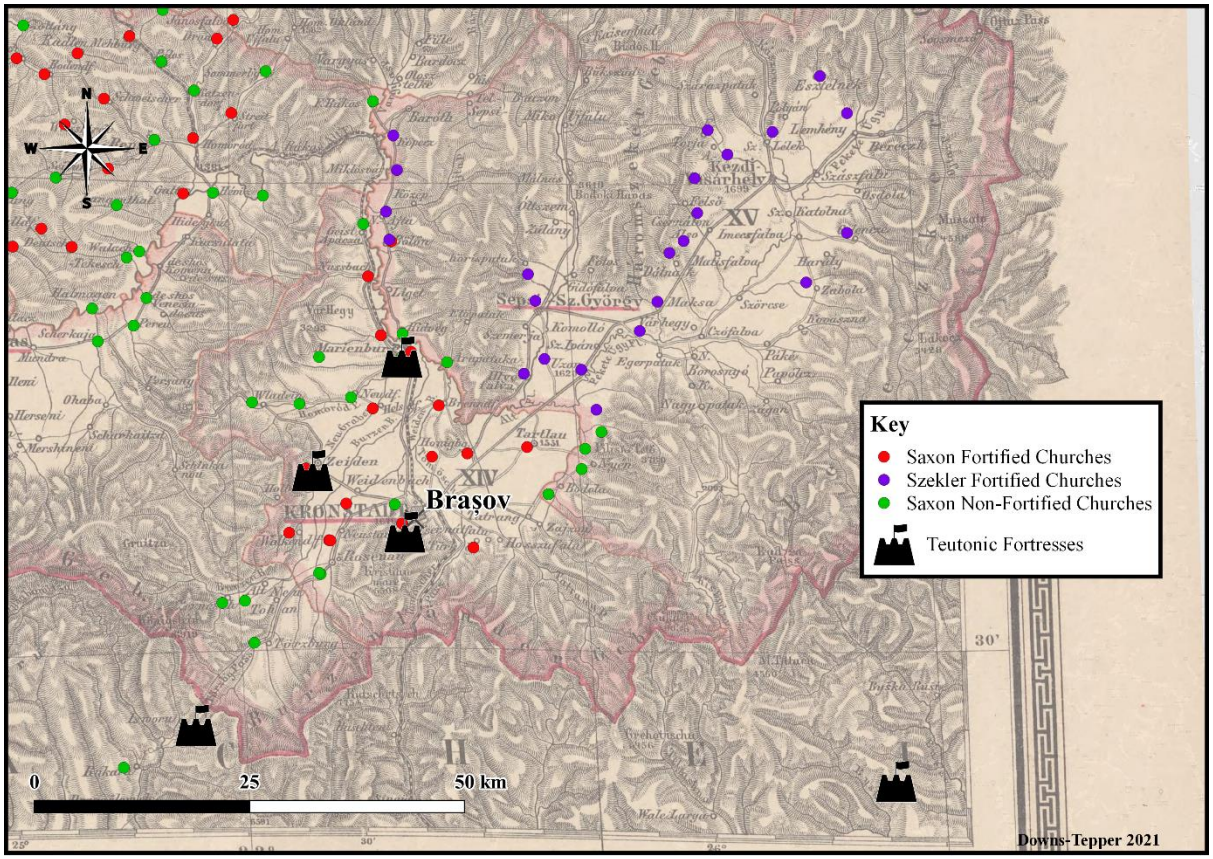


Figure 9: Fortified Churches and Teutonic Fortifications

András Sófalvi's recent work supports this hypothesis. His research indicates that the area under the control of the Teutonic Knights may have been noticeably greater than it is often depicted in research, and thus that their influence may have been spread further.[191] However, he also notes that some of the archaeological finds in the area are indicative of some form of pre-Teutonic settlement.[192] This is consistent with some of Fabini's arguments on the topic.

During his reign, Emperor Sigismund once again recruited the Teutonic Knights, in particular for their expertise in constructing fortifications, a bookend to their expulsion in 1225.[193]

[191] Sófalvi, "A Barcaság Határai és 13. Század Eleji Településképe a Német Lovagrend Adományleveleiben."
[192] Sófalvi, 63.
[193] Whelan, "Sigismund of Luxemburg and the Imperial Response to the Ottoman Turkish Threat, c. 1410-1437," 150–52.

As a Demonstration of "Peasant Fortifications" - Intended for Use by Common People

The question of whether fortified churches can be viewed as "peasant fortifications" is mostly a semantic dilemma. Significant amounts of land and property, including the fortified churches, were held as communal property for towns, with no individual ownership.[194] In this sense there was certainly a "collective" involved. Whether or not this constitutes a "peasant" group is a different question. Rusu convincingly argues that neither Saxons nor Székelys were peasant groups: by definition, as they were granted special privileges, they were elites.[195] In effect, he states that any ethnic group was allowed to build their own fortifications could not be a peasant group. While this is a reasonable argument, it is also a purely definitional question: if peasants could not have privileges, and fortress construction was a privilege, then there can be no peasant fortresses.

There is a second linguistic possibility for this term: the German "Gemeindeburg." Burg, meaning "Castle," is clear. "Gemeinde," on the other hand, can mean a local community, municipality, congregation, or parish. The monolithic *Geschichte der Siebenbürger Sachsen: für das Sächsische Volk* offers these as an alternative to fortified churches. In a portion discussing the artistic masterpieces of some Saxon craftsmen, Teutsch explains:

> Yet their works often did not see peace in the churches to which they belonged. Ever since the Turks came into the country, and with the ever greater decline in the state order, security against external and internal enemy threats was the basic condition of existence for every community. Wherever a community castle [Gemeindeburg] did not exist, the ever-stronger fortification of the fortified church [Kirchenburg] was an urgent task for everyone.[196]

[194] Horváth, "The Private Law of the Principality of Transylvania (1540–1690)," 296.
[195] Rusu, "A Critical Approach to 'Peasant Fortifications' in Medieval Transylvania"; Kovács, "The Participation of the Medieval Transylvanian Counties in Tax Collection," 676.
[196] Original in German: Ihre Werke aber sahen in den Kirchen, welchen sie gehörten, gar oft nicht die Stätte des Friedens. Seit die Türken ins Land fielen und bei dem immer größern Verfall der staatlichen Ordnung die Sicherung gegen äußere und innere Feindesgefahr für jede Gemeinde die erste Bedingung des Daseins war, da

A more colloquial translation of the term could be "the locals," which could ostensibly enter into the concept that these were structures for any and all, and thus peasant fortifications.

This leads to a further issue: does this definitional question have any greater impact on our understanding of fortified churches? The answer is an unequivocal negative; beyond touting "peasant fortresses" as a demonstration of Romania's longstanding commitment to Communism, it is not a particularly valuable distinction.[197] It is a revisionist approach akin to claiming that Vlad Tepes "pursued a surprisingly enlightened policy toward the peasant masses when he promised that 'nobody shall be poor but all shall be rich in the country.'"[198]

The introduction to Fabritius-Dancu's remarkable study of fortified churches also offers some egregious examples of ideology-infused historical revision:

> The cohesion of the Transylvanian peoples throughout the centuries, struggling together for a better lot, helping one another and growing culture, is taking an unprecedented shape today within the framework of the socialist community of our present-day Romania, whose primary goal is to give its citizens a better, more substantial existence and to shape a future for our descendants on ever higher levels of culture.
>
> [Fortified churches are] harmoniously integrated into the unchangeable conditions that have shaped the eternal face of the Romanian landscape, they emerged on the mountain slopes, over which the flocks of sheep, [sung of in old] ballads have wandered since ancient times, next to an architecture defined by gently curved lines, decorated with all the richness of the soul of the Romanian People, on the banks of the blue waters in which the constellations of the skies of home are reflected, on the edge of the forests, in whose foliage the ancient fairy tale of the fraternization of man and nature still whispers.[199]

wurde, wo eine Gemeindeburg nicht stand, ja selbst neben ihr, die immer stärkere Befestigung der Kirchenburg die drängende Aufgabe jedes Geschlechts. Teutsch, *Geschichte der Siebenbürger Sachsen*, 260.

[197] Rusu, "A Critical Approach to 'Peasant Fortifications' in Medieval Transylvania."

[198] Quotation attributed to Vlad Tepes, on the event of burning a number of beggars alive. This story and context is not included in the book. Ronay and Gaydos, *The Truth About Dracula.*, 68.

[199] Original in German: Der Zusammenhalt der siebenbürgischen Völkerschaften durch Jahrhunderte, im Kampf um ein besseres Los, ihre gegenseitige Hilfe und kulturelle Befruchtung, gestaltet sich heute in noch nie dagewesener Weise im Rahmen der sozialistischen Gemeinschaft unseres heutigen Rumänien, dessen vornehmstes Ziel es ist, seinen Staatsbürgern ein besseres, gehaltvolleres Dasein und unseren Nachkommen eine Zukunft auf immer höheren Stufen der Kultur zu gestalten. Den unveränderlichen Gegebenheiten, die das ewige Antlitz der rumänischen Landschaft zu prägten, harmonisch eingegliedert, entstanden sie auf den Berghängen, über die seit altersher die Schafherden der Ballade wandern, neben einer von sanftgeschwungenen Linien

This evocative language is also a clear attempt to demonstrate how the Saxons, an outlier minority in Romania in the 1980s, not only fit within the nation at the time, but rather embodied it. There are other notes throughout her work on the same subject, about the collective of town all working as one for the greater good. There is a striking change of tone between the flowery language in these sections and the heavily analytical tone of much of the rest of her writing.

A semantic issue necessitates a semantic solution, and Berry offers a useful term: "*Citizen fortresses*, which differed from most of the fortresses of Western Europe in that they were in the possession of the citizens, and not, as for instance in the Rhine valley, of the nobles."[200] This is also in line with the more direct translation of Gemeindeburg, and thus offers a terminology solution consistent with both the available German language and English language literature.

Ultimately understanding these structures as a piece of collective property is a useful historical lens. It allows a greater understanding of community relations and helps explain the cohesive identity of these settlements. The idea of the "Gemeindeburg," understood as a community fortification, is a useful lens – including an understanding going beyond a single settlement and to either the local administrative region (Stühle) or ethnic group. It helps to illustrate the intimate connection between place and inhabitants. The protection that one had in a town was related to the whole population. However, pushing it further towards peasant ownership stretches veracity and does not add to discourse.

bestimmten, mit dem ganzen Reichtum der rumänischen Volksseele ausgeschmückten Architektur, am Ufer der blauen Gewässer in denen sich die Sternbilder des heimatlichen Himmels spiegeln, am Rande der Wälder, in deren Laub noch immer das uralte Märchen der Verbrüderung von Mensch und Natur wispert. Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 3.

[200] Italics added for emphasis. Berry, "Transylvania and Its Relations," 140.

5.2 Specific Locations of Fortified Churches

Placement on Hills, Where Possible

This is a straightforward geospatial claim, and thus easier to evaluate than a number of other theories examined here. It is also logically sound; placing fortifications on hills makes them harder to access, of course. Transylvania's terrain is both hilly and irregular, allowing ample opportunity for the use of such locations. The graph below shows the elevation profile of a straight line between Alba Iulia and Brașov, offering a good visual of the hills and terrain of Transylvania.

