AESTHETICS
– THE UNEASY DIMENSION IN ARCHITECTURE

Editors: Anne Elisabeth Toft and Magnus Rönn
CONTENTS

4 FOREWORD
Magnus Rönn and Anne Elisabeth Toft

6 ON THE NORDIC ASSOCIATION OF ARCHITECTURAL RESEARCH (NAF) AND ITS HISTORY
Magnus Rönn and Anne Elisabeth Toft

9 SOME ASPECTS OF “ANONYMOUS ARCHITECTURE”
Hege Charlotte Faber

27 DEFINING REQUIREMENTS FOR APPRECIATION OF PATINA
Iida Kalakoski

41 MODERNIST AESTHETICS AND BUILDING DEFECTS: A STUDY OF HOW BUILDING DEFECTS ARE DEALT WITH IN ARCHITECTURAL LITERATURE
Ævar Hardarson

59 DESIGN VERSUS ECONOMY: ON PREQUALIFICATION IN DEVELOPER COMPETITIONS
Magnus Rönn

87 FUNCTION AND ORNAMENT: THE MODERN OF LOUIS SULLIVAN AND ELIEL SAARINEN
Minna Chudoba

109 AESTHETICS AND ARCHITECTURE FOR THE DEPENDENT AGEING PROCESS: SIX ARCHITECTURAL COMPETITIONS IN SWEDEN, 1907–2012
Jonas E. Andersson

131 DEN PRAGMATISK ARKITEKTURTEORI UTGÅENDE FRÅN JOHN DEWEYS TEORIER OM ESTETISKA ERFARENHETER
Leif Östman

145 PEER REVIEWERS
This anthology is the proceedings publication from the 2013 NAF Symposium *Aesthetics, the Uneasy Dimension in Architecture*. As a co-production between the Nordic Association of Architectural Research (NAF) and the Faculty of Architecture and Fine Arts at the Norwegian University of Science and Technology (NTNU), it took place at NTNU in Trondheim, Norway, on 25–27 April 2013.

What motivated the collaboration was a shared interest in architecture and aesthetics of NAF and the Faculty of Architecture and Fine Arts at NTNU. Suggesting that critical discussion on aesthetics in architecture and architectural discourse has become marginalized or almost non-existent at many universities and schools of architecture, the symposium wished to address this matter and what it means to architecture and our notion of it. In a self-reflexive manner, NAF and the Faculty of Architecture and Fine Arts at NTNU also wished to explore how this influences architectural research and the way architectural research is carried out in different research contexts.

Taking their point of departure in a number of epistemological questions regarding architecture and its aesthetic dimension, presentations at the symposium were framed by keynote lectures given by Peter Wilson, Juhanni Pallasmaa, Peter Buchanan, Yael Reisner, and Alexander Booker.
This proceedings publication collects seven articles written by authors who all presented papers at the symposium. The articles represent a selection made by the editors of the book. All of the articles published here have been submitted to a double-blind peer review process, following a peer review template developed by NAF.

We are very grateful to all the individual authors who have contributed articles to the publication and to the many peer reviewers who have supported NAF and its work by offering their time and professional expertise to reviewing the articles. We would like to express our gratitude to all of these people.

Our thanks are also extended most particularly to Associate Professor Eivind Kasa and Vice-Dean Gunnar Parelius, both at NTNU, who organized the symposium and conceptualized its programme in collaboration with the NAF Board.

Finally, we would like to sincerely thank NTNU and its Dean Tore Haugen, Professor in Architectural Management and Facilities Management, for hosting the event and giving a platform to its discussions.

Magnus Rönn and Anne Elisabeth Toft, Editors
The 2013 NAF Symposium *Aesthetics, the Uneasy Dimension in Architecture* coincided with the 25th anniversary of the Nordic Association of Architectural Research (NAF). NAF, an independent association of architectural researchers from universities and schools of architecture in the Nordic countries, was founded in 1987. Its primary function is to facilitate the research collaborations of its members and their exchange and dissemination of research results. Through its research symposia and its peer-reviewed scientific journal *NJAR*, NAF sets a standard for the scientific and artistic level of architectural research produced in the Nordic countries. NAF represents a pluralist approach to research in the area of architecture, urban planning, and landscape architecture, supporting academic freedom and scientific independence. It welcomes researchers ranging from PhD to senior researcher level, providing them with critical mass and an engaging and supportive research community.

