ARCHITECTURAL CHARACTER

- exploring form and construction



Elisabeth Ek

Architectural character



CHALMERS

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- exploring form and construction

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Abstract

This thesis seeks to investigate ways to explore and convey character in architecture. Through an exploration of how character relates to form and construction, it aims for craftmanship and a sense of playfulness. Qualities in a selection of existing buildings are studied to create a vocabulary for inspiration. This makes a starting point for the design work that is implemented in a program of atelier houses, where characteristic and playful qualities are tested.

This project is a reaction to the generic building industry, generally lacking the qualities mentioned above. I have a longing for buildings that contrast the anonymous and standardized. The vernacular architecture is often intriguing where there are irregular lines, tactility, and a human scale.

Two main references are studied: Japanese architect Terunobu Fujimori and vernacular architecture of Gotland, Sweden. They corelate as they are both nonnormative, where Fujimori is a contemporary practitioner that uses natural materials, embraces work made by hand and makes architecture with a sense of playfulness. This is shared with the vernacular architecture of Gotland, which also holds a traditional craftmanship knowledge in the construction. They are differentiated by time and by geography, yet Fujimori is often inspired by vernacular architecture. The leading question for the thesis is: Which approaches to design regarding character can be conceived whilst making a synthesis of the works of Terunobu Fujimori and the Gotlandic vernacular architecture?

This thesis embraces the research through designapproach and focuses on methods of physical models built by hand. The models are iterated into digital drawings, alternating between the two mediums. The materials in focus are primarily wood and reed, followed by clay and stone.

There seems to be a longing for alternative ways to build and a revival for craft, contrasting the industrial and abstract aspects of today's society. The character of the natural materials could not only hold tactical qualities but also sustainable ones. Designing with the aim of craftmanship is, to me, to show care for the users, and it often shows marks of the creators. Introduction Background Method Analysis Prototyping On site Reflection

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Student background

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Erik, for your support and company.

INTRODUCTION



fig. 1 Broskogs, Gotland.

Introduction

Plenty of architects have a longing for more character and craftmanship in architecture. Contemporary Swedish building culture is often characterized by standardization and distance – the way we design buildings is largely executed without being physically involved, and materials/products are often transported a long way and might lack local anchoring. Together, this yields rather generic, character-lacking architectural expressions.

The term character has been debated among architects since the 1700s. However, in the 1900s, advocates for structural rationalism came into existence and character was criticized as out-of-time. In recent times, the term is once again discussed. A frustration has been brought forward by people and architects about the standardization at the expense of quality and more poetic aspects of architecture. In the Swedish architect-run podcast Själens standard, the creators discuss how laws, norms, and standards (SIS) that are supposed to give architectural qualities instead seem to miss everything that is not functional and measurable (Stålhane, n.d.). They search beyond cost-effectiveness and sets of rules to discuss what architecture should give to our lives. In contrast, parts of Japanese architectural culture, e.g., Terunobu Fujimori, are described as to often hold poetic qualities and beauty, whereas Swedish building culture is more focused on utility and stability, imprinted by an engineering culture.

Character can be described as about care – how someone has created something particular for a user. Preferably with craftmanship, local materials, and a human presence – imprints of tools, ideas, and playfulness. Character is important due to many reasons, e.g., being able to express care to a user makes them care for the building. Additionally, in a world with finite resources, the materials suited for craftmanship is often made of local materials, such as reed, wood, and clay – which yield less carbon emissions than other materials. Further, being inspired by local techniques and materials ensures that parts of our cultural heritage are not forgotten.

In this thesis I aim to counterbalance the generic expressions of the building industry, by studying ways to explore and convey character in architecture. Two fields that have been identified as characterful are studied - the contemporary Japanese architect Terunobu Fujimori's work and parts of the vernacular architecture of Gotland, both being outside of mainstream architecture. Fujimori frequently uses natural materials, is closely involved in the building process (often by hand), and regularly creates playful expressions. The Gotlandic architecture also utilizes work made by hand, where local materials and traditions bring forth their unique characteristics. They differ in time and place, but Fujimori often seek inspiration in vernacular architecture of the world and is actively expressing character with a poetic nerve. Furthermore, the builders of Gotlandic architecture probably made choices based on local materials and feasibility, rather than searching for certain expressions like Fujimori and other architects do. This have resulted in beautiful, simple forms with advanced skills, often in a collective process.

The thesis is driven by research-by-design and focuses on working by hand, alternating between physical models and digital drawings. The analysis of the selected works inspires the prototyping, leading to a design proposal located on Fårö, Gotland, where characteristic and playful qualities are tested.

aim and thesis questions

The aim of this thesis is to explore and convey character in architecture, using an iterative process of digital drawings and physical models made by hand. Selected works of architecture will serve as inspiration.