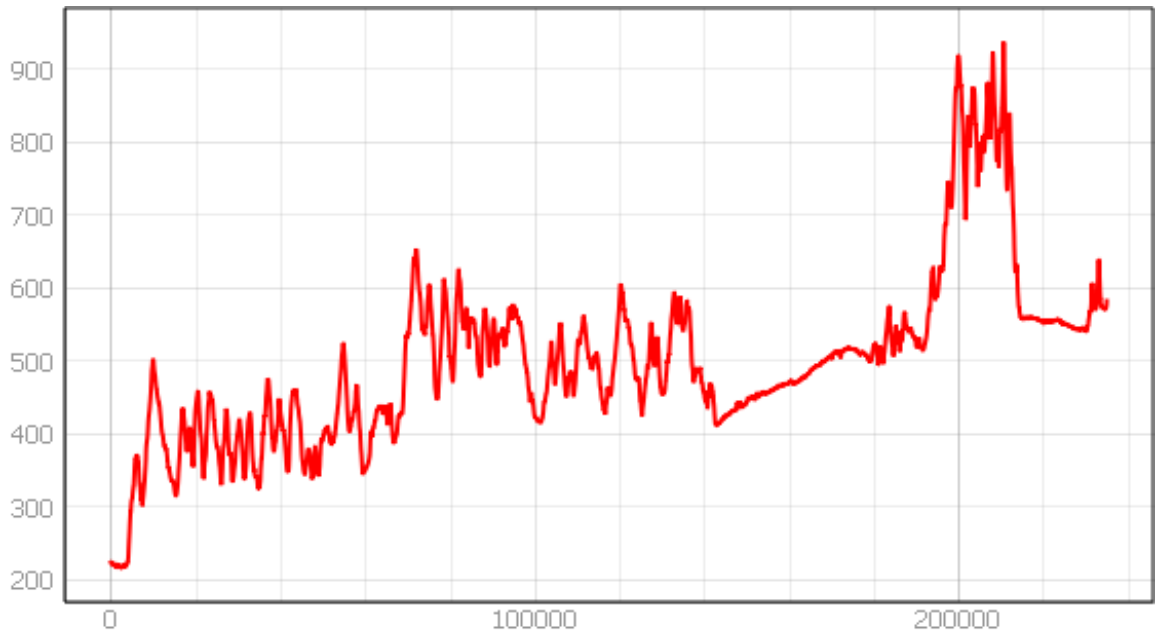


Figure 10: Elevation cross-section in meters, showing the fluctuation in elevation along a straight line from Alba Iulia to Brașov.

However, despite both the logical solidity of fortifying hilltops and the abundance of hills in Transylvania, this theory requires some more rigorous examination.

To that end, a few different methods have been applied here. The first is simple aggregate data analysis. A comparison of the average elevations of fortified versus standard churches does indeed show a difference: the average ground elevation of non-fortified churches in

Transylvania is 390 meters, while the average elevation of fortified churches is 28 meters higher, at 418 meters. This further supports the idea that hilltops and elevation are important factors in selecting a location for a fortified church.

However, the map below shows the elevations of Transylvania. Darker colors here indicate lower elevation, and as is clear, the greatest density of non-fortified churches is near Bistrița in an area that is, on the whole, lower in elevation. On the other hand, there are simply more fortified churches constructed between Sibiu and Brașov, an area of higher average elevation. Thus the overall higher average elevation of fortified churches reflects their regional concentration rather than reflecting a choice of higher elevation.

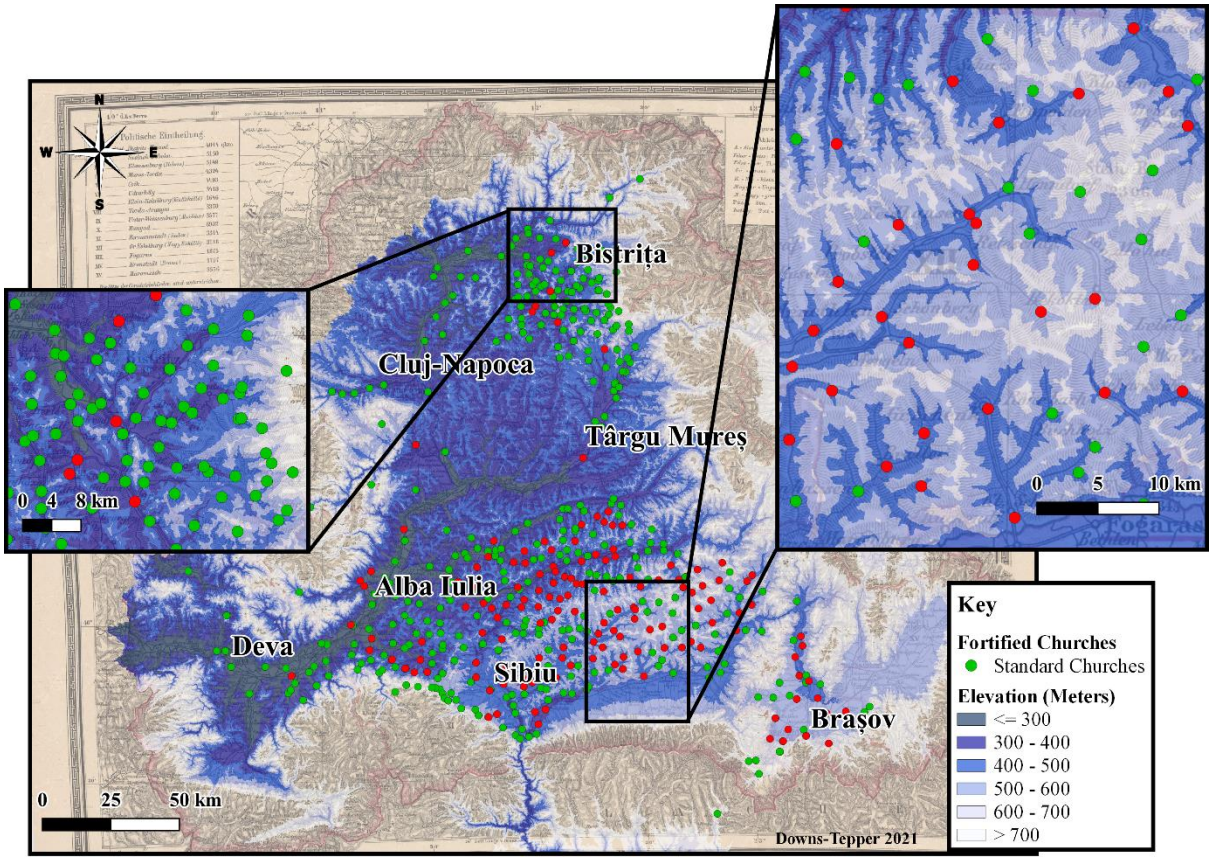


Figure 11: Elevation of Transylvania vs. Church Locations

All of the previous methods have been focused on examining aggregates and large groupings. To provide a better consideration of the specific context of each church, local sampling was

used. Using cruciform point sampling to gain more granular data shows that in only twenty of 178 cases a fortified church was built at the highest point in its vicinity, given a radius of 230 meters. More simply – it is exceptionally rare to find that a fortified church is the highest point around. With a 75-meter radius, there was only one example of a fortified church that was higher than those in every direction.

These churches are not, however, typically in basins. They are not typically the lowest point in a given cruciform cluster. Instead, in the majority of cases, the land is effectively flat in all directions.

While there are indeed cases of fortified churches on hilltops, in the vast majority of cases this does not seem to have been a deciding factor in placement, despite it being a logically reasonable approach.

Placement Among Foothills

Foothills are a reasonable place for fortified churches for a few reasons. They offer significant natural protection, in the form of adjacent mountains, without the difficulties of actual construction within mountains. This means, among other things, that roads can be built in the area, without added terrain complications. At the same time, because of the irregularities of hills, they are not always visible from great distances, as they would be on plains, fields, or other totally flat zones. Foothills, then, can offer an effective compromise between the ease of construction in flat areas and the protection of mountainous ones.

The map below examines slope and church locations as a way to assess mountain and hill locations. For the sake of visual clarity, mild slopes – those less than ten degrees – have been left transparent. Thus any visible slopes here range from moderate to extreme.

It would certainly appear that this argument for foothill placements holds up under scrutiny: the inset highlighting the Sibiu area shows the remarkable number of churches built among foothills, directly adjacent to much steeper, mountainous regions. The same could be noted for the churches immediately southeast of Deva. The Székely fortified churches near Brașov also lay in the vicinity of foothills, though not embedded as deeply as their Saxon counterparts further to the west.

Worth considering here is that this site selection is true of non-fortified churches more than fortified churches. The cluster near Sibiu is striking in its density, but it is clear that the furthest periphery, those churches placed closest to the foot of the mountains, are non-fortified. The same is true for those churches which are truly embedded within the mountains. They are, without exception, unfortified. This is probably clearest among the wider spread of churches north of Deva. Non-fortified churches being placed in these locations more consistently than fortified churches adds credence to Streitfeld's idea that foothills allowed residents of a town to flee into the mountains, and as such decreased the importance of other local fortifications. It makes sense, then, that fortified churches often tend towards the inside of large groups of non-fortified – with the noticeable exception of the area around Brașov.