NAF symposia are held once a year. They are important platforms for critical reflection on architecture and architectural research in the Nordic countries. The fact that the symposia are conceptualized and organized in collaboration with various partners and each year hosted by a different university or school of architecture ensures their dynamic and democratic format. Each year, the symposium focuses its discussions on a topic or theoretical framework representing the current research interests of NAF and its collaborating partner. The plug-in structure of NAF symposia allows for crossover collaborations between research institutions, and it stimulates individual researchers to explore new research contexts and cultures within the larger research community of NAF.

The history of the association and its journal can be divided into six different phases:
Conceptualized in 1987 by researchers in Gothenburg, Stockholm, and Lund, the association began as a purely Swedish project. It was managed by the Department of Architecture at Chalmers University of Technology, and
Professor Jerker Lundequist was by law responsible for its journal. The association – then known as The Association of Architectural Research – was founded in response to the growing need of Swedish research communities at universities and schools of architecture for a unifying platform. It was the first independent association in the Nordic countries to formalize discussions on architectural research, its research questions, theories, and methods.

In 1992, another seminal year in the history of NAF, the association became a truly Nordic association with a board consisting of members from Sweden, Norway, Denmark, and Finland. The association changed its name to The Nordic Association of Architectural Research, and its journal was given its present name The Nordic Journal of Architectural Research (NJAR) and a signature layout.

In 1995, a new board was selected for the association. This was dominated by members from Norway and had Professor Birgit Cold from NTNU as its president. This change signifies a third important phase in the history of NAF. The objective of the new board was to transform NAF into a common Nordic project for architectural research communities in the Nordic countries. From the mid-1990s onward, NAF symposia began to be organized on a regular basis, offering researchers critical mass and lectures by invited international keynote speakers.

The history of NAF entered its fourth phase when, in 1999, the NJAR peer review system was developed and professionalized. Associate Professor Pia Bille became editor-in-chief of NJAR, and the journal moved from Sweden, the Department of Architecture at Chalmers University of Technology, to Denmark, i.e. to Aarhus School of Architecture. Bille was editor-in-chief from 1999 to 2005. In her time as editor, the journal developed into a top-ranked scientific journal on an international level. During the same period, Professor Niels Albertsen, also from Aarhus School of Architecture, became president of NAF, followed by Dr. Katja Grillner from KTH, Stockholm, in 2000, Dr. Lena Villner from KTH, Stockholm, in 2002, Dr. Eivind Kasa from NTNU, in 2004, and Associate Professor Peter Thule Kristensen from KADK, in 2007.

In 2006, NJAR moved from Denmark to Norway when Eivind Kasa took over the responsibility as editor-in-chief of the journal. This shift, which represents another significant phase in the history of the association, was symbolically marked by a new layout for the journal.
The year 2010 represents the beginning of a sixth phase in the association’s history. 2010 was the year when NJAR became a digital journal and NAF began developing its website. Following an ever-increasing interest from researchers to publish in NJAR, the editorial work of the journal had grown significantly. In 2011 not only one but three new editors-in-chiefs were consequently selected: Professor Claus Bech-Danielsen, from Aalborg University, Dr. Madeleine Granvik, from the Swedish University of Agricultural Sciences, and Dr. Anni Vartola, from Aalto University, School of Art and Design. Dr. Jonas E. Andersson at The Swedish Agency for Participation and Trond Haug, Head of Publications at SINTEF, were made responsible for the NAF website and its maintenance, and they began the extensive work of digitalizing and archiving all previously published issues of NJAR; a job they successfully completed in 2015.

The above initiatives were all instigated during the presidency of Associate Professor Magnus Rönn from KTH, Stockholm, who was elected president of NAF in 2010. Anne Elisabeth Toft, Associate Professor at Aarhus School of Architecture, became president of NAF in 2015 with an ambition to carry on the work of her predecessor, yet turning NAF into an even stronger, more far-reaching association and brand.

The future of NAF looks bright as its journal has just been ranked at international top level, not only in Denmark and Norway but also in Finland, making it, to date, the only scientific journal in architectural research in the Nordic countries ranked at the prestigious top level 2.

The present proceedings publication, which was published by NAF’s own publishing house, is also a token of the focused development and professionalisation NAF is currently undergoing. Thus, 2016 was the year NAF established Nordic Academic Press of Architectural Research – an academic publishing house reserved NAF’s own peer-reviewed publications in book form.

