Vernacular Buildings and Urban Social Practice

Wood and people in early modern Swedish society

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Cover image: 'View of Gottenburg' the great harbour canal by Elias Martin c.1787. Gothenburg City Museum.

To my children, Anton and Embla, and my parents Eva-Britt and Ivar who have stood by me through thick and thin with encouragement and support. Thank you for believing in me, I love you!

Eternally yours, Andrine

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Contents

List of Figures

5.4

Chapter 6

6.1

6.2

Chapter 7

Chapter 8

Appendix 3b. Archaeological evidence of log timber technique

Appendix 4b. Preserved buildings in Vita Bergen, Stockholm

List of Tables

6.2

Chapter 8

Appendix 4b

Appendix 11. Fire insurance records, Majorna 1795, residential buildings

Appendix 12. Fire insurance records, Gothenburg 1800-1804, residential buildings

Glossary

Jetty – '*Cantelevered overhang of parts of the façade (or part of a façade, gable or oriel window). Supported by the projecting ends of beams or joists, additional, short joists jointed at right angles to beams, or made by a – hewn jetty. The first floor of an internal partition may also be jettied*' (Volmer and Zimmermann 2012, 189).

Jetty bressumer – is '*a sillbeam of an upper storey to which the posts of the upper storey are attached*' (Volmer and Zimmermann 2012, 162). Thus, concerning buildings with external jetties.

Girding beam – '*in a continuous, not jettied wall'* (Volmer and Zimmermann 2012, 162)

Short upward brace – '*Short brace running upwards from a vertical to a horizontal timber*' (Volmer and Zimmermann 2012, 184)

Up and down braces – '*downward (long) brace at the lower end of a frame, running for example from a post to a sill beam*' (Volmer and Zimmermann 2012, 181). '*Upward (long) brace at the upper end of a frame, running for example from a post to a wall plate* ' (Volmer and Zimmermann 2012, 181). Here the two types of braces are registered together.

Close studding – 'Pattern of timber-framing which is composed of posts and studs set fairly close together; it lacks almost all rails (except pieces such as window sills); often the panels are only as broad as the studs' (Volmer and Zimmermann 2012, 194)

External stairs – '*Stairs outside a building* ' (Volmer and Zimmermann 2012, 380).

Balcony/open gallery – '*Covered external passage or balcony at some height above the ground, open except for a balustrade and giving access to adjoining rooms. It may be supported by pillars or corbels*' (Volmer and Zimmermann 2012, 66).

Introduction

Most of the early modern townscapes in terms of wood constructions are gone in the Swedish cities of today. Wooden buildings dominated the towns and stone houses were few; as an example, Gothenburg only had 11 residential stone houses in 1737 (Scheele and Simonsen 1999: 24). What is left of the early modern wooden buildings is mostly found in archaeological contexts as remains in the ground. Nonetheless, some buildings have survived despite town fires, demolition or being transformed by renovations. Many historic buildings have also been moved and thus lost their former context over time.

There is a lot left to study to begin to understand these townscapes and buildings regarding construction, functions and living environments. An interdisciplinary method has therefore been used to develop new knowledge on buildings *under* and *above* ground.

The image on the front page depicted by the artist Elias Martin around 1787 shows the big harbour canal in Gothenburg. It encapsulates the heart of this work by visualizing the busy street life, the public buildings in stone surrounding the big square i.e. the magistrate's court, the stock market, the town hall, the city guard and the Christinae 'German' church. Behind the stock market, a small one storey wooden residential building can be seen. These types of buildings were ubiquitous in the back streets and they are the focus of this study. In the front left corner, there is a two storey multi-unit building in wood, which reflects a new type of communal urban living. The picture likewise shows some pivotal features of the early modern Dutch city plan that epitomizes Gothenburg i.e. the canals and bridges, the big square and the angular street grid.

Aims and questions

This exploratory work addresses the Swedish urban wooden early modern building stock.

- The principal aim of the study is to examine what components the wooden early modern built environment held and how they were organized within the urban plots to some extent the study address possible changes over time in these patterns and possible regional differences.
- The study examines what building techniques were chosen and how they were used, in terms of function.
- The work also studies how the internal layout of buildings changes over time.
- Furthermore, internal comfort i.e. insulated/heated and uninsulated/unheated spaces are investigated to understand usage and layouts.

The building techniques discussed have both practical and social implications. A key question to address is if there was a difference in the built environment and social structure in the city centre as opposed to the urban periphery (outside the city limits).