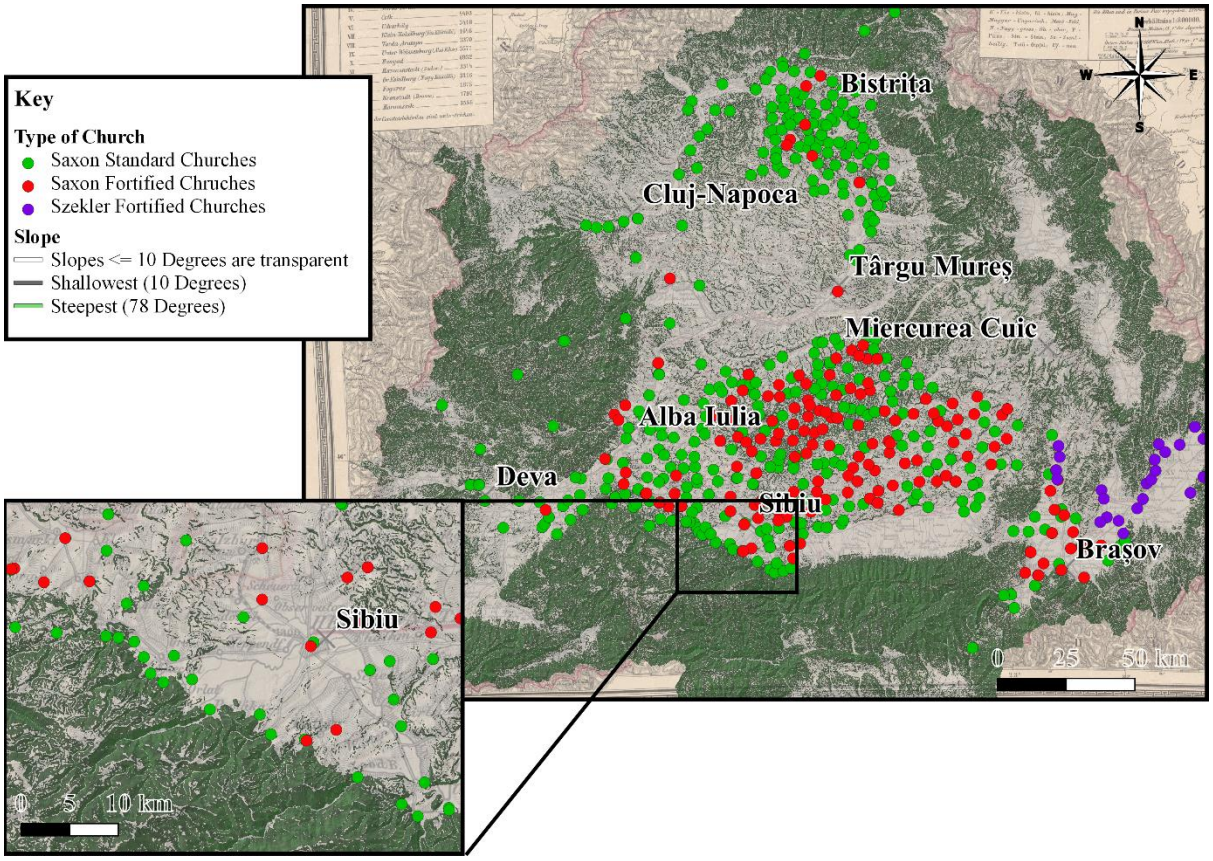


Figure 12: Slope Analysis of Church Locations

The Desire to Use Church Towers as Watchtowers

The concept of fortified church as watchtower shows up in a number of sources. What distinguishes a watchtower from any other structure is the area over which it is intended to survey. Watchtowers, by design, must see as large of an area as possible. They are also thus visible from an equally wide area. Naturally there are methods of increasing view distances – the use of smoke and signal fires being among the best known. But in its most basic sense, a watchtower should see a large area. This is why this type of methodology is frequently used for applications like placing of fire towers in forests.

Viewshed analysis is a perfect methodology to test this idea. The map below shows all areas that are visible from one or more fortified churches. This is a binary viewshed; either a given point is visible from a tower or not. Another form of viewshed analysis would use different

colors for areas of overlap, helping to see which areas are more or less thoroughly covered. In this instance, however, the key question is simpler: are the fortified churches able to view large areas or not?[201]

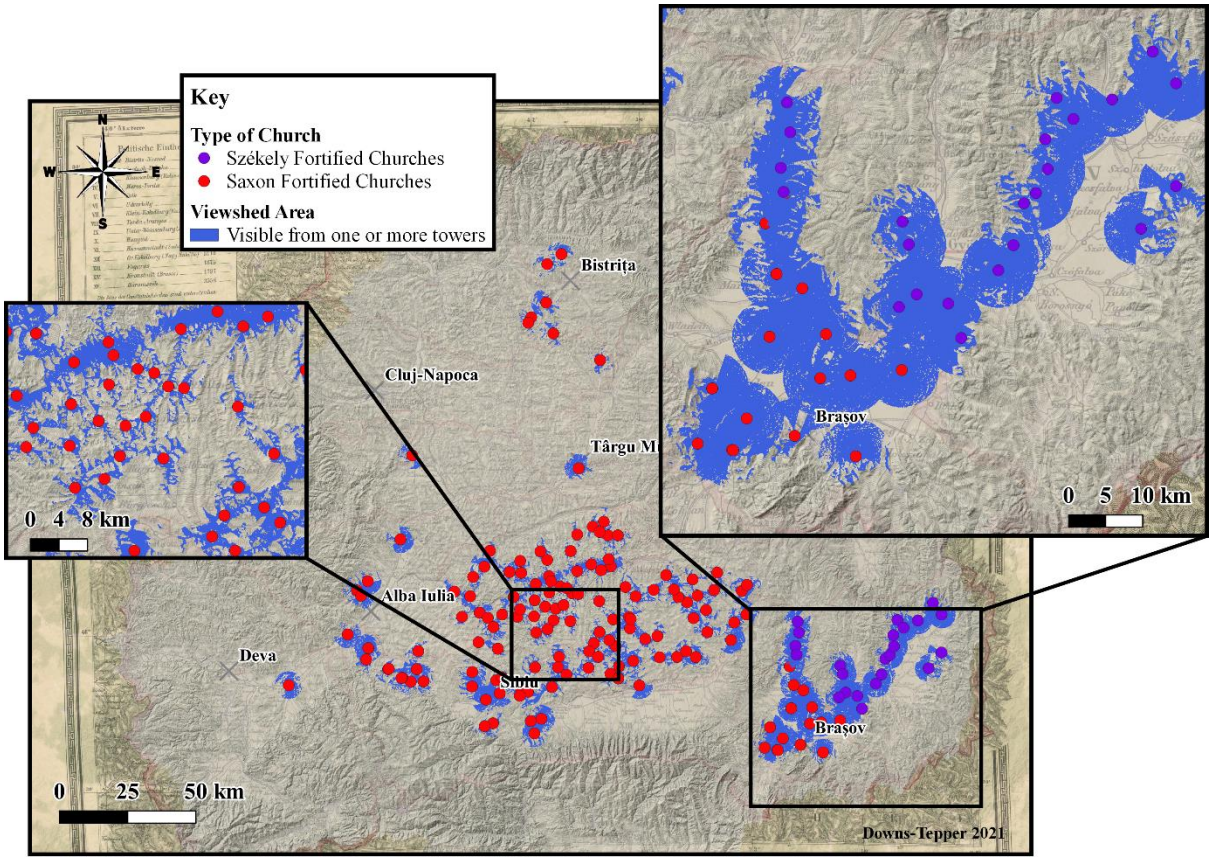


Figure 13: Viewshed Analysis of Fortified Churches

There are remarkable variations in viewshed size, as highlighted by the two insets. Those fortified churches in the area just northeast of Sibiu have remarkably small viewsheds, restricted to only their immediate surroundings. In the area of Brașov, however, viewsheds are massive – each fortified church seeing close to its full surroundings.

[201] There are some added quirks that make overlapping viewsheds muddled. In particular, any settlement with more than one church causes issues, as the two churches, located so close together, have almost entirely overlapping viewsheds. This causes specific zones to appear erroneously well surveyed.

The Székely churches are particularly striking here, both in the size of their viewsheds and in their placement in foothills. Even from the church tower – typically the highest point in a town – the mountains quickly become opaque.

This also means, based upon this dataset, that the argument could be made that fortified churches built by the Székelys have larger viewsheds on average. While technically true, it is more a reflection of data and context: the area around Brașov is much flatter, and thus conducive to larger viewsheds. That said, this is also the same region in which the Teutonic Knights were originally located; defense was, as such, also a real choice in these placements.

Nonetheless, it appears, based on the general area of viewsheds for Transylvania's fortified churches, they were not intended to be watchtowers. Instead, they were designed as bunkers: a smaller area was visible from each church, but they were thus visible from a smaller area, and could avoid any threats or attacks. From this perspective, even the larger viewsheds of the churches near Brașov can be viewed as defensive constructions: wide open areas have fewer places to hide, and any threat to a town would need to be visible from further away so that residents could seek refuge.

This also interacts with the idea of fortified churches as a method of Saxon proselytizing. These buildings were purpose built to *not* tower over the area. Compare the symbolic strength of these protective but relatively hidden structures with something like Stift Melk or Göttweig in Austria: buildings built to look down over their surroundings, acting as a constant reminder of the presence of the church. Naturally within a given town, the fortified church was likely the most dominant structure. This does not, however, translate to a much broader mission of conversion.

There are also not striking differences between the viewsheds of fortified and non-fortified churches in Transylvania, as illustrated below. This will be discussed further at the end of this chapter.

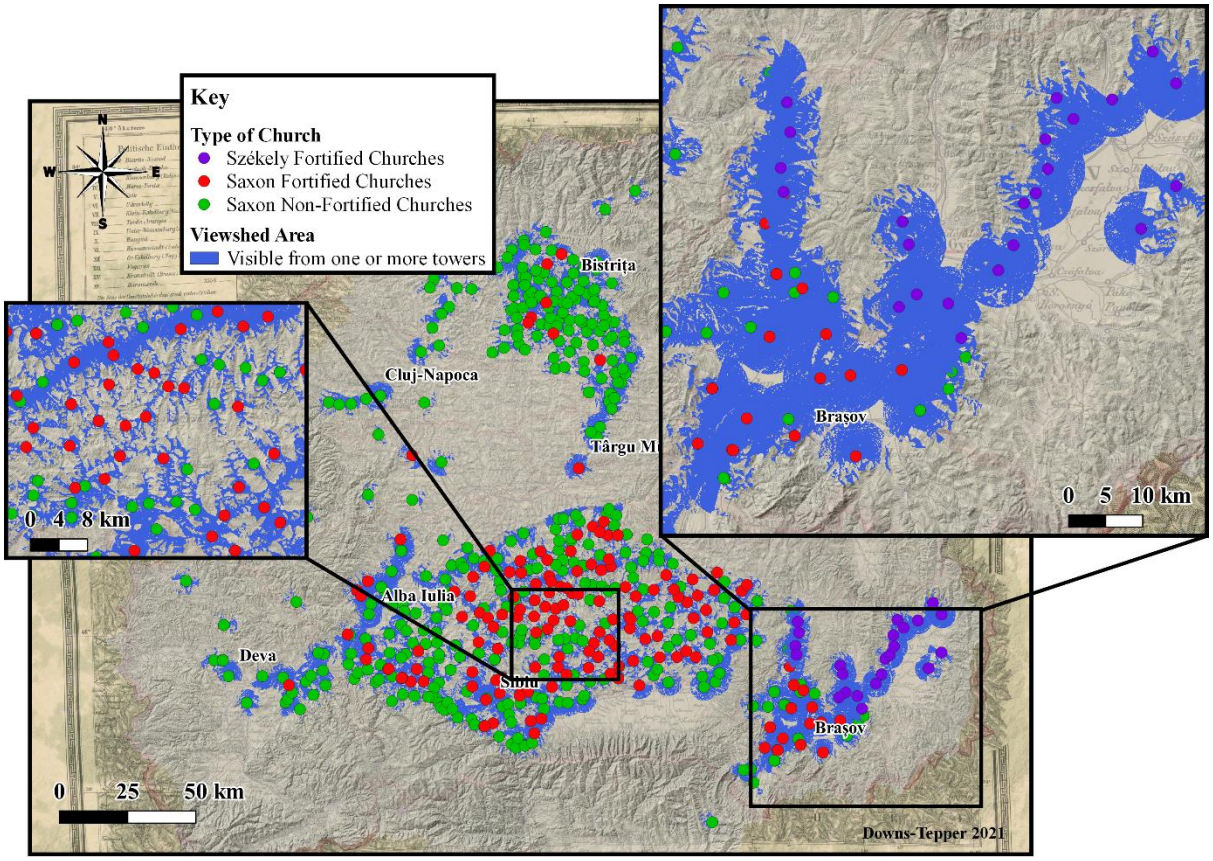


Figure 14: Viewshed Analysis of Fortified and Non-fortified Churches

Analysis indicates that the majority of fortified churches were not built to act as watchtowers. The possible exception is those in the Brașov area, though this is also a function of local topography. Nonetheless, this can be discounted as a main guiding principle.