*Magnus Rönn*
*President of NAF 2010–2015*

*Anne Elisabeth Toft*
*President of NAF, 2015–ongoing*

ABSTRACT
The objective of this article is to address some aesthetic aspects of eider duck houses in northern coastal parts of Norway, especially in the Vega Archipelago. I became aware of those small buildings for the first time a couple of years ago, while travelling in the north.

In his recent book about eiderdown from the north, Jon Suul calls the eider duck houses “anonymous architecture,” which is a good description of the phenomenon.

The literature so far – to the degree that it analyses and appreciates these buildings, and not only describes them – is appreciating the buildings from a cultural, historical, and agricultural point of view, and the weight is put on a utility perspective. However, we should ask ourselves about differences between architecture (understood as art) and other constructions in the landscape made by human beings: What is to be seen as architecture, and not as mere buildings or just sheds? Is it possible to see those dwellings – the eider duck houses – as architecture? I aim to look at the eider houses from an aesthetic point of view and tentatively as architecture, by relating them briefly to certain concepts of architecture.

KEYWORDS
Eider ducks, architecture, housing, eiderdown, harvesting, Vega Archipelago

INTRODUCTION
The objective of this article is to address some aesthetic aspects of eider duck houses in northern coastal parts of Norway, especially in the Vega Archipelago (or Vegaøyan in Norwegian). I became aware of eider duck houses for the first time a couple of years ago, while travelling in the north. The houses are built by people in the archipelago and meant for eider ducks during their nesting and brooding time. The houses are traditionally made of any con-
venient and near-at-hand materials, from stones and driftwood to old boathouses. In his recent book about eiderdown from the north, Jon Suul calls the eider duck houses "anonymous architecture," which I think is a good description.

The Vega Archipelago, which consists of about 6,500 small islands, some of them just reefs or rocks, was inscribed on the UNESCO List of World Natural and Cultural Heritage in 2004 as the first Norwegian cultural landscape area. It was emphasized that the Vega Archipelago is a living cultural landscape that “reflects the way generations of fishermen/farmers have … maintained a sustainable living” based on fishing and harvesting eiderdown. The contribution of women to eiderdown harvesting was also noted. From the 1960s onward, the inhabitants abandoned the islands, and the eider population declined. However, the world heritage status resulted in the tradition being revived on some of the islands, and today some people are even working as bird tenders on different islands (fig. 1).
THE EIDERDOWN HARVESTING TRADITION

In Northern Norway, the common eider (Somateria mollissima) has been a domestic animal for more than a thousand years. As Inga E. Næss and Jon Suul write, we find traces of this in kitchen middens and rock carvings from the Stone Age. The eider has not really been domesticated in a strict sense like cattle or sheep, but more like persuaded to come back to the same place on the same island for several years to nest. According to Bente Sundsvold, the eider is never really tamed, but a successful brood of ducklings will cause the adult eider to return. On the other hand, Jon Suul seems to be of a slightly different opinion when he mentions that some of the female eider have been given proper names.

The eider is well known for its invaluable down, which traditionally is used for filling in duvets and pillows. The eiderdown is term used for the small, soft feathers moulted from the breast of the female eider. The down is extremely light and warm and has tiny barbs that keep it together to provide perfect insulation qualities, which makes it so valuable.

Already several hundred years ago, the islands had become an important centre for the supply of down. This appears to have accounted for around a third of the islanders’ income. One can read in Snorre Sturlason’s Heimskringla, or The Chronicle of the Kings of Norway that the wealthy Hårek of Tjotta was up to a severe fight against Åsmund Grankjellsson and his father Grankjell about the income from eiderdown, in addition to the gathering of eggs, seal hunting, and fishing. The story ends with Hårek setting Grankjell’s house and Grankjell himself on fire, and Åsmund killing Hårek for revenge.