- Which approaches to design regarding character can be conceived whilst making a synthesis of the works of Terunobu Fujimori and the Gotlandic vernacular architecture?

Keywords: character, craftmanship, vernacular, Gotland, Terunobu Fujimori

delimitations

The studied examples of architecture are a selection based upon certain qualities and do not fully represent the respective fields of Terunobu Fujimori and vernacular architecture of Gotland.

dictionary

Definitions from Cambridge Dictionary:

Character

- qualities that are interesting and unusual

and

- the particular combination of qualities in a person or place that makes them different from others

Craftmanship

- skill in making things, especially by hand

note on craftmanship

There are many ways of making craftmanship. This thesis focuses on a more unprecise, natural, and handmade presence, rather than a sleek and a perfectly precise one. These words will be further explained in the thesis.

BACKGROUND



fig. 2 Reed roof building. Photo: Markus Moström

Character

*"Character is a large word, full of significance; no metaphoric river can more than hint at its meaning"*Louis Sullivan
(Sullivan, 1947, cited in Forty, 2000)

The term character was introduced into the architectural discourse in the 18th century, and multiple uses of the word have occurred since. Character was introduced into the discourse of architecture by Germain Boffrand, French architect and writer, in 1745 (Forty, 2000):

"Although architecture may seem only to be concerned with what is material, it is capable of different genres, which make up, so to say, its forms of speech, and which are animated by the different characters that it can make felt. Just as on a stage set a Temple or a Palace indicates whether the scene is pastoral or tragic, so a building by its composition express that it is for a particular use, or that is a private house. Different buildings, by their arrangement, by their construction, and by the way they are decorated, should tell the spectator their purpose [...]."

Since then, the conversation shifted from the structure itself onto what effect the structure had on the dwellers. Before, the academy was focused on the quest for perfection and ideal proportions, which often relates to monumental, religious, or royal buildings, whereas the discussion on character opened to include all type of buildings, which gave architects a way to discuss the expression of a work. (Hicks & Newmeyer, 2020)

Colin Rowe, architectural historian and critic, wrote an essay in 1954 called *Character and composition*, where he argues that character is a no longer useful architectural vanity from a distant era. He describes the shifting definitions from the late 1700s and forward,

where, for example, Robert Lugar in the 1800s meant that the architect "should frequently compose with a painter's eye", and Edmund Aikin found that "contrast and variety is essential to architectural beauty", as they are qualities that give "character and interest to any composition". Rowe describes the discussions through the times around the terms and concludes his essay with his view upon character and composition. He means that they embody "an idea which, by emphasizing the particular, the personal, and the curious, will always vitiate system." (Rowe, 1954)

Adrian Forty, architectural historian, means that Rowe's essay conformed to a certain, high modernist view, that the meaning of architecture is solely in the immanence of its perception, not able to represent anything beyond the building's immediate presence. Although Rowe attempted to strike the term out of the modernist vocabulary, the term has been widely used during the modernist era. For example, the early modernist Otto Wagner encouraged his students to attend to "a clear, easy, and immediately apprehensible expression of the building's character". (Forty, 2000)

Forty claims that the relative decline of character, in all its senses, in the first part of the 1900s, appears to relate to the influence of structural rationalism. Character was ridiculed wherever structural rationalism took place. This is for example shown during the end of the rationalist lecture of W.R. Lethaby in 1910 "The Architecture of Adventure", where he said:

"The method of design was to be understood in a scientific, engineer's sense, as a definite analysis of possibilities - not as a vague poetic dealing with poetic matters, with derivative ideas of what looks domestic, or what looks farmlike, or looks ecclesiastical – the

dealing with a multitude of flavours – that is what architects have been doing in the last hundred years [...]"(ibid.)

In a more recent setting, character has been discussed from different perspectives in the magazine MAS Context Issue 32 / Character. The authors Stewart Hicks and Allison Newmeyer of the architecture firm Design with company thought the term had been out of lexicon for too long and dedicated an issue to the subject. They claim that character is subjective, and because of this, the term relates to experiencing human subjects, making architects find it uncomfortable. They mean that architects often prefer more concrete descriptors and "objective, quantifiable means of valuation". Since the middle of the 1900s architects have shunned the term, and instead "character" has been used by apartment hunters, neighborhood design guidelines, and preservationists. (Hicks & Newmeyer, 2020)

The authors were further interested in the term because character can mean so many things; it is hard to grasp although character today often have a positive attribution. Hicks and Newmeyer were searching for "a bridge between narrative-driven architectural explorations and formally driven ones" - a stronger link between stories and form. They believed character would be a good starting point. The magazine covers many perspectives, and they claim they wanted to take back the term from the real estate agents and neighborhood planning boards, to introduce new territories for architectural explorations. (ibid.) Character can mean many things. This thesis explores

character from a perspective of being about care. Of how the personal, human qualities behind an architectural work can be expressed to a user. Perhaps by using craftmanship, site-specific solutions, or a sense of humor. This project explores how character can inform a design process where form, materiality, and expression is in focus, being inspired by architectural references.