Strategic Placement to Create a Barrier/Chain Against Incursions

Plenty of researchers refer to fortified churches as a network or chain, a system for preventing invasion. In some cases, this is intended as a rhetorical link – a system in the sense of a group, as opposed to implying connection. Others include more explicit mentions of connections and chains, suggesting linkages. This has been addressed already, to a degree: the demonstration

that they are not intended as watchtowers substantially undermines the foundation of this theory.

However, the depiction of fortified churches as a network is common enough that it merits more intensive analysis. Some churches, after all, had sizeable and overlapping viewsheds; particularly those in the area of Brașov. To that end, the map below assesses this network concept more directly: building an intervisibility network to show which churches were able to see one another. The straight lines are the line-of-sight connections between different churches. By looking at both the connections between fortified and non-fortified churches it is easy to see how infrequent intervisibility is in all cases, and more specifically how uncommon it is between fortified churches. The greatest level of intervisibility is among non-fortified churches in the Bistrița area, where connections are relatively common. This could also be a result of simple density and forced proximity, but the links are there.

Once again Brașov stands out. Despite the high density of fortified churches, and the relatively flat land, the vast majority are unable to see one another. Once again, the irregularities of Transylvania's foothills become visible: proximity is insufficient when topography interferes.

In fact, the lack of intervisibility seems to be an intentional choice. Any threat that made it to one fortified church, whether their attack was successful, would find the next fortified church obscured by land in between. This adds further credence to the idea of churches as a local refuge as opposed to a broader network or barrier.

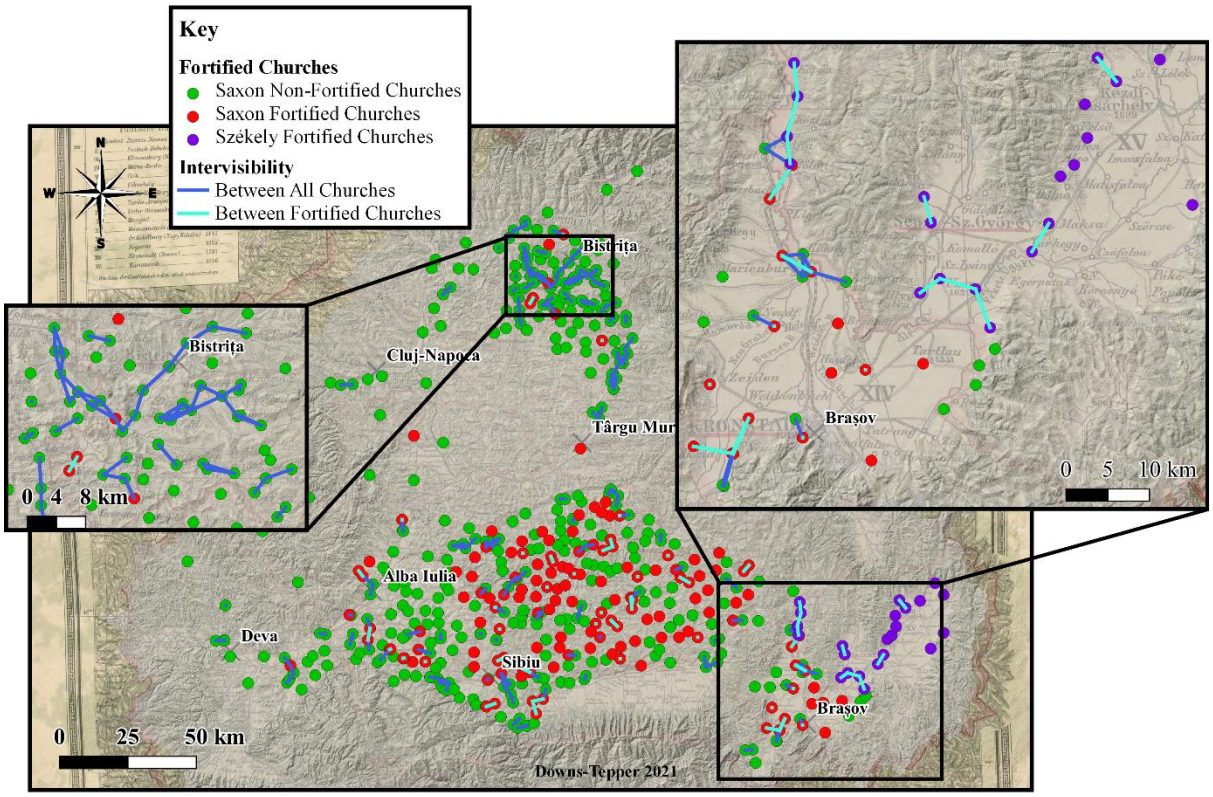


Figure 15: Intervisibility Analysis of Fortified and Non-fortified Churches

5.3 Towards A Unified Theory of Fortified Church Placement

A number of the theories analyzed above have a core weakness: they are complex answers to what may be a simple issue. This section applies two ideas:

- Occam's Razor: that given competing solutions, the simplest is the most likely.
- Tobler's First Law: Everything is related to everything else, but near things are more related than distant things.[202]

Renovation of Existing Churches

The vast majority of fortified churches were not constructed as fortified churches. They were instead built as standard churches and, over time, fortified.[203] The church itself was both an

[202] Tobler, "A Computer Movie Simulating Urban Growth in the Detroit Region," 234.
[203] Dan and Meilă, "German Church Architecture," 89.

investment and an integral part of the community; construction could not be delayed until the town was prepared to build it as a fortification. It is thus that a number of theories on fortified church placement, which address them more as fortifications, do not bear much scrutiny. Site selection for a standard fortification is a much more intentional process. These are, instead, churches. They are within settlements, not isolated like a mountain bastion.

This means that some of the research done on settlement patterns and town site selection in Transylvania, even those which do not focus on fortified churches, are often more accurate, in broad strokes, on explaining the locations of churches.

> The settlement patterns are almost the same: rows of narrow and deep plots with houses whose gables face the street, attached to each other and aligned along one or both sides of the public spaces – the streets and/or the settlement square… In Transylvania all the settlements of the Saxons have the church in the centre of the village (or settlement; even in towns)…[204]

The most likely explanations for the locations of Transylvania's fortified churches are the same concerns that impact the site selection for any other building: sufficient flat area, lack of obstacles. The results of testing a number of other theories above support this. Testing hills as a main location for fortified churches showed that they were usually built on flat ground, necessary if it is the center of a town. Foothills make sense as a construction location for towns, not just fortifications. The same factors – the protective nature of mountains balanced against the necessity of feasible construction space – impact a town as much as a fortified church.

Terrain Ruggedness

A further step in assessing these areas is checking the general ruggedness of each area.

The earlier analysis of hills as selected locations demonstrated that hills were not a priority, and the application of cruciform point sampling demonstrated this on a granular level. The map

[204] Machat, "Settlement Patterns of the German Colonisation in Transylvania /Romania," 37–38.

below shows how this applies much more broadly, showing the locations of fortified churches in relation to the ruggedness of land. Lighter colors here indicate less rugged areas. It is quite clear that both fortified and non-fortified churches, both Székelys and Saxon, are generally built-in areas that are less rugged. The immediate location is vital. As is clear from the insets here, even in those areas that are generally rugged, the specific spots chosen are those which are not. While this is an unsurprising result, it is important to clarify: standard architectural concerns seem to outweigh other issues.

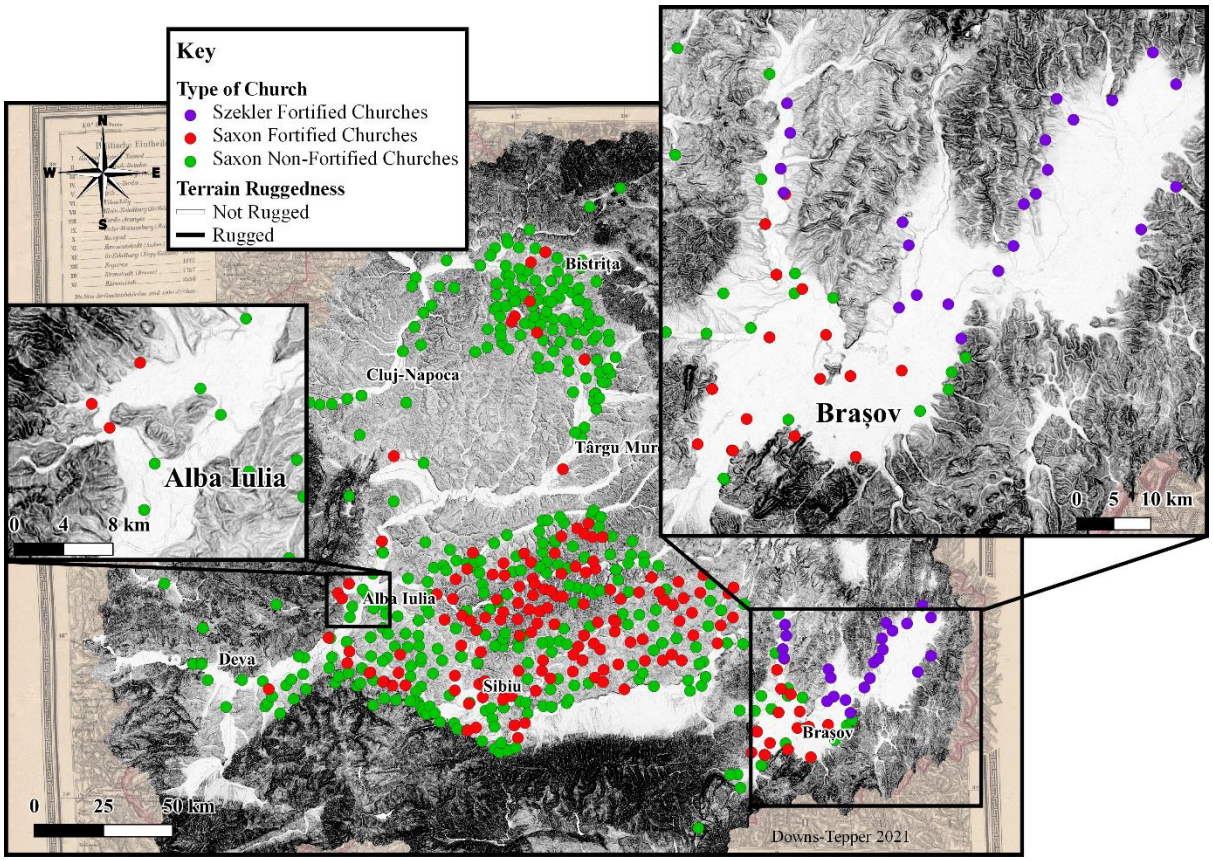


Figure 16: Ruggedness Analysis of Church Locations

To Fortify or Not to Fortify

The two facts – that standard terrain concerns are the most prevalent decisions-making factor on church location, and that most of these were built as churches and later fortified – do not invalidate the locational questions posed by this thesis. The decision to fortify a church or leave

it unfortified becomes the choice, as opposed to where to construct a new church. Given the type of permissions and privileges given to each town, this is likely a local choice in each case. As such, these earlier questions have weight – each village had to decide for themselves if the additional costs of fortifying made sense. These were not state-sponsored constructions; with collective ownership, it becomes an individual question to the community: is it worthwhile to pay for fortifications?