Time span and space

The study is focused on the production of space in the period 1470-1850, that is to say, the early modern period. The starting point of 1470 might seem early, yet, changing Swedish townscapes (for example that of Nya Lödöse and Uddevalla) mark a change in city planning (Öbrink, Williams, and Nilsen 2018). Another factor, from the perspective of a building researcher, are innovations within the indoor environment such as the chimney and glazed windows as well as storied houses. These alterations to the interior slowly changed the way people went about their daily lives.

The end date is set between 1800-1850, connected to how the new era of industrialization, major population growth and the tearing down of city walls, altered the early modern urban environment completely. Setting the end date to the mid-19th century for the early modern probably seems late. Nonetheless, much of the traditional building techniques, internal layouts and residential organization prevailed and could still at this point be related back to the beginning of the early modern and even further back in time (Linscott and Nilsen 2018). It is important to recognize that these artificial breaks in time, or time periodization, are connected to specific events and do not extend to all aspects of society. Parallel practices will follow different timelines i.e. a government can decide to create a state religion or a shift in state religion set to a specific date. However, it does not stop people continuing to worship in accordance with their old beliefs in secret. Similar practices can be seen in the built environment even though new techniques, new layouts, modes of heating and the introduction of windows brought change, traditional building practices existed side by side throughout the period.

Study methods and academic disciplines

This work stands on four legs regarding source material. The study of vernacular wooden buildings combines knowledge from the disciplines of building

conservation, architecture but foremost archaeology from the ground up. Historical sources and historical methodology will also be an important part of understanding what the lost urban building stock once looked like. The interdisciplinary approach will help combine and deepen the knowledge as well as the context of the vernacular townscape of the early modern period.

Studies of the building stock in several towns over a rather extended period makes it difficult or even impossible to be comprehensive. This work includes a number of micro studies of samples of the building stock from different places and periods through archaeological, preserved, drawn, photographed and written records. These micro studies enable a series of socially and structurally related questions to be investigated. They also give an idea of what these datasets can hold in terms of research potential and limitations. The urban wooden building stock is a minor area of research within archaeology, but one that recently has started to attract a lot more attention in line with ever more interventions, carried out within the ambit of contract archaeology, coming in contact with the material. The micro study is thus a method of approaching this vast material by testing methods and theories that can be reproduced and compared on a macro level. The scope of each micro study has a limited reach and is therefore not intended as statistical evidence; however, the micro study is necessary to produce a good quality macro study. '*Microhistory, then, sets out to create generative procedures that can use a given general issue to test a multitude of possible outcomes, in different contexts under a variety of conditions; procedures that can then suggest new problems and new questions that propose a rereading of the initial unwarranted generalizations of an insistently generalizing historicist vision of history* ' (Levi 2019, 45) This study thus rests on seven micro studies in line with Levi's argument to further a discussion on complex urban social, material and spatial issues.

Objects of study and mode of selection

The focus of this study are urban wooden housing from the 1470s to 1850. The data consists of a sample of archaeological remains, preserved houses, as well as of contemporary images and written records, the methodology behind the sampling will be addressed further on. In Sweden, early modern building remains in urban settings have to be surveyed according to the Heritage Act.[1] Contract archaeology has gone through major changes in the last two decades in respect of digital documentation, field techniques, and natural science analysis as well as through a heightened emphasis on researching historical sources, all of which have been useful to this work.

Major urban archaeological surveys have been undertaken in a number of Swedish cities in the last couple of years with early modern material. Some of them have been studied more closely as case studies in this work primarily through archaeological reports: Gothenburg, Nya Lödöse, Stockholm, Jönköping and Falun.

The towns have been chosen on the premise of having examples of excavated early modern building remains with most of the layout of the ground floor intact.

These five towns represent the capital, four major cities as well as a further four harbour towns, two newly founded towns, and two towns that were moved, in addition to futher incidences of two inland towns and two fortified towns and finally single instances of a smaller town, a mining town and a factory town.

A number of reference cities both domestic and international will also appear; Copenhagen (Denmark), Christiania (Norway), London (UK), Turku (Finland) as well as Visby and Eksjö (Sweden) and others in order to establish context and influences on the Swedish urban landscape.

Volmer and Zimmermann (2012) has been used as the main glossary for the language concerning buildings and constructions. They have done substantial work comparing and explaining building methods and regional language differences for the historic building stock of a large part of Northern Europe.

Archaeological records

In respect of the archaeological remains of log timber buildings, the main focus has been on finding examples of houses with as much of the layout intact as possible and with examples from different periods. Log timber preserves well in the ground therefore there are a great many examples to choose from; it was not possible to examine all excavated early modern log houses. Thus, a sample has been studied to provide examples from this building technique.