Terunobu Fujimori

Fujimori (b.1946) is a Japanese architect and architectural historian. He first studied architecture for almost 30 years until he began creating his own work. Because of his late entry into creating architecture, he has claimed he wants to avoid comparison by making sure his buildings are like no one else's (Michaëlsson, 2016). However, he is often inspired by neolithic and vernacular architecture from all over the world, and his works have been described as "New Primitivism". (Buhrs et al., 2012), (Wooxer, 2021)

He arrived late at creating his own architecture but was initiated into the world of building early. At eight years of age, his parents rebuilt their house and during a whole year Fujimori assisted the carpenter after school. (McGuirk, 2007) His works are said to be eccentric, poetic, and ecological, as many of them are made with traditional materials like wood, stone, earth, bark etc. His buildings are said to appeal to our basic instincts, promising warmth and protection. (Buhrs et al., 2012)

Fujimori has analyzed the expression of architecture in Japan and claimed there are two approaches: the red school and the white school. The red school, which he is a part of, signifies for example earthiness, mass, and an intentional lack of refinement. By contrast, the white school conveys ethereality, lightness, and precision. Where the white school seeks abstraction, the red school is based on a sense of real existence. (Brownell, 2016)

"The red school is rooted in the soil. White's innovative technology is no match for the delight of artful ingenuity; its luxuries are pushed aside for sensuality and simple pleasures, for soaking in a bath or sipping tea. Red is a little fat, rendered roughly, made of raw rock and weathered wood. Red counters industry with the handmade and slightly homely; it embraces accident and ornament." (Buhrs et al., 2012)

Together with natural materials and roof planting, he adopts a method generally based on simple workmanship, with some playful nuances. "[H]is design appears natural and nostalgic, and it is these characteristics, often combined with a fairy tale-like cuteness, that attract the public's attention." (Kim, 2016) Further, his tea rooms are known for having playful features such as bridges and hiding places. (Buntrock, 2021)

Fujimori has claimed he has an interest in buildings and parts of cities that are made by non-architects. In his late twenties, while still a graduate student, he began to study disappearing structures and founded *The Architectural Detective Agency* (ADA) together with Takeyoshi Hori. They walked with cameras and sketchbooks to take stock of Japan's cities, documenting structures that were disappearing or had not been represented in the official architecture history of Japan. (CCA, n.d.)

Over six years, ADA documented 1,300 Meiji-era structures, most previously unknown. Later on, Fujimori began to gain public celebrity as ADAs work were sold as pocket guides, as well as gaining professional respect for his academic work. These expeditions across Japan led him to meet the group ROJO (The Roadway Observation Society), a collective of artists that searched the streets for accidental art and unconventional beauty. (Buntrock, 2021)



fig. 3 Roof House, 2009. Family dwelling with tea-room reached by a ladder. Alternative forms of volumes combined with pines and wind device as decoration. Photo: Anna Guseva



fig. 4 Yakisugi House, 2007. Two smaller volumes add variation to the silhouette as their relation to ground is elevated. Photo: Forgemind Achimedia

When Fujimori built his first house in 1991 in his hometown, the Jinchokan Moriya Historical Museum (fig. 5), a lot of architects ridiculed him as an amateur. Fujimori had decided to trace back as far as the client, the Moriya family, who dates to the Stone Age. He claims there are two international eras in architecture: the opening act, when simple structures were built everywhere – he had thoroughly studied the primitive structures of the world, made of wood, clay and stone – and our current global era. Kengo Kuma called it "a punch right into the jaw of modernism". Toyo Ito criticized the proportions and thought Fujimori was a "maniac with unusual taste". ROJO encouraged him when others did not. (ibid.)

During his first years as a practicing architect, he found the builders unwilling to build roughly and try new methods. However, ROJO stepped in and gladly created awkward craft and put plants on the roofs and within walls. (ibid.)