Chapter 6: Discussion and Conclusion

This chapter aims to briefly assess the broader issues with which this thesis interacts.

6.1 Digital Humanities for Humans Redux

The methods applied here, in some ways, diverge from some fundamental tenets of the humanities. This research has examined aggregates, averages, and collectives. It has treated different groups as homogenous monoliths: "The Saxons," "The Székelys," "The Hungarians." The 458 files this work has produced take up 19.6 gigabytes of storage, nestled within ten different layers of folders.

One of the explicit purposes of this thesis was to use digital humanities in a way that was consistent with a human-centric approach to history.

Perhaps more than anything else, this thesis has demonstrated the failure of singular explanations and the importance of individual community decisions. Each of the ten theories analyzed was offered as the explanation for why fortified churches, as a unit, were constructed across Transylvania. That one must find a hilltop, and that is the place to build a church. That the specter of the Mongols hung over every town, and the necessary response was to fortify the church. That the different fortified churches come together to form a boundary – so a new church would need to be placed somewhere to fill the chinks in this wall.

Instead, this thesis shows that choosing to fortify a church was a local decision. It was a decision made by the members of a community, weighing for themselves the costs of building and the benefits of protection. Was it a choice made out of fear of the Ottomans? In many cases, it certainly seems to have been. But it was not an amorphous "They" who was afraid; it was the residents of specific towns. Are these churches frequently in foothills? Again, in many

cases, yes. But this preference is not from someone behind the scenes: it is settlers picking a spot for a town that makes sense to them specifically. This thesis, which eschews data about individuals in favor of groups, fundamentally affirms the individual nature of choice that each fortified and non-fortified church represents.

This thesis demonstrates the utility of GIS methods for analyzing humanities issues. It showcases how these approaches can be used to dismantle singular explanations in favor of more nuanced understandings. And it illustrates how digital approaches can nonetheless respect the integrity of humans and human choice.

6.2 The Geospatial Rationale of Fortified Churches in Transylvania

This thesis applied novel GIS methods to test ten different explanations for the locations and density of fortified churches in Transylvania.

In many ways, this work was shackled by the research which has come before it. Almost every study of fortified churches begins with the Teutonic Knights, abandons them, discusses the Saxons, moves on to the horrors of the Mongols in 1241-42, and then goes from there to the Ottomans.

Despite what many have written, it seems a stretch to say that the construction of fortified churches was an answer to the Mongol invasion of 1241-1242, though it would be fair to say that the invasion precipitated the wider distribution of privileges allowing local fortresses and thus enabled their construction. There are much clearer signs that fear of the Ottomans drove construction, as well as tension with Wallachia, and, to a lesser degree, internal strife. The proximity of fortified churches to Teutonic fortifications suggests an early connection, and the requests for help later indicate continued military and architectural influence in later centuries.

The simultaneous development of fortified churches by both Saxons and Székelys indicates that they were not a uniquely Saxon phenomenon. In both cases they were part of the communal property of each town. They are both of and for the community, inextricably intertwined with people and place. However, these were privileged groups; they are citizen fortresses, not peasant fortresses.

There are a number of factors that influence locations selection. Fortified churches do not seem to be built upon hills with any particular frequency, though the construction of churches in foothills is clear. In both cases, this remains the case as long as sufficient area exists for the surrounding town. Most fortified churches have small viewsheds, indicating that they were designed more as a bunker than a watchtower. These small viewsheds contribute to the lack of intervisibility between them, indicating that they were not constructed to be an interconnected chain or barrier. Ultimately, the largest driving factor in the placement of fortified churches seems to be the simplest: that they are built where the ground is less rugged, and easier for construction. They were built first as churches in communities, and a later decision was made (or not) to fortify them.

What matters here is that these choices were primarily made on the local level. With the help of GIS and digital humanities, we are able to get a suggestion of the mindset of the inhabitants of medieval Transylvania. These tools offer us suggestions of trends, of reasoning, without any claim of iron-bound Laws of Planning. Some towns truly could have fortified their churches in the fifteenth century because of lingering fear of the Mongols; some did indeed prefer hills, as well. Many seem to be more afraid of the Ottomans than the Mongols, felt safer against the mountains, and were looking for a refuge large enough to store enough food for all the families in the area. As a town and a community, they looked out for their own, as best they knew how.

6.3 The Legacy of Fortified Churches

Searching online for Biertan pulls up some historical information but far more on tourism. One of the first: "Biertan – The Transylvanian Village with Only One Divorce in The Past 300 Years"[205] offers a bit of history, but really focuses on a single local legend: that "Couples seeking divorce were locked in the Prison Tower for two weeks. Sharing one set of cutlery and one bed, the couple had to make their final decision. In 400 years, only one couple decided afterwards to go through with the divorce!"[206]

Similarly, when searching for activities in the area, Biertan is lumped in with a number of other locales on "Ghost and Vampire Tours." The distinction does not seem particularly meaningful; rather, it is a more intrinsically appealing approach than pure history or culture. Of the seven fortified villages listed by UNESCO, the two largest attractions are Biertan and Prejmer; much like the former, the latter often ends up bundled in a "Haunted" tour of some variety. A useful gimmick for attracting tourists evolved into something that undermines the actual history and heritage of the area, as vampires, ghosts, and a grab-bag of myths obfuscate local history. Even some of the information in Romanian focuses on kitsch: one such offers a human-interest story about the family that has been smoking meat in Dârjiu for decades.[207]

These shortcomings are further exacerbated by the curious choices made involving the geographical spread of the UNESCO sites. None of the sites, including the chosen representative of Székely fortified churches, are within the area that has the greatest density of Székely fortifications.

[205] Ciortescu, "Biertan – The Transylvanian Village with Only One Divorce in the Past 300 Years."
[206] RomaniaTourism.com, "Biertan Fortified Church."
[207] Ciuc, "REPORTAJ."

Further, the selected sites do not come anywhere near the extent of Saxon settlement in Transylvania. While the density of fortified churches is lower in the northern areas of Saxon settlement, there are plenty of reasonable candidates.

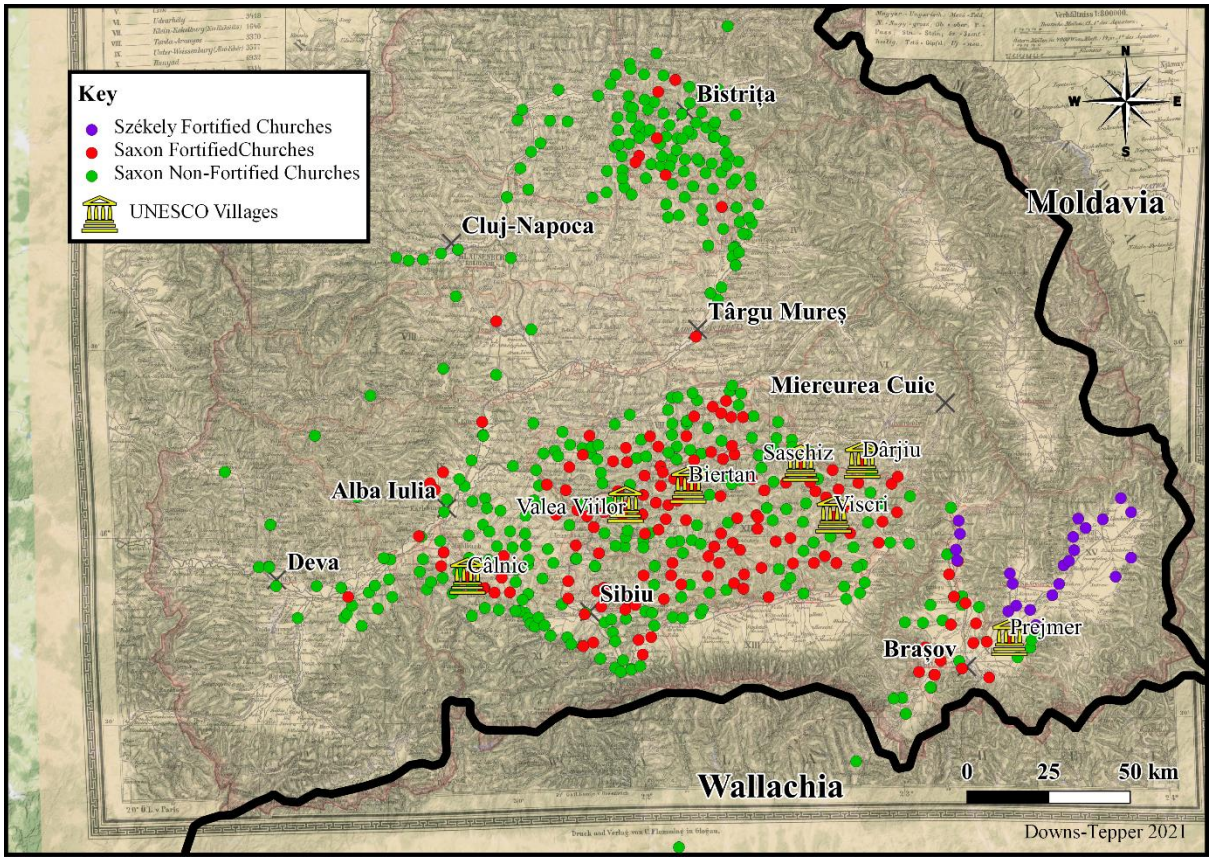


Figure 17: UNESCO Fortified Churches and Saxon and Székely Settlements

It would be easy to condemn tourists as fools, and those offering these tours and information as savvy businesspeople. Academics know better, after all.

Yet the popular discourse mirrors many of the flaws of the academic work on the topic. Violence is a necessary element when talking about fortified churches, perfect for Dark Tourism. Every paper, this one included, has an obligatory gory anecdote about the Mongols or the Ottomans. Blood and death – or undeath – is a far more appealing sales pitch than serene architecture. Why should it be a surprise that tourism has embraced the same route?

The name "Transylvanian Saxon" is almost synonymous with fortified churches, even among academics. An astonishing volume of literature does not even mention the Székelys. When they do come up, they are often depicted as derivative of the Saxons – inspired, not equal. Why should it be a surprise that they are given unequal consideration in the UNESCO sites? And why would it be a surprise that fortified churches are left to crumble, when the communities to which they are most closely tied are no longer around to care?

To be clear, they are crumbling.