In the eiderdown harvesting tradition, the down is cleaned manually, for instance by using so-called down harps, which means a lot of work, and in order to collect and clean the down, it was important for the islanders in the north to tend the birds by making houses, or shelters for them (see fig. 2). If the down was full of grass, moss, and weeds, then it was very difficult to clean, and it would take a long time. According to Birgitta Berglund, people collect bladderwrack (Fucus vesiculosus, a sort of seaweed) and dry it, using it to make nests inside the eider houses. If they do not fill the nest with seaweed, the ducks themselves tend to use grass. Fetching and drying seaweed for the nests is therefore an important part of the bird-tending job, in addition to building, looking after, and repairing the houses.
Figure 2 (from postcard). Different eider duck houses in the Vega Archipelago. Photo: Inga E. Næss
Female eider duck (below). Photo: Lars Løfaldli
Because a large share of the islanders’ income came from eiderdown, it was extremely important to make comfortable and sustainable houses for the ducks, persuading them to return for nesting at the same place year after year. Making small houses for the ducks is thus a way of taking care of these seabirds as livestock. It is a win-win situation: people of the north get easy access to eiderdown for the making of pillows and duvets, while the birds get protection from winged and four-legged predators like seagulls, ravens, crows, sea eagles, otters, and in the later years, from about the 1930s, also the American mink.

The literature portraying and discussing the long-lasting Norwegian eider-down harvesting tradition is to a certain degree describing and appreciating the eider duck housing tradition. However, the literature tends to put weight on the symbiosis between man and eider duck, in domesticating the bird. To the degree that it is analyzing and appreciating the buildings, it approaches them from a cultural, archaeological, historical, and/or agricultural point of view, and weight is placed on the utility perspective.

For instance, Birgitta Berglund gives a thorough description of the eider houses, but as far as I can tell, her main interest is not in the architecture per se, but in eiderdown as a trade commodity for over a thousand years. Bente Sundsvold also points out that the islanders have developed a sophisticated practice of building nests for the birds from dried seaweed and houses from driftwood and stone, and of protecting the eiders from predators during the brooding season. She describes the houses and the eiderdown harvesting tradition in the context of protection notices, legal tradition, and legislation, in the context of protecting land and resources from public utilization, and especially the eider ducks during their nesting time. Inga E. Næss and Jon Suul are also mainly concerned about the utility perspective, but as we have seen, in the utility perspective the eider duck architecture is very important.

In addition to placing emphasis on the utility perspective, the literature also mentions eider duck architecture as a very characteristic feature (which it most certainly is), as we can read in the following passage found on a website about the Vega Archipelago as a World Heritage Area: “Architecture relating to the eiders: An outstanding [my italics] feature in the World Heritage Area is the many large and small constructions built to house breeding eiders.”
EIDER DUCK ARCHITECTURE
In the following, I am going to present some examples of different kinds of eider duck houses, ranging from what we could call single-family houses ("e-hus" in Norwegian)\(^\text{15}\) to semi-detached houses, apartment buildings, or row houses ("e-bane" in Norwegian). The examples of eider duck houses are collected from different islands in the Vega Archipelago. Of course, one might look at the eider duck houses as examples of cultural heritage and agricultural buildings like beehives and cow barns. People learning the handicraft by their predecessors made the most of the eider houses, in other words, we could talk about tacit knowledge being passed on from parent (or grandparent) to child.\(^\text{16}\)

The eider houses in the examples are made in the traditional way, using or reusing any convenient material. This material may consist of plywood and planks, corrugated plates, scrap iron, parts of other buildings, driftwood, bricks, flagstones, and other stones. It may also involve a reuse of old boats, boathouses, and outbuildings. A small fishing boat, often a four-oared boat, can be used as accommodation for several birds. Lodging for the eider ducks

![Figure 3. Skjærvær. Photo: Kari Wærum](image-url)
may even be found under a kitchen floor or in a storage cellar. According to Inga E. Næss, only fantasy and access to material set the limits.\textsuperscript{17}

Builders of the eider houses have to take into account both weather and nature. Since there are not many trees in the coastal areas, they used mostly stone in older times.\textsuperscript{18} Jon Suul writes that in our age some materials are not used in the building process, because they may pose a danger for the birds, for instance plastics or materials impregnated under pressure.\textsuperscript{19}
Because of the climate and the initial shyness of the birds, the builder has to possess some ecological knowledge as well. It is a harsh climate along the Helgeland coast with many challenges, both from the weather and from different predators, including winged ones and four-legged ones like the already mentioned American mink. This implies that the builder has to possess quite a lot of different knowledge: Where is the best place for the eider house? Where to put the entrance? How solid does the material have to be to resist the stormy weather? How close to the main house should the eider house be to avoid predators, but still not scare the ducks? How to avoid the American mink? Is it possible that the eider house will be destroyed by the spring tide? How to reuse an old fishing boat or a boathouse? The eider duck houses are exposed to nature, that is, to changing water levels, continuous weather fluctuations, and a harsh Norwegian climate – hence they will require a certain minimum of maintenance.