Nowadays, he always involves people to help make the finishing layers of the building. Local volunteers, students, and others help to make the more unrefined expression, which he claims differs in a positive way from how Japanese craftsmen would do it – too perfectly precise. In his designs he ensures that the finishes are made so that unskilled people can execute the work. (Michaëlsson, 2016) Fujimori rejects the smooth surfaces and clinical thinking that was represented by the first modernism, and the contemporary digital design, as he finds them lacking vital character. (Buntrock, 2021) During this master thesis, Fujimori's work has served as an inspiration to explore the non-normative and playful characteristics. He lets the accidental and unrefined be included in the process, as well as using source materials in unexpected ways. The bridges, ladders, and upward-movements also encourage a more playful part of people's spirits. He seems to have a strategy to be inspired by parts of vernacular architecture and using it to innovate.

More of these characteristics are summarized into a library, further below in the booklet.



fig. 5 Jinchokan Moriya Historical Museum, 1991. Clad in long, hand-split shingles, walls covered in clay and trees reaching out of the roof. Photo: Kenta Mabuchi



fig. 6 Interior of Akino Fuku Museum 1998. Lamps hung in branches. Photo: Tawashi2006, WikiMedia



fig. 7 Interior of Yakisugi House, 2007. Glass meets shaped wooden stems. Photo: Rachel Harmon

Vernacular architecture of Gotland

The Nordic vernacular architecture is often rich in materiality and tectonic qualities. It tells stories about people using the local materials at hand and how they learned to live with and of the area. Often the houses were quite simple in their shapes. However, decoration was shown through the traditional craftmanship and the knowledge of the material. They took pride in making a well-executed timber joint. In Sweden, the lumberjack knowledge has often been shared among the men in the villages, and they have helped each other build their homes. When more complicated work had to be done, more experienced people came to join. (Werne, 1993)

To use natural and local materials can bring a certain tactility and relation to the building. Another benefit is the sustainable qualities it can hold. Marwa Dabaieh, researcher and architect at Malmö University, works with straw, reed, and clay together with wood, and claims there is a big and untapped possibility for more use of local and biobased materials in construction of Swedish houses. (Krook, 2021)

Gotland has a range of building traditions that have varied in popularity during times, spanning from stone and brick to different types of timber structures: post-and-plank, timber jointing, and timber framing. (Haase & Ström, 2005) The tradition of building with a certain type of reed was vital for survival during hundreds of years. Today, however, it is more of a cultural achievement. It was nearly forgotten during the first part of the 1900s but had a renaissance in the beginning of the 60s. This roof is in Swedish called "agtak" and is made of pine stems and a locally sourced type of reed, called "ag" - which thrives in lime-rich soil, present in many parts of Gotland (and Fårö). The reed has small thorns that helps it stick to other straws. (Brogren et al., 2016) The more general terms thatch or reed will be used when writing about this unique type of reed.

As more industrial roof solutions were chosen, the reed roof tradition became more seldomly used. In the 1960s however, some students were interested in the tradition of building these thatched roofs – which gave life to the tradition of building together once again. Today there are more than sixty thatched roofs on Fårö, and they last for about 70 years. (ibid.) The base is often made of walls of stone or timber structures. The thatched roof has often been used on farm buildings, stables, storage buildings for sheep and ponies, but also on woodwork sheds. The residential buildings were instead often covered with planks or stone chips. These different types of buildings were often formed as a cluster around a courtyard. (Blomberg & Lindquist, 2007)

The "täckating" is the feast for building this specific roof and often takes place during warmer months. People gather and are served food and beverage; music plays as they build all day until the roof is done. The roof is officially done when a person has completed a handstand on the roof, see fig. 10. (Brogren et al., 2016)

Parts of Gotland's vernacular architecture has served as inspiration for design, with focus on materiality, construction, and form. See library further on for more of their characteristics.



fig. 8 Lunderhagestugan, Bunge Museum. Postand-plank construction and diagonal patterns.



fig. 10 Archive picture of building feast (Swedish: täckating). Photo: Erik W Ohlson



fig. 9 Edvin Hammander's in Giftskog. Dovetailed timber in aged, grey tones. Photo: Markus Moström

Study trip to Fårö and Visby, Gotland

During a study trip for a couple of days, different parts of Gotland were explored, mainly focused on Fårö. It was fascinating to see how present the stone and plaster is in this area, where limestone is quite common.

The focus of the study was on the buildings that expressed character through their form and construction. For example, in material meetings, where fields of stone were cut off by wooden beams or merged into plaster fields. Local materials stacked in clear ways can make a quite unique character.