At 9PM on February 19th, 2016, the bell in Rotbav tower rang only twice. Before it had rung a third time, the entire bell tower collapsed, taking out part of the main church as well. This was the second such collapse within a week. The first, in Roades, was already part of a planned reconstruction and rehabilitation project - one that was far too late.[208]

There are websites dedicated to the preservation of these churches, documenting the buildings as they crumble. One such elucidates the perceived issues explicitly:

> Medieval churches in danger! Like other historical monuments, for various reasons (disappearance of administrators, thin or poorly managed funding, lack of education in the field of heritage, general disinterest in culture and its economic and tourist capital, lack of information and vocal specialists, etc.), many medieval churches disappear before our eyes.[209]

The UNESCO sites are not immune to wear and tear; even the less famous of the listed "Villages with Fortified Churches in Transylvania" are among the buildings in need of repair. The outlook for monuments broadly is bleak, according to Romania's Culture Minister:

> The representatives of the Culture ministry convened in an emergency meeting to analyse the two collapse cases (…) According to the latest statistics of the ministry, over 600 architectural monuments are in collapse or on the verge of collapse right now, which means imminent risk of collapse for other monuments across the country.[210]

[208] Chiriac, "Collapsing Churches Cause Dismay in Romania."
[209] Medievistica.ro, "Biserici În Pericol!"
[210] Grigoras, "600 Architectural Monuments in Collapse or on the Verge of Collapse."

At their peak numbering around 200,000, the Saxon population in Romania has diminished substantially to roughly 5% of its earlier total. In theory, they and the Evangelical Church are responsible for maintaining many of these churches; an untenable feat, with a population so small. A church spokesperson made this explicit, noting that, "There are fewer than 12,000 Saxons left in Transylvania now, but we have to take care of some 250 places of worship, including some 160 fortified churches, some of which are 700 years old."[211]

Each community was the fortified church, and the church was the heart of the community. Physically, because that is how these towns were designed; socially as well, because that was a space for peace, for learning, far more than it was one for violence and fear.[212]

In the 1999 ICOMOS recommendation to create the "Villages with Fortified Churches in Transylvania" explains why these villages were selected:

> The Transylvanian villages with fortified churches provide a vivid picture of the cultural landscape of southern Transylvania. They are characterized by the specific land-use system, settlement pattern, and organization of the family farmstead units preserved since the late Middle Ages, dominated by their fortified churches, which illustrate building periods from the 13th to 16th centuries.[213]

The full document includes more of the broader history and context, but this is the blurb that is highlighted, the first one that appears on the UNESCO website for this location.[214]

No Mongols. No Ottomans. No Saxons. Just communities and buildings as a defining characteristic of a time and a place. It is not a question of upending current understandings of fortified churches, changing paradigms, or anything of the sort. It is more that we, on both the popular culture and academic side, want them to be more than they are.

[211] Chiriac, "Collapsing Churches Cause Dismay in Romania."
[212] Fabritius-Dancu, *Sächsische Kirchenburgen Aus Siebenbürgen.*, 14.
[213] ICOMOS, "Villages in Transylvania (Romania)."
[214] UNESCO, "Villages with Fortified Churches in Transylvania."

Originally built as community churches, their immediate communities are no longer able to ensure their upkeep. With fuller understanding of the rich nuanced heritage of the fortified churches, they may draw more interest and support from broader Romanian and international communities.

6.4 The Next Project

This thesis has endeavored to showcase the viability of GIS methods as a strategy for addressing and testing established historical notions. It has demonstrated how effective these approaches are when handling disparate groups and diverging explanations of phenomenon (in this case site selection), particularly in the absence of abundant primary sources.

Most specifically it showed how these methods work perfectly with the study of fortified churches.

Transylvania has one of the most striking groups of fortified churches in Europe, but it is not the only one. The next step in this project is to push the boundaries further, to look at other groups of fortified churches. An easy starting point are those in other German-speaking areas, for comparison to those of the Saxons. And then perhaps those in Slovenia, which were apparently much better armed, and those in Languedoc, which were placed to deal with pirate raids.[215] Some mapping projects have been done on each of these groups, but no rigorous spatial analysis, and certainly no comparative rigorous spatial analysis.

There are a number of other methods that would be interesting to examine for the fortified churches in Transylvania but were of no use in addressing current theories on fortified church placement. Better data of Szekeley churches and settlements would add new dimensions to the

[215] Lazar, "The Slovenian Lands as the Armed Frontier of the Holy Roman Empire," 64; Bonde, *Fortress-Churches of Languedoc Architecture, Religion and Conflict in the High Middle Ages.*, 12.

next round of this work, as would information on fortified manors, estates, and so on – more research on other forms of local and community fortifications beyond churches. It would be interesting to see what the influence of roads is on these locations: whether it makes more sense to build on a conduit, for easy trade and population flow, or on a moderately small road, for better protection. Were remnants of Roman roads enough to dictate some settlement locations? Were actual watchtowers built where they truly had the best view or was that balanced against accessibility or other factors? There are some maps that could be digitized to start to answer that question. Is enough planning going into the original church location that they are building somewhere with accessible groundwater? A reconstructed historical water table would be able to shed some light on the subject. It would also be enriching to work in other fortifications, manors, and so on, to see if there was inter-town coordination or if there are redundant areas of coverage. And finally, to incorporate some more rigorous statistical testing of each hypothesis.

This thesis proposed ten different explanations and addressed them all and then some. And now, in its final page, it suggests a few more years of work to do.

Bibliography

Albu, Ioan. *Inschriften der Stadt Hermannstadt aus dem Mittelalter und der Frühen Neuzeit*. Hermannstadt; Heidelberg: Hora ; Arbeitskreis für Siebenbürgische Landeskunde, 2002.

Alhasanat, Mahmoud Bashir, Shahid Kabir, Wan Muhd Aminuddin Wan Hussin, and Erin Addison. "Spatial Analysis of a Historical Phenomenon: Using GIS to Demonstrate the Strategic Placement of Umayyad Desert Palaces." *GeoJournal* 77, no. 3 (June 2012): 343–59. https://doi.org/10.1007/s10708-010-9392-4.

Altmann, Wilhelm. *Die Urkunden Kaiser Sigmunds, 1410-1437*. Place of publication not identified: Nabu Press, 2012.

ArhIn. "Arhin Database." Accessed May 16, 2021. http://www.arhin.ro/arhin_public/index_public.php.

Barta, Gábor. *Kurze Geschichte Siebenbürgens*. Akadémiai Kiadó, 1990.

Baud, Michiel, and Willem Van Schendel. "Toward a Comparative History of Borderlands." *Journal of World History* 8, no. 2 (1997): 211–42.

Bencze, Ünige. "Similarities and Differences of a Benedictine and a Cistercian Abbey as Reflected in the Landscape. Beginnings of a Comparative Approach." *Ecclesiastical Landscapes in Medieval Europe. An Archaeological Perspective*. Accessed May 16, 2021. https://www.academia.edu/43751962/Similarities_and_Differences_of_a_Benedictine_and_a_Cistercian_Abbey_As_Reflected_in_the_Landscape_Beginnings_of_a_Comparative_Approach.

Benkő, Elek. "A Székely Irás Középkori és Kora újkori Emlékei. Régészeti és Történeti Megjegyzések." *Korunk*, no. 08 (2014): 65–74.

———. "Research Proposal: The Szekler Land in the Middle Ages." NKFI-EPR. Accessed May 29, 2021. http://nyilvanos.otka-palyazat.hu/index.php?menuid=930&num=106508&lang=EN.

Berend, Nora. *At the Gate of Christendom: Jews, Muslims and "Pagans" in Medieval Hungary, c.1000 – c.1300*. Cambridge Studies in Medieval Life and Thought: Fourth Series. Cambridge: Cambridge University Press, 2001. https://doi.org/10.1017/CBO9780511523106.

Berry, James. "Transylvania and Its Relations to Ancient Dacia and Modern Rumania." *The Geographical Journal* 53, no. 3 (1919): 129–46. https://doi.org/10.2307/1779261.

Binder, Paul. "Ethnische Verschiebungen im Mittelalterlichen Siebenbürgen." *Zeitschrift für Siebenbürgische Landeskunde* XVIII, no. 2 (1995): 142–46.

Bonde, Sheila. *Fortress-Churches of Languedoc Architecture, Religion and Conflict in the High Middle Ages*. Cambridge Univ Pr, 2009.

Borcoman, Mariana. "Community Structures - Expressions of the Transylvanian Saxon Identity." In *Tradition and Reform: Social Reconstruction of Europe*, 1:71–74. Bucharest: Medimond International Proceedings, 2013.

Brandstätter, A., B. Egyed, B. Zimmermann, N. Duftner, Z. Padar, and W. Parson. "Migration Rates and Genetic Structure of Two Hungarian Ethnic Groups in Transylvania, Romania." *Annals of Human Genetics* 71, no. 6 (2007): 791–803. https://doi.org/10.1111/j.1469-1809.2007.00371.x.

Brindenbaugh, Carl. "AHA Presidential Address," 1962. https://www.historians.org/about-aha-and-membership/aha-history-and-archives/presidential-addresses/carl-bridenbaugh.

Britannica. “Transylvanian Saxons.” Encyclopedia Britannica. Accessed March 31, 2021. https://www.britannica.com/topic/Transylvanian-Saxons.

Brusanowski, Paul. “The Romanian Medieval Principalities Between Orient and Occident: Geopolitical, Ecclesiastical and Social Consequences.” *Jurnalul Libertății de Conștiință* 7, no. 1 (2019): 405–19.

Chiriac, Marian. “Collapsing Churches Cause Dismay in Romania.” *Balkan Insight*, February 24, 2016. https://balkaninsight.com/2016/02/24/romania-plans-to-save-its-heritage-02-23-2016/.

Ciortescu, Ramona. “Biertan – The Transylvanian Village with Only One Divorce in the Past 300 Years.” *The Romania Journal* (blog), January 28, 2015. https://www.romaniajournal.ro/travel/biertan-the-transylvanian-village-with-only-one-divorce-in-the-past-300-years/.

Ciuc, Miercurea. “Reportaj: ‘Cetatea Slăninilor.’” Mediafax.ro, February 7, 2014. https://www.mediafax.ro/life-inedit/reportaj-cetatea-slaninilor-de-la-darjiu-care-hraneste-o-comunitate-este-unicat-in-patrimoniul-mondial-foto-12875559.

Ciuhu (Dobre), Ana-Maria, Valentina Vasile, Cristina Boboc, and Simona Ghita. “Cultural Tourism in Central Region of Romania,” May 17, 2019.

Colcer, Alexandra-Maria, and Ioan-Aurel Irimuș. “The Role of Landforms in the Location of Roman Fortifications in Northern Transylvania (Tihău-Cășeiu Area) and the Production of Place and Regional Identity.” *Territorial Identity and Development* 6, no. 1 (December 10, 2020): 5–21. https://doi.org/10.23740/TID120211.

Coman, Marian. “A Game of Rhetoric: Transylvanian Regional Identities in Medieval Wallachian Sources.” *Annales Universitatis Apulensis Series Historica* 16, no. 2 (2012): 87–104.

———. “From an Open to a Closed Frontier: The Wallachian-Moldavian Frontier from c. 1350 to c.1450.” *Annual of Medieval Studies at CEU* 9 (2003): 127–54.

Crîngaci-Ţiplic, Maria-Emilia. “Weapons and Military Equipment Found in the German Settlement Area from Southern Transylvania (the 12th – 13th Centuries): Some Aspects and Perspectives.” *Studia Universitatis Cibiniensis. Series Historica*, no. VIII sp (2011): 73–104.

Cristini, V., L. García-Soriano, and F. Vegas. “Villages with Fortified Churches in Transylvania: Architecture, History and Intangible Culture.” In *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, XLIV-M-1–2020:249–54. Gottingen, Germany: Copernicus GmbH, 2020. http://dx.doi.org/10.5194/isprs-archives-XLIV-M-1-2020-249-2020.