Finding the dataset for timber-framed constructions started as a puzzle to establish if timber-framing could be found outside the provinces of Halland and Skåne. Therefore, a wide internet search was started including archaeological reports, preserved buildings, photos in museum databases of historical buildings as well as of historic drawings and records discussing the building stock. Thus, the sampling might appear slightly chaotic, but it does answer the original question.

[1] Sveriges Riksdag, Kulturmiljölag/Historic Environment Act (1988:950), Sveriges Riksdag, Stockholm. Viewed 28 October 2019 https://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/kulturmiljolag-1988950_sfs-1988-950

Post and plank construction poses yet other dataset issues i.e. such constructions are not always preserved well in the ground and appear to sometimes be problematic to record archaeologically. In addition to the limited archaeological dataset, written records, preserved buildings, drawings and photos have been studied.

Archaeological and architectural drawings or digital measurements of layouts have been included and discussed when applicable.

Selection of preserved houses

After conferring with the town conservationists, a limited number of preserved houses were chosen to be part of a dendrochronological survey aimed at understanding the storied house in terms of dating, layout and possible traces for archaeologists to 'read'. The preserved houses were chosen from urban contexts in the province of Västergötland, in this case Gothenburg, and the province of Småland with samples from Jönköping and Eksjö.

An additional small number of preserved log timber buildings at the reserve *Vita Bergen* in Stockholm have been compared to the sample of archaeological remains of log timber buildings. In the early modern period, Vita Bergen, was situated in the urban periphery.

Historical records

All fire-insured properties in Majorna (a suburb outside Gothenburg) in 1795 have been selected (a total sum of 10). Unfortunately, there were no fire-insured properties in Gothenburg that year, instead 1800-1804 seem to be the earliest years for this type of insurance. Nineteen properties from Gothenburg had been insured during that period while only 10 of those had enough information to be included in the analysis. Clearly, these twenty fire insurance records do not reflect the whole building stock at that time, but do give some insight of what the city looked like and what types of buildings it included as well as an estimated value.

The focus of the probate inventories is for the purpose of this discussion on built property, and not household goods, to compare with information from the fire insurance records on buildings and property. These probate inventories have been selected randomly from 1795 with the only criteria that property is mentioned in both Gothenburg and the suburb Majorna, a year that reflects a vast population increase in the area.

Contemporary traveller's diaries have been used to provide background on a few occasions.

Photos and drawings have been selected freely where they could be found in published books, museum photo databases, in the university library database Alvin, as well as in archaeological or conservation reports.

The structure of the study

This study has a slightly different set up than usual so here is a guide through the chapters. The theme of the work concerns wooden buildings in an urban environment during the early modern period. This is a rather new field of research in Swedish archaeology. The archaeological source material is fragmentary and the quality of documentation varies a lot. This study is thus an exploratory attempt to fill in some of the gaps left by the fragmented material. This will be achieved through conducting an interdisciplinary study combining the archaeological reports and preserved buildings with historical images, historical records, dendrochronology and maps. The research is not based on statistics (the source material is too limited) but it aims to combine, compare and find out what materials can benefit from joint studies.

This research follows the methodological lines of historical archaeology with archaeological material as primary source and written documentation as secondary source material. Physical material objects are the focus of this study and their role within urban social practice. Written sources are used within many branches of archaeology aside from historical archaeology such as archaeological history and contemporary archaeology as well as a general reference to, and use of, archaeological reports.

Chapter 1 is where the theoretical outline of the work is presented. The *basis* or *frame* is formed by questions of space such as the production of space and its social dimensions. The other part is the *driving concepts* and their application such as the difference between routine and conscious actions. The serial collective choices in building, such as repetitive or functional constructions sometimes referred to as the 'common-sense', are often found in so-called 'traditional' or vernacular building culture. While also considering the multiple choices of functionality that can be applied to buildings, thus suggesting that common sense can mean different things or that the social dimension at times requires buildings with less obvious functionality.

Materiality is part of the spatial in terms of the physical properties and dimensions of wood materiality in connection with spatial organization.

Chapters 2 and 3 shows different aspects of the research background.

Chapter 2 explains how the wooden building stock is reflected in all strata of Swedish society but also why the wooden early modern urban buildings of today mainly consist of archaeological remains. The *atypical,* or the *unique* was saved at the expense of the *usual or commonplace*, the wooden building, which was targeted and demolished on an enormous scale affecting a very large part of the building stock.