A site for the project was found, which is presented further on.



fig. 12 Gottvaldska huset, Visby



fig. 11 Strandgatan 10, Visby



fig. 13 Gottvaldska huset, Visby



fig. 14 Stora Gåsemora Gård, Fårö



fig. 16 Close to Fårö Fyr



fig. 15 Stora Gåsemora Gård, Fårö



fig. 17 Ryssnäs, Fårö



fig. 18 Langhammars, Fårö



fig. 19 Bläse Kalkbruksmuseum, northern Gotland



fig. 20 Broskogs, Fårö



fig. 21 Bläse Kalkbruksmuseum, northern Gotland



fig. 22 Helgumannens fiskeläge, Fårö



fig. 24 Helgumannens fiskeläge, Fårö



fig. 23 Helgumannens fiskeläge, Fårö



fig. 25 Helgumannens fiskeläge, Fårö

METHOD



fig. 26 Terunobu Fujimori at work. Photo: Dana Buntrock

Method

"The process of drawing is very important to me. If I draw in a formal way, I feel that the rough quality in my architecture might disappear, so my plans are drawn by hand and then when it's about to be constructed it is put through the computer - but then it doesn't feel like my work anymore!"

- Terunobu Fujimori (Michaëlsson, 2016)

This thesis embraced the work made by hand. In the buildings of Terunobu Fujimori and Gotlandic vernacular architecture, there is a presence of craft made by hand. In Fujimori's process he often sketches by hand and joins in on the building process together with volunteers. The models he makes are for presentation, and often come after the house is built (Michaëlsson, 2016). The design process of the vernacular architecture is more unknown but is probably iterated in real scale. However, the body's presence is strong in both respective fields. You may see marks from hand tools and asymmetrical or more organic compositions, compared to using material from more standardized, refined production methods that may give a more sleek and precise result. In the studied buildings, there are often traces of the origin of the materials, eg. bark left on some wooden parts and thatch on roofs.

This aspect was embraced in the prototyping process by using natural materials. Perhaps these materials are easier to relate to, compared to, for example, composite materials or concrete, as we can often imagine forming natural materials with tools and by hand.

The references, i.e., buildings from Fujimori and vernacular architecture of Gotland, have been studied through drawing, focusing on form and construction. Silhouettes have served to convey form and relations of part-to-whole have been studied. Through sections, the construction has been studied and speculated upon.

Aspects that convey character have been put into a library that have acted as inspiration when prototyping models. The models have been translated into digital drawings and iterated by alternating between the two mediums. These iterations allowed explorations of how character could withstand the translation into digital representations. A study trip to Gotland informed the design further, and finally, characteristic and playful qualities were tested in a smaller program on a chosen site on Fårö, Gotland.

Selection -	Analysis 🔸	Library →	Prototype ->	Synthesis
Terunobu	Materiality	Drawings	Models	Design
Fujimori +	Form			proposal:
Gotlandic	Construction			Drawings
vernacular	Part/whole			Models
architecture	Detail			



fig. 27. Model of Teahouse Too-High, by Terunobu Fujimori. Photo: Terunobu Fuiimori



fig. 28. Naturalis Brutalis, model by Krupinski Krupinska at Venice Biennale 2018. Photo. Victor Johansson

ANALYSIS

Terunobu Fujimori



fig. 29 Chasitsu Tetsu (Tetsu Tea Room) 2005 (Photo: Akihisa Masuda)

In the following chapter, selected works of Terunobu Fujimori has been analysed through drawing and text. The search for patterns in characteristic features ended up in drawings where the silhouettes are in focus, as well as how parts relate to whole. Materiality and construction are speculated upon and described in text.

Analysis - Terunobu Fujimori



fig. 30 Stork house - Perspective

Form: A simple shape of the roof is contrasted with the tall bird's nest and the organically shaped pillars under the roof. An unexpected user, the stork, is included in the program.

Construction: Wood structure with straight, simple wooden planks and straight lines in the window forms. These are contrasted with thatched roof, an organically shaped door, and pillars.



fig. 31 Lamune Onsen Spa - Perspective

Form: A lean-to roof is crowned by tall volumes (blue-coloured) with pyramid hip roofs.

Construction: Wood structure with zebra-patterned facade made of charred, un-edged planks and plaster in between. Contrasted with brown wooden shingles on some roof parts.



fig. 32 Chasitsu Tetsu (Tetsu tea room) - Perspective

Form: A tea house is elevated from the ground and supported by a single wooden stem where the tree continues up to the ceiling. Small volumes like the chimney and some roof windows pop out in the silhouette. Roof broken in angles.

Construction: Wood structure rest on an unprocessed wooden stem and the facade covered with an earthy mass. Wooden shingles cover the roof and smaller volumes.



fig. 33 Ichiya-tei (one-night room) - Perspective

Form: Elevated small house with an integrated chimney in the roof-shape. Several smaller branches support it. Small entrance, maybe 80 cm high.