Crosse, Andrew F. *Round About the Carpathians*, n.d.

Dan, Maria Bostenaru, and Alexandra Meilă. “German Church Architecture.” *Journal of Urban and Landscape Planning*, no. 3 (2018): 87–98.

Darnton, Robert. *The Great Cat Massacre: And Other Episodes in French Cultural History*. New York, NY: BasicBooks, 2010.

Dincă, Adinel C. “Medieval Literacy in Transylvania: Selective Evidence from Parish Churches.” *Transylvanian Review* XXIV, no. 01 (2015): 109–21.

———. “The Medieval Book in Early Modern Transylvania: Preliminary Assessments.” *Studia Universitatis Babes-Bolyai - Historia* 62, no. 1 (2017): 23–34.

Dobrei, Florin. “The Expansion of the Hungarians in the South-West of Transylvania in the 10th-13th Centuries: Historical Reference Points.” *Astra Salvensis - Revista de Istorie Si Cultura* IV, no. 8 (2016): 31–44.

Fabini. “Monumenta Verlag.” Hefte der Reihe „ Baudenkmäler in Siebenbürgen“. Accessed February 2, 2021. http://www.abfabini.ro/opencms/export/fabini/verlag/heft.html.

Fabini, Hermann. *Atlas der siebenbürgisch-sächsischen Kirchenburgen und Dorfkirchen*, 1998.
Fabini, Hermann, and Alida Fabini. *Kirchenburgen in Siebenbürgen: Abbild Und Selbstdarstellung Siebenbürgisch-Sächsischer Dorfgemeinschaften*, n.d.
Fabritius-Dancu, Juliana. "Die Kirchenburg - Identifikationssymbol der Siebenbürger Sachsen." *Zeitschrift für Siebenbürgische Landeskunde* VI, no. 1 (1983): 30–34.
———. *Sächsische Kirchenburgen Aus Siebenbürgen.* 1. Aufl. edition. Sibiu: Revista Transilvaia zeitschrift Transilvania, 1980.
Fischer, Susanne. "Neue Beobachtungen an der Wehrkirche von Birthälm." *Zeitschrift für Siebenbürgische Landeskunde* XXII, no. 2 (1999): 233–51.
Flanders, Julia. "Time, Labor, and 'Alternate Careers' in Digital Humanities Knowledge Work." In *Debates in the Digital Humanities*, 2012. https://dhdebates.gc.cuny.edu/read/untitled-88c11800-9446-469b-a3be-3fdb36bfbd1e/section/769e1bc9-25c1-49c0-89ed-8580290b7695#ch17.
Fletcher, James. "Spurious Correlations: Margarine Linked to Divorce?" *BBC News*, May 25, 2014, sec. Magazine. https://www.bbc.com/news/magazine-27537142.
Fodor, Laura-Adina. "The Tatars in the Collective Memory of the Szekely Inhabitants of the Sic Settlement, Transylvania." *Studia et Documenta Turcologica* 1 (2013). https://www.academia.edu/6846191/Studia_et_Documenta_Turcologica_1_2013.
Fodor, Pal, Terez Oborni, and Geza Pal. "Cross and Crescent: History." In *Encyclopedia Humana Hungarica*. 05. Budapest, 1999.
Franz Zimmermann, Carl Warner. *Urkundenbuch zur Geschichte der Deutschen in Siebenbuürgen*. In Kommission bei FranzMichaelis, 1892. http://archive.org/details/urkundenbuchzur00mlgoog.
Grigoras, Alina. "600 Architectural Monuments in Collapse or on the Verge of Collapse." *The Romania Journal*, February 22, 2016, sec. SOCIETY & PEOPLE. https://www.romaniajournal.ro/society-people/600-architectural-monuments-in-collapse-or-on-the-verge-of-collapse/.
Gündisch, Konrad. *Siebenbürgen und die Siebenbürger Sachsen*. 2. Aufl., (Sonderproduktion). München: Langen Müller, 2005.
Hämäläinen, Pekka, and Samuel Truett. "On Borderlands." *Journal of American History* 98, no. 2 (September 1, 2011): 338–61. https://doi.org/10.1093/jahist/jar259.
Hegyi, Géza. "The Relation of Sălaj with Transylvania in the Middle Ages." *Annales Univesitatis Apulensis* 16, no. II (2012): 59–86.
Hendrickson, Eric. "A Reinterpretation of Prince Vlad the Impaler." M.A., University of Wyoming. Accessed May 18, 2021. https://www.proquest.com/docview/304540212/citation/241290F6A6AA45A1PQ/1.
Horváth, Attila. "The Private Law of the Principality of Transylvania (1540–1690)." *Acta Universitatis Sapientiae, Legal Studies* 9, no. 2 (2020): 269–306.
ICOMOS. "Villages in Transylvania (Romania)," 1999.
Ignat, Cosmin. "Romanesque Ecclesiastical Architecture on the Periphery of the Catholic World: Round Churches and Basilicas in Transylvania." *Studia Universitatis Cibiniensis. Series Historica*, no. XIII (2016): 169–99.
Ispas, Ana, Elena-Nicoleta Untaru, and Steluta Iesanu. "Identifying A Representative Souvenir For A Romaniantourist Destination: The Case Of Rupea." *Annales Universitatis Apulensis Series Oeconomica* 2, no. 16 (December 31, 2014): 193–202. https://doi.org/10.29302/oeconomica.2014.16.2.17.
Jack Gieseking, Jen. "Where Are We? The Method of Mapping with GIS in Digital Humanities." *American Quarterly* 70, no. 3 (2018): 641–48. https://doi.org/10.1353/aq.2018.0047.

Kondor, Katherine, and Mark Littler. “Invented Nostalgia: The Search for Identity Among the Hungarian Far-Right.” In *Nostalgia and Hope: Intersections between Politics of Culture, Welfare, and Migration in Europe*, edited by Ov Cristian Norocel, Anders Hellström, and Martin Bak Jørgensen, 119–34. IMISCOE Research Series. Cham: Springer International Publishing, 2020. https://doi.org/10.1007/978-3-030-41694-2_8.

Kousser, J. Morgan. “Review of: Historian’s Guide to Statistics: Quantitative Analysis and Historical Research.” *Journal of the American Statistical Association* 67, no. 338 (June 1972): 493–493.

Kovács, András W. “The Participation of the Medieval Transylvanian Counties in Tax Collection.” *The Hungarian Historical Review* 7, no. 4 (2018): 671–93.

Laszlovszky, József. “Review: The Szekler Land in the Middle Ages I–II.” *Hungarian Archaeology*, Summer 2014.

Laszlovszky, József, Stephen Pow, Beatrix F. Romhányi, Laszlo Ferenczi, and Zsolt Pinke. “Contextualizing the Mongol Invasion of Hungary in 1241-42: Short-and Long-Term Perspectives.” *Hungarian Historical Review* 7, no. 3 (2018): 419–50.

Laszlovszky, Jozsef, Zoltan Soos, and Central European University Dept of Medieval Studies. “Historical Monuments of the Teutonic Order in Transylvania.” In *The Crusades and the Military Orders: Expanding the Frontiers of Medieval Latin Christianity*. Central European University Press, 2001.

Lazar, Tomaž. “The Slovenian Lands as the Armed Frontier of the Holy Roman Empire.” *Fasciculi Archaeologiae Historicae* 30 (2017): 59–72. https://doi.org/10.23858/FAH30.2017.006.

Lee, Joo-Yup. “The Historical Meaning of the Term Turk and the Nature of the Turkic Identity of the Chinggisid and Timurid Elites in Post-Mongol Central Asia.” *Central Asiatic Journal* 59, no. 1–2 (2016): 101–32. https://doi.org/10.13173/centasiaj.59.1-2.0101.

Machat, Christoph. “Settlement Patterns of the German Colonisation in Transylvania /Romania.” *ICOMOS – Hefte des Deutschen Nationalkomitees* 67 (2018): 37–41. https://doi.org/10.11588/ih.2018.0.74460.

———. “Zunftwesen und Baukunst Siebenbürgens im Mittelalter.” *Zeitschrift für Siebenbürgische Landeskunde* I, no. 2 (1978): 130–37.

Madgearu, Sabina Stanila. “The Figuretive Language of Holy Defences in Transylvania - Fortified Churches of the Fourteenth to Sixteenth Centuries.” Accessed May 16, 2021. https://www.academia.edu/30251335/The_Figuretive_Language_of_Holy_Defences_in_Transylvania_Fortified_Churches_of_the_Fourteenth_to_Sixteenth_Centuries.

Makkai, László. *History of Transylvania*. Edited by András Mócsy, Zoltán Szász, and Bennett Kovrig. Translated by Péter Szaffkó. 3 vols. New York: Columbia University Press, 2001.

Medievistica.ro. “Biserici În Pericol!” Accessed March 31, 2021. http://www.biserici.medievistica.ro/texte/biserici-in-pericol/biserici-in-pericol.html.

Minic, Natalija. “Development of ‘Dark’ Tourism in the Contemporary Society.” *Journal of the Geographical Institute Jovan Cvijic, SASA* 62 (2012): 81–103. https://doi.org/10.2298/IJGI1203081M.

Mitchell, Russell Anthony. “Emperor Sigismund and Eastern Europe: Political and Religious Conflicts.” M.A., The University of Texas at Arlington. Accessed May 24, 2021. https://www.proquest.com/docview/304317150/abstract/F6CA91ACD8EA4D60PQ/1.

Morgan, David. “Examining Transylvanian Saxon Fortified Churches from the 13th to the 16th Centuries: The History and Archaeology of the Saxon Rural Church in Romania: Roles and Identities.” University of Leicester, 2008.