In addition, the builder and bird tender has to take into account the preferences of the ducks. The duck and the drake go together to view the houses, but it is the female eider who chooses between the different accessible structures: the individual “e” might prefer a single-family residence, or she might like to live together with others in a semi-detached house, a row house, an apartment, or so forth.
An example from the fishing village of Skjærvær presents two single-family houses (fig. 3). The structures are placed by the wall of an outbuilding, traditionally clad with grass on the roof. The two eider duck houses are made of old and reused planks. On top of the houses, there are stones to provide weight and to steady the structure, ensuring that rough weather will not destroy it. Here, it is also likely that the predators will stay away, because of the placement of the eider houses next to the other building. It is a rather small opening for the ducks, but the front of the house is designed as a bigger trapdoor for the bird tender to lift, obtaining access to the house. The bird tender needs a trapdoor when the house is going to be cleaned and prepared for nesting early in spring, and later in summer, when the duck and her ducklings are leaving the nest, to get hold of the down.

Another example shows some semi-detached houses placed all over the area (fig. 4). Here, one can see the construction of a double cage, and the ducks have to thrive with a near neighbour to choose such ones for nesting. Again, the tenders have used stones and some scrap iron to steady the construction.

An example from Halmøy shows a rather big apartment house, made by turning an old fishing boat upside down (fig. 5). The boats are often cut in two
parts right across the middle and subsequently equipped with a wall featuring a door for the bird tender and a trapdoor or opening for the birds. Heavy stones on both sides, the stones hanging in a strong rope, steady the construction. There is also a small walkway for the ducks, leading to the entrance. As in the example from Skjærvær, there is a door for the bird tender to gain access to the house for cleaning and down harvesting.

The next example presents some row houses from the little island of Lånan (fig. 6). Planks are the material used for the walls of these row houses. The roof consists of corrugated plates and planks. Again, stones on top of the roof secure the structure and prevent the wind from blowing it away.

Two eider houses from Hysvær are both single-family houses, one of which is constructed from stones and plates, clad with dried seaweed (fig. 7).

The last example I would like to mention is from Flovær, a semi-detached eider duck house, formerly a boathouse (fig. 8). Because the entrance is high up on the wall, the tenders have provided a walkway for the birds. As in some of the other examples, there is also a door for the bird tender.
These are just a few examples of eider duck architecture of course, selected to show the variety. In 2010, there were around 3,000 “eider houses” in the Vega Archipelago, an increase of nearly 30 per cent over the previous five years.

The largest known “apartment buildings” for eider ducks were in big boathouses on the islands of Flesen and Lånan (fig. 9), where about 100 ducks were nesting together in the 1950s.

To summarize, we could say that eider duck houses are made to give the birds attractive, dry, and protective shelters to nest in and to keep the down with which they line their nests clean and dry. The eider duck architecture can be seen as a shelter. A shelter might in turn be perceived as the most primitive form of architecture, starting with the dawn of mankind, when man was living in found or barely shaped dwellings like caves – but, barely shaped, they were for the purpose still quite suitable, providing shelter from bad weather and certain climatic challenges.
ARCHITECTURE ACCORDING TO PEVSNER

I will now move on to look at the eider houses from an aesthetic point of view and tentatively as architecture, by relating them briefly to certain concepts of architecture throughout history, from Vitruvius in the antiquity, Alberti in the Renaissance, and onward. The question is whether it is possible to interpret and appreciate these houses as architecture and not merely as buildings, or even only as sheds. Is it possible to see these dwellings – the eider duck houses – as architecture, even if they are not impressive or monumental? One might say that the answer depends on which concept of architecture one prefers to use.

According to the late Sir Nikolaus Pevsner (1902–1983), for example, a well-known art historian and architectural theorist – to cite his work on the history of European architecture (originally published in 1943) – a bicycle shed is a building, while the Lincoln Cathedral is architecture (with a capital A). Pevsner claims that nearly everything that encloses space on a scale sufficient for a human being to move in is a building; however, it requires certain
aesthetic qualities in addition to this for something to be called architecture. An eider duck house is from time to time big enough, but quite often not big enough, for a human being to move in, which means, following Pevsner, that we cannot even look upon such constructions as a building, and definitely not as architecture. So it seems that only the “shed” category remains.