Construction: Unprocessed wooden stems lift this wooden structure and is clad with an earthy mass and wooden shingles.



fig. 34 Charred cedar house - Speculative section I

Form: Asymmetric composition, small volumes pop out (blue-coloured) with pyramid-roof, elevated above ground and over the main building.

Construction: The walls are very thin, perhaps 100 mm - might be a material equivalent to cross-laminated timber. The overhang might be made with disc effect, where some parts are attached to the larger structure.



fig. 35 Charred cedar house - Speculative section II

Again, the zebra-patterned facade made of charred black planks and white plaster. The straight pattern is contrasted by the roof and the smaller volume that are covered with brown wooden shingles.



fig. 36 Roof house - Perspective

Form: A large horizontal volume that is varied with small volumes with asymmetric shapes (blue-coloured), at times elevated over the roof - one volume is separated from the house and stands on pillars and is reached by a ladder.

Construction: Thin and might be something equivalent to cross-laminated timber.



fig. 37 Roof house - Speculative section

Pots are designed into the ridges to use vegetation as decoration. Brown wooden shingles on the separate volumes and black horizontal timber make a major part of the facade.

ANALYSIS

Vernacular architecture of Gotland



fig. 38 Reed building for Gotland ponys at Lansa. Photo: Markus Moström

In this chapter, selected works of Gotland are studied in a similar procedure. The silhouettes are often simpler and there may be a stronger materiality of reed or a timber-frame construction that makes a decorative gesture. The latter ones are more thoroughly studied using line-drawings. Construction is also described and speculated upon in text.

Analysis - Vernacular Gotlandic architecture



fig. 39 Gottvaldska huset, Visby - Perspective

Form: A tall volume separated into three parts. Steep roof and a graphical pattern made of the construction, with a colour palette in white plaster, dark brown wood members and terracottabricks.

Construction: A timber frame structure probably made of oak. There is a slight overhang on the second story and by the roof base, supported by decorative consoles. The upper diagonal timber might be for stabilizing in the horizontal axis, just like the diagonal beams on the two first stories.



fig. 40 Lunderhaugenstugan (Museum of Bule) - Speculative section

Form: Simple volume where each story has its own construction. Strong materiality with thick wood, bricks, and stone.

Construction: The timber framing on the upper story creates a pattern in the facade, resting on the more dense, lower wood part.



fig. 41 Lamb shelter with reed roof - Perspective

Form: Strong materiality of the thick reed and the unprocessed wood holding it in place. Vegetation as decoration in the corners of the roof and at times a sign made of branches at the center of the ridge.

Construction: A steep angle of the roof ease the water run-off. Unprocessed pine stems serve as structural elements. The bark is left on them and small parts of branches are kept on the stems, directed upwards, as this will help keep the reed in place. (Werne, F, 1993)





fig. 42 Lamb shelter with reed roof - Speculated section + Axonometry

The pine stems are placed with about 15 cm in between, in a mark on the beam. The reed is supported by the horizontal branches that are held by consoles of crooked branches, attached to the outside of the beam. The reed has small thornes that helps it stay in place and is laid up to nearly one meter thickness. The ends of the pine stems are above the ridge in order to keep the reed in place when there is wind. (ibid.)

PROTOTYPING



Library

themes to inspire prototyping

After studying different aspects of chosen buildings through drawings and texts, the next step was to bring this research into design. When doing research on buildings you are fascinated with, one's respect for their works might make it harder to design something new. What qualities of character could be brought from the references and into a new design?

In the vernacular architecture the focus was on qualities of materiality and the readability of the structures. In Fujimori's work the focus was on the more playful qualities, such as alternative silhouettes and material meetings. How could qualities of readability from the vernacular structures be combined in new ways, with more playfulness? The design process was started by summarizing selected themes of characteristic qualities in the references into a library, which is presented on the next page. The themes were more open-ended and therefore inspired to test new designs. For example, using themes as relation to ground, silhouettes, vegetation as decoration, etc. These have all been starting points for the prototyping in physical models.