Munteanu, Petre Beşliu. “Die Kirche des mittelalterlichen Eppeschdorf.” *Zeitschrift für Siebenbürgische Landeskunde* XIX, no. 1 (1996): 1–11.
Neacșu, Monica. “Slimnic Castle and Its Position in the Development of Military Architecture in Medieval Transylvania.” *Annual of Medieval Studies at CEU* 7 (2001): 65–95.
Nicolescu, Adrian. “Gothic Church Architecture in Romania.” *Romanian Journal of Artistic Creativity*, no. 2 (2013): 16–26.
Niedermaier, Paul. “Sieben Thesen zur Ansiedlung der Siebenbürger Sachsen.” *Forschungen zur Volks- und Landeskunde*, no. 53 (2010): 165–87.
Niemiec, Dariusz. “13th-Century Fortifications of Kraków.” *Recherches Archéologiques. Nouvelle Serie* 10 (2019). https://doi.org/10.33547/RechACrac.NS10.06.
Pascu, Marioara. “Saxon Settlements in Brasov-a Declining Cultural Landscape?,” June 13, 2016.
Pattee, A., A. Volkmann, and M. Untermann. “Integrative GIS-Based Investigation of the Medieval Fortress Architecture of Pfalz, Incorporating Photogrammetry, Geoinformatics and Landscape Analysis.” *Archeologia e Calcolatori* 28, no. 2 (2017): 521–30.
Pietschmann, Dieter-Robert. *“Church Castles”. A Photodokumentation of the Federal State of Baden-Württemberg and Selected Districts of the Surrounding Federal States of Bayern, Hessen, Rheinland-Pfalz and Thüringen (within the Years 2006 – 2012).* Heidelberg University Library, 2012. https://doi.org/10.11588/ARTDOK.00002144.
Ponticelli, Giacomo. “The View from ‘Pre-Crusader’ Shawbak: Towards a First Contextualization through GIS Visibility and Spatial Analyses.” *Studies in Ancient Art and Civilisation* 24 (December 1, 2020): 153–68. https://doi.org/10.12797/SAAC.24.2020.24.07.
Pop, Ioan-Aurel. “Religiones and Nationes in Transylvania During the 16th Century: Between Acceptance and Exculsion.” *Journal for the Study of Religions and Ideologies* 12, no. 34 (2013): 209–36.
———. “Some Observations Concerning the Medieval History of Transylvania.” *Bulletin of the Center for Transylvanian Studies* 1, no. 2 (1992): 9–23.
———. “Testimonies on the Ethno-Confessional Structure of Medieval Transylvania and Hungary (9th-14th Centuries).” *Transylvanian Review* 19, no. 1 (2010): 9–41.
———. “The Discrimination of Romanians in Transylvania in the 16th Century: Considerations on the Concept of Nation.” *Transylvanian Review* XXVI, no. Suppl 2 (2017): 15–26.
Predovnik, Katarina, ed. *The Castle as Social Space*. Castrum Bene 12. Ljubljana: Univerza v Ljubljani, Filozofska Fakulteta, 2014.
Prioteasa, Elena Dana. *Medieval Wall Paintings in Transylvanian Orthodox Churches: Iconographic Subjects in Historical Context*. București : Cluj-Napoca: Editura Academiei Române ; Editura Mega, 2016.
Prox, Alfred. “Szekler Kirchenburgen.” *Zeitschrift für Siebenbürgische Landeskunde* IX, no. 1 (1986): 26–30.
Radvan, Laurentiu. “The ‘Central European Urban Model’ and the Emergence of Towns in Wallachia from the Fourteenth to the Sixteenth Century.” *East Central Europe* 37 (April 1, 2010): 1–30. https://doi.org/10.1163/187633010X488281.
Röhle, Theo. “‘A Sedate, Hesitant, Circumspect, Little Behavioral Revolution’ : The Case of New Political History 1957–1970.” In *Digital History – a Field, a Method or Just a Phase?*, 135. Gothenburg, Sweden, 2019. http://urn.kb.se/resolve?urn=urn:nbn:se:kau:diva-75783.
RomaniaTourism.com. “Biertan Fortified Church.” Accessed March 31, 2021. http://romaniatourism.com/castles-fortresses-romania-biertan-fortified-church.html.

Romhányi, Beatrix F. “Church and Salt. Monasteries and Salt in the Medieval Kingdom of Hungary (11th–13th Centuries).” *Annales Universitatis Apulensis Series Historica* 19, no. Special (2015): 147–60.

———. “The Banat Region as Reflected in the Mirror of the Changing Ecclesiastic Network.” *BANATICA* 2, no. 29 (2019): 17–29.

Romhányi, Beatrix F., and József Laszlovszky. “A Tatárjárás Pusztítása És a Templomok.” *Várak Kastélyok Templomok, Történelmi És Örökségturisztikai Folyóirat* 15, no. 2 (2019): 32–35.

Ronay, Gabriel, and Tim Gaydos. *The Truth About Dracula.* New York: Day Books, 1979.

Rusu, Adrian. “A Critical Approach to ‘Peasant Fortifications’ in Medieval Transylvania.” In *The Castle as Social Space*, 1st ed., 189–98. Castrum Bene 12. Ljubljana, 2014.

Sălăgean, Tudor. *Transylvania in the Second Half of the Thirteenth Century: The Rise of the Congregational System*. *Transylvania in the Second Half of the Thirteenth Century*. Brill, 2016. https://brill.com/view/title/22849.

Senchyne, Jonathan. “Between Knowledge and Metaknowledge:: Shifting Disciplinary Borders in Digital Humanities and Library and Information Studies.” In *Debates in the Digital Humanities 2016*, edited by Matthew K. Gold and Lauren F. Klein, 368–76. University of Minnesota Press, 2016. https://doi.org/10.5749/j.ctt1cn6thb.33.

Snider, Jason. “A Military Analysis of the Iron Gates Castle Chain Entrusted to the Teutonic Order (1429-c. 1436).” *Annual of Medieval Studies at CEU* 26 (2020): 161–76.

Sófalvi András. “A Barcaság Határai és 13. Század Eleji Településképe a Német Lovagrend Adományleveleiben.” In *Genius loci. Laszlovszky 60*, 60–63. Budapest: Archaeolingua, 2018. http://real.mtak.hu/99727/.

Spalatensis, Thomas. *Historia Salonitanorum Atque Spalatinorum Pontificum*. Translated by Damir Karbić, Mirjana Matijević Sokol, and James Ross Sweeney. Central European University Press, 2006.

Stoica, Liviu, Gheorghe Stoica, and Gabriela Popa. *Following the Traces of the Teutonic Knights in Transylvania*. 1st edition. Liviu Stoica, Gheorghe Stoica, Gabriela Popa, 2012.

Stollberg. *Kirchenburgen in Siebenbürgen*. Köln, 2007.

Strautiu, Eugen. “The Traditional Model of Human Security Ot Transylvanian Saxons.” *Land Forces Academy Review* 17, no. 2 (2012): 143–49.

Streitfeld, Theobald. “Mittelalterliche Vorhöhenburgen im Südwestlichen Siebenbürgen.” *Zeitschrift für Siebenbürgische Landeskunde* III, no. 2 (1980): 122–26.

Stroe, Andreea. “The Consumption Decision in Rural Tourism and Models of Rural Tourism in South Transylvania.” *LUMEN Proceedings* 13 (August 11, 2020): 377–86. https://doi.org/10.18662/lumproc/ncoe4.0.2020/34.

Sunyer, John. “Big Data Meets the Bard.” *Financial Times*, 2013. https://www.ft.com/content/fb67c556-d36e-11e2-b3ff-00144feab7de.

Sweeney, James Ross. “Innocent III, Hungary and the Bulgarian Coronation: A Study in Medieval Papal Diplomacy.” *Church History* 42, no. 3 (1973): 320–34. https://doi.org/10.2307/3164389.

Szabó, János B. “‘Splendid Isolation’? The Military Cooperation of the Principality of Transylvania with the Ottoman Empire (1571–1688) in the Mirror of the Hungarian Historiography’s Dilemmas.” *The European Tributary States of the Ottoman Empire in the Sixteenth and Seventeenth Centuries*, January 1, 2013, 301–39. https://doi.org/10.1163/9789004254404_013.

Tatár, Sarolta. “A Transylvanian Folk Legend about the Tatars,” January 21, 2010.

Teutsch, Georg Daniel. *Geschichte der Siebenbürger Sachsen: für das sächsische Volk*. S. Hirzel, 1874.

Ţiplic, Maria Crîngaci. “The Rise of the Parish System in Transylvania as Reflected by the Archaeological Discoveries.” In *Ecclesiastical Landscapes in Medieval Europe: An Archaeological Perspective*, edited by Maria Crîngaci Ţiplic, José C. Sánchez-Pardo, and Emmet H. Marron, 79–93. Archaeopress, 2020. https://doi.org/10.2307/j.ctv15vwjrk.9.

Tiplic, Maria Emilia, and Ioan Marian Tiplic. “The Archaeology of Romanesque Churches in Transylvania (11th–13th Centuries).” In *Medieval Changing Landscape. Settlements, Monasteries and Fortifications*. ArhIn: Archaeology, Architecture and Informatics. 1. Accessed February 6, 2021. https://www.academia.edu/31299671/Archaeology_Architecture_and_Informatics_ArhIn_I_Medieval_Changing_Landscape_Settlements_Monasteries_and_Fortifications.

Tobler, W. R. “A Computer Movie Simulating Urban Growth in the Detroit Region.” *Economic Geography* 46 (1970): 234–40. https://doi.org/10.2307/143141.

Topouzi, S, and A Sarris. “Ancient Mantineia’s Defence Network Reconsidered Through a GIS Approach,” n.d., 8.

Tosh, John, and Sean Lang. *The Pursuit of History: Aims, Methods and New Directions in the Study of Modern History*. Pearson Education, 2006.

Tóth, Boglárka Márta, Istvan Botar, and András Grynaeus. “Dendrochronological Analyses and Architectural History: Observations on the Unitarian Church Ensemble in Dârjiu.” *Transsylvania Nostra* VII, no. 26 (2013): 1–27.

UNESCO. “Villages with Fortified Churches in Transylvania.” UNESCO World Heritage Centre. Accessed April 12, 2021. https://whc.unesco.org/en/list/596/.

varak.hu. “Monument Coordinate List.” Accessed May 16, 2021. https://varak.hu/othertopics/gps-list.

Viktor Papdi-Pécskői. “Korszerűsítették Engel Pál középkori Magyarországról készített digitális atlaszát,” February 9, 2021. https://index.hu/techtud/tortenelem/2021/02/09/korszerusitettek-engel-pal-kozepkori-magyarorszagrol-keszitett-digitalis-atlaszat/.

Weber, Eugen. “An Introduction to the Study of Saxon Settlement in Transylvania During the Middle Ages.” *Mediaeval Studies* 18 (January 1, 1956): 50–60. https://doi.org/10.1484/J.MS.2.306601.

Whelan, Mark. “Sigismund of Luxemburg and the Imperial Response to the Ottoman Turkish Threat, c. 1410-1437.” Royal Holloway, University of London, 2018. https://pure.royalholloway.ac.uk/portal/en/publications/sigismund-of-luxemburg-and-the-imperial-response-to-the-ottoman-turkish-threat-c-14101437(9792dbca-d792-446f-b03a-757a81b6c560).html.

Zachariadou, Elizabeth. “Ottoman Diplomacy and the Danube Frontier (1420-1424).” *Harvard Ukrainian Studies* 7 (1983): 680–90.

Zarifis, Nicholas, and Despina Brokou. “GIS and Space Analysis in the Study of the Hospitallers’ Fortifications in the Dodecanese,” n.d., 5.

Zimmermann, Harald. “850 Jahre Siebenbürger Sachsen.” *Zeitschrift für Siebenbürgische Landeskunde* XV, no. 1 (1992): 1–10.

———. “Das ‘Andreanum’ und seine Probleme: Alte und Neue Überlegungen.” *Forschungen zur Volks- und Landeskunde*, no. 56 (2013): 9–50.

Zriba, Hassen. “The Role of Digital Humanities in the Democratization of Knowledge.” *Journal of Humanities and Social Sciences Studies* 1, no. 4 (July 31, 2019): 82–92.

Appendix

Should any other researchers be interested in any of the databases or spreadsheets used in this project, please feel free to contact me. Primary table layout:

Fabini Entry #	Romanian Name	Latitude	Longitude	church style	Fortified?
1	Apos	46.031354	24.5555967	Gothic Hall	
2	Tapu	46.0723789	24.0883181	Gothic Hall	Fortified
3	Adamus	46.3034945	24.2350807	Gothic Hall	