In Chapter 3, the research history of the wooden building is discussed. Various disciplines have contributed to the knowledge of this joint heritage i.e. architects, ethnologists, art historians, building conservationists, historians, building practitioners such as carpenters and so forth. Archaeology has entered the scene quite late and had other periods than the early modern as well as other types of buildings (mainly in brick or stone) in scope for a long time. This is a relatively new field of research in archaeology, thus there is a lot more to be done and many questions left to explore. This study is in many ways pioneering new research.

Chapter 4 revolves around wood as a material in general and wood as archaeological remains (Appendices 1-2). This is the first step in a micro archaeological scale starting with discussing wood materiality in itself. The aim is to show how wooden building remains of dwellings and houses are only a small part of the whole spectrum of wooden structures, artefacts and historic environments. This is imperative since wood is a biological material which often is missing from the 'scene' on archaeological sites.

Chapter 5 has four sections dedicated to discussing building techniques in wood from the early modern town. This is the second step in a micro archaeological scale with studies on the particularities of buildings.

Section 5.1 sets the background for the other three sections in terms of a short presentation of five Swedish towns (Nya Lödöse, Gothenburg, Stockholm, Jönköping and Falun) with their general history and archaeological history. These towns outline the case studies.

Section 5.2 discusses a sample of log timber constructions with its layouts, modes of insulation and size. There was ample material from archaeological reports to draw on, it seems log timber structures are preserved well in the ground. The archaeological remains were then compared to preserved buildings. Due to the large number of examples, the presentation of each building is to be found in Appendices 3 a-b and 4 a-b.

Section 5.3 is focused on what degree houses built using timber-framing techniques could/can be found outside the former Danish provinces of Skåne and Halland. The archaeological source material was fragmentary so other types of sources were explored i.e. pictures/ photos, preserved buildings and historical records such as fire insurance records (Appendices 5-7).

Section 5.4 is a study on post and plank constructions in urban environments. Again, the archaeological record was in short supply and additional sources were used i.e. preserved buildings, photos and fire insurance records (Appendices 8-9).

Chapters 6.1-2 are the third step in the micro archaeological scale discussing particular buildings in urban environments from a technical but also social aspect. While Chapters 5.2-5.4 are focused on wooden buildings in the urban centre, Chapter 6.1 highlights the urban townscape, while Chapter 6.2 is directed towards the urban periphery. There were no archaeological records from the suburb Majorna, thus other forms of records had to be explored. Probate inventories but foremost fire insurance records have detailed information on buildings and property (Appendices 11-12). The aim was to see how this historical material compares or adds to the archaeological data through asking the same/similar questions to both sources.

Chapter 6.1 discusses the storeyed building. Houses with more than one floor are elusive for archaeologists and difficult to find. However, studies of preserved buildings, historical records and historical images show them to be common features in urban environments. Twelve dendrochronological surveys of storeyed houses contribute data on dating, wood source, type of wood and construction but also whether the houses were built in one or two floors originally. Layouts of storeyed houses is another dataset discussed and whether or not the storeyed house would leave identifiable traces on archaeological sites.

Chapter 6.2 raises the question on urban-like building environments outside the city limits, vital to the city but rarely discussed in archaeological research mainly due to not being included in the Historic Environment Act (*Sw. Kulturmiljölagen*).

Chapter 7 is a broader more general contextualization of the wooden building stock in terms of who initiated, influenced, built and used the towns. This is the fourth step in the micro archaeological scale providing a sketchy overview of the early modern society from the urban perspective.

Chapter 8, all the data from the case studies from Chapters 5-6 have been combined and analysed in terms of size, building technique, layout as well as insulated and uninsulated spaces and the presence of windows etc. Hence, further contextualized for a deeper social understanding. The analysis provides a macro level to

the case studies and is to be considered the final step in the micro archaeological scale.

Chapter 9.1 holds the general conclusions of the work.

Chapter 9.2 summarizes the study as a whole.

Appendices

This study rests on a large empirical material, and not everything could fit into the main text. At the same time, it is important for a full disclosure to make it easily accessible. There is a mixed use of English and Swedish depending on source.

Appendices 1-2 are the collection of finds and wood material registered at the Nya Lödöse investigations for 2013 and 2015 respectively. This material is discussed in Chapter 4 (table in Swedish).

Appendices 3-4 a, and 5-10 are the database of the empirical data of log timber, timber-framed and post and plank buildings from Chapters 5.2-5.4.

Appendix 3b is the archaeological empirical data from the micro study regarding log timber buildings with full descriptions and photos of building layouts discussed in Chapter 5.2.

Appendix 4b is the empirical data from preserved log timber buildings in Vita Bergen in Stockholm, discussed in Chapter 5.2.

Appendices 11-12 are lists of fire insurance records in Majorna and Gothenburg discussed in Chapter 6.2.