Library / Terunobu Fujimori

on e.g. a tree

fig. 3, 29

Library / Vernacular architecture of Gotland





Volume stacked on other material, e.g. stones

fig. 38

fig. 8, 9, 22

SOURCE MATERIAL

VEGETATION AS DECORATION



Reed held in place with unrefined pine stems

fig. 9, 10

TRADITIONAL CRAFTMANSHIP

fig. 1, 2, 9

fig. 9

VISIBLE SUPPORT



Readability of supporting and supported parts

fig. 11, 12, 23

Unexpected use of construction

fig. 6

fig. 5, 7

SILHOUETTES



Simple volumes and often few perforations





Plants on roof

ALTERNATIVE FORMS



Steep saddleback roofs

fig. 12, 13, 14

MATERIALITY



Wood, clay, reed and stone

(all examples)

PATTERNS OF CONSTRUCTION







Construction form graphical patterns

fig. 11, 12, 13

Prototyping

model sketches for character

During the modeling process the focus was on working with form and construction. To free up the mind from the references, the pictures of the works were put away. Instead, the themes of the library acted as inspiration for making my own, new structures. The models are made without regard to scale to enable a freer way of prototyping. A chunk of wood could represent a room in a large building as well as being a part of a room of a smaller one. The materials used were processed wood, reed, and clay, as well as unprocessed wood found in the forest. During the search for new forms, the process raised questions on how to combine vernacular architecture with playfulness – where is the balance? How can the quality of readability be used, where heavy materials lift lighter structures, and yet use these in unexpected ways? The prototyping gave further input to the search for new combinations that could express character.





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Prototyping form and construction













































learnings from model sketching

During modeling, stones and wood were built tall to become a base for a building. Further, timber structures and smaller volumes were stacked on top of each other, creating new structures. Organizing these larger chunks of mass into structures is a new addition to the design. It derives from how materials are stacked in vernacular architecture, combined with unexpected forms. Readability formed into new compositions.

Another lesson from the prototyping was how exaggerated scale could convey character. Big compositions of reed or large feet for the buildings are more expressive – they are clear and take up space. In comparison, forms that blend into the composition more naturally are more anonymous.

The chosen materials of the models affected the expression and the part-to-whole relations. Chunks of wood and timber structures resulted in organizing larger parts, whereas the clay allowed softer, more freeshaped, coherent forms.

model into drawing

After working with the models, questions were raised on what to bring from them – what was literal and what was symbolic? What did they represent that could be taken into design? When translating a physical model into a drawing, friction increased as precision was needed.

I got interested in a model that formed a courtyard, so this became the starting point for design. In the drawing sketch, materiality and scale was implied, and a bridge was suggested between two households.

To translate the models into digital drawings raised questions on how to keep the character of the handmade. The more unrefined wooden chunks in the prototyped models allow for quickly trying out and embracing randomness. In the digital modeling programs, the precise lines and shapes brought friction and created another expression. However, if it were to be built it would again be translated through the physical work by hand, and specific, personal solutions might come more easily. In the digital line-drawings, character has been aimed for by embracing irregular lines, suggesting materiality as well as letting the imagination fill in some blanks.







fig. 43 Nystugu, Fårö. A thatched farm close to the site of the proposal that inspired the material and colour settings, using light brown/honey coloured tar, light grey stones, and natural white plaster.

ON SITE

A place to live and create

Using the library

The prototyping process of exploring character through models and drawings led to testing qualities on a site. There are many ways to use these qualities, and the following synthesis shows one way to combine some of them.

Fårö has a cultural heritage, with film makers, writers, and artists working and living on the island. However, it has not led to many artfully designed buildings, drawn by architects (Svantesson et al., 2004). Instead, there are catalogue houses and other more standardized ditto, while there are constant changes of the older buildings.

This proposal is inspired by the cultural heritage of Gotland, yet in new, playful ways. The atelier-houses are formed as a courtyard. This formation functions as a space to let people continue the tradition of forming worlds and creating stories. A house of one's own, yet with people living in the same courtyard and a possibility to invite the public to create, in the more open building with timber-framing and large windows.

The site Fårö Nystugu

On the island Fårö there is an area called Fårö Nystugu, which have been chosen due to the character of the site. Quite close, there is a thatched farm with honeycolored tarred wooden details and fields of stone and plaster (fig. 43), close to a plastered mill (fig. 44). The pine trees embrace the site yet allow a glance of the sea towards south-east. A long, low stone wall frames the forest, and this gesture is translated into rounded stone walls in the design proposal.



SITE PLAN - 1:3000. Proposal marked in white.



fig. 44 Stone wall, pines, mill, and sea. The proposed site is to the right in the forest.



fig. 45 View from entering the site.







SITE PLAN 1:200

- 1. Tall atelier-house

- 4. Public atelier-house
- 6. Dog-house
- 7. Runner duck-house





PERSPECTIVE

A courtyard is formed by seven houses and two half-circle stone walls. All houses have their own mood, yet they share some material qualities.

FRONT VIEW - 1:200

The cables connecting the three atelier-houses are to enable the users to put their individual character to the site. They can communicate and send things, while working and living close to each other.



THE SEVEN HOUSES

1. Runner duck-house

Two stories with a plastered facade and two arched perforations. Shingle roof and three boxwood plants pruned into round shapes.

The first building the visitor sees when entering the site. A small, elevated thatched house rests on the half-circled stone wall. Vertical non-edged timber with

5. Public house

2. Dog-house

4. Thatched house

One-story building with a loft and thatched roof in the Fårö tradition. Colours are inspired by the farm close-by. Timber-framed structure resting on light grey stones. The wood is treated with light-brown tar and contrasted by natural white fields of plaster and light grey stone.

6. Tall house

Three-story building with a loft. First story in light grey stone. Vertical non-edged planks with light-brown tar are contrasted with white plaster in between. Shingle-clad pyramid roof in light-brown tar.

roof. 7. Monochrome house

Two-story building with a loft and a ceiling window towards the pine trees. Horizontal logs and the shingle-clad roof are treated with tar, linseed oil, and grey pigment, just like the Public house.

3. Bathrooms

light-brown tar, contrasted with white plaster. The round perforation in the wall is big enough to fit a dog's snout.

One-story building resting on single stones. Timber-framed structure treated with tar, linseed oil, and grey pigment, to get an expression of aged wood. The higher perforation rate of the facade indicates a more public use where courses and dinners can take place. The roof is a traditional wooden board

Facades in natural white plaster with shingle-clad roof and light-brown tar. The roof is crowned by a boxwood plant pruned into a round volume.



TALL HOUSE - AXONOMETRY

The first floor has a lounge, the second a kitchen with possibility to use the two windows for seating. The third floor has a view towards the sea and on the loft there are windows towards the sky.



TALL HOUSE - MODEL

The facade is made of un-edged planks that have organic lines combined with white plaster. It is treated with tar and linseed oil to reach a honey colour that contrasts the white plaster.

Reflection

During this thesis I have had the opportunity to explore character in different ways, by studying examples of successful buildings, getting hints about the processes of Fujimori and the Gotlandic vernacular architecture. I observe that there are big differences between these and how mainstream architecture normally is executed, which lead to different results. Prototyping in model allowed for more playful gestures, more easily than sketching in Rhino and other digital tools would have allowed for. Different sketching methods tap into different parts/amounts of creativity, which probably allow different outcomes. How we build, involved in the building process in real life, or by representing something digitally for others to build, I believe allow different outcomes when it comes to site-specific, playful expressions. It seems as if the rationalism and cost-effectiveness for the last decades has undermined the architect role and the potential to make architecture that convey character. If the method of creating architecture would be more personal, I believe the built environment could show more character and soul, with sustainable materials inspired by old and new techniques.

The final design proposal is different from the first sketches, where the focus was more on how, for example, the reed buildings of Gotland might look if translated into a villa, rather than using alternative compositions. The model sketching from the library allowed for a more playful process. Therefore, the current design proposal shows a variety of buildings with their own moods, forming a group. The forms in each one of them are quite subtle and normative but with strong materiality, in adherence to vernacular Gotlandic architecture. If instead one single buildings would have been designed, more complex forms might have been explored, and the single focus would have allowed the design to go more into detail. This contrasts to when Fujimori designs a house, where he often uses some few gestures, as in Roof house – a quite normal, orthogonal black house topped with smaller alternative forms to climb up to. This way the building has character and some readability, without being too messy. When designing a group of buildings in this proposal, the focus has rather been the composition of the whole courtyard, compromising on more flamboyant, non-normative qualities.

This thesis has led to approaches in character-driven design by embracing the materiality of sustainable materials and being physically involved in the process. Gestures of character can be to create upwardmovements, alternative silhouettes, vegetation as decoration, etc. All of these add to the whole expression. However, if you would liberally spread gestures out, it would not automatically lead to a characterful building. Design needs to be done with care and balance, which can be done in several ways.

The Finnish architect Juhani Pallasmaa (2009) claims that technology and economy must be joined by a life-enhancing charm. To me, subtle traces of playful humans and architects, add warmth to the users – to all of us grown-up children. This project has further ignited a longing for design, probably in part because of the more direct methods of creating architecture than usual. Hopefully, there are circumstances ahead for more experimentation and play in future designs. As Pallasmaa says:

"[I have] a firm conviction and instinctive feeling that in the midst of our labouring, calculating, utilitarian age, we must continue to believe in the crucial significance of play when building a society for human beings, those grown-up children. The same idea, in one form or another, surely lies at the back of every responsible architect's mind. [...]"



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Figure 38. Reed roof building for Gotland ponys at Lansa, Stursvik. Photo: Markus Moström. [Image] © Markus Moström. Received image, published in *Täckating på Fårö*

Modified images

Images as basis for line-drawings:

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