What, then, are the required aesthetic qualities, according to Pevsner? Pevsner stresses three different qualities, and in turn connects these qualities to three different ways of thinking, namely the painter’s way, the sculptor’s way, and the architect’s way. The treatment of walls, the proportion of windows, the relation of wall-space to window-space, of one storey to the other, is two-dimensional and belongs to the painter’s way. The second is three-dimensional; it is the sculptor’s way, and the means are to treat the building as a whole, as a volume or plastic unit. Finally, we have the architect’s way, which is also three-dimensional. This is the way of thinking about space. Thus, according to Pevsner, the history of architecture is mainly the history of man forming space, and the art of architecture is the most superior of the different art forms, because the architect should think of space while creating architecture, but also have in mind the painterly and sculptural ways of thinking.26

The notion of the architect as the artist superior is perhaps not an opinion we find these days, in spite of great architects like Frank Gehry (b. 1929), Norman Foster (b. 1935), and Zaha Hadid (1950–2016) and marvellous works such as for instance the Guggenheim Museum Bilbao, and others. However, the opinion that it is both possible and necessary to distinguish between architecture and mere buildings is an opinion we still might find. According to this opinion, there is a difference between what we might call proper architecture, on the one hand, and mere buildings or sheds, on the other hand. This view belongs to a tradition of trying to limit the notion of architecture, to make it manageable. According to Hazel Conway and Rowan Roenisch, limiting the definition of architecture to polite or monumental works such as castles, palaces, and cathedrals uses status as a way of defining the boundaries of the subject.27 “The heroic approach to architecture reinforces the idea that it is the individual architect who makes history and so the history of architecture is the history of great architects and great buildings.”28

On the other hand, in the 1960s and 1970s Robert Venturi and Denise Scott Brown tried to show that commercial and non-heroic architecture was also worth studying, and that complexity and contradiction were of great interest.29
One could also think of shantytowns or farm buildings and outbuildings, beehives, and stables as interesting phenomena to study, even if they are not examples of heroic architecture of any kind, but rather examples of anonymous architecture.

In his *A History of Western Architecture* (1986), David Watkin writes that “each generation has had to rediscover the classical language for itself, finding in it what it wanted to find”. This is apparently a different approach to architecture than the normative one we find by Pevsner. From Watkin’s point of view, architecture might be seen as a living continuity, where one can find inspiration in the classical sources and the classical language of architecture, including for instance the Vitruvian.

**ARCHITECTURAL PRINCIPLES ACCORDING TO VITRUVIUS AND ALBERTI**

As we have seen, the eider duck houses may not be architecture in a strict sense, as defined for instance by Pevsner. On the other hand, we might look upon them as architecture due to other understandings of the concept, like the ones including primitive architecture, cardboard cities, shantytowns, and outbuildings, and so on. As such, we can discuss whether an eider duck house possibly possesses certain aesthetic qualities or not, anonymous architecture as it might be.

In the treatise *De architectura liber decem* or *The Ten Books of Architecture*, the Roman architect, engineer, and architectural theorist Vitruvius (ca. 80–70 BC, died after ca. 15 BC) claims that a structure must exhibit the three qualities *Firmitas*, *Utilitas*, and *Venustas*. “There are three classes of public buildings: the first for defensive, the second for religious, and the third for utilitarian purposes … All these [buildings, HCF] must be built with due reference to durability, convenience, and beauty.” As for instance David Smith Capon has pointed out, the three Latin concepts have been translated and interpreted in slightly different directions through history: *Utilitas* has been translated as function, commodity, usefulness, and convenience, while *Firmitas* has been understood as construction, firmness, solidity, durability, and strength. *Venustas* is related to form, delight, beauty, and grace. I am not going to inquire further into the different interpretations.

In order to perceive the eider houses as beautiful, we should in a sense look upon beauty as both a contextual and a historical entity, and perhaps as a
cultural one. It might also be fruitful to use a concept of beauty related to aesthetic experience, as developed by the Danish philosopher Dorthe Jørgensen in her writings about the history of aesthetics.\textsuperscript{33}

An eider house is certainly not beautiful in a similar way as a towering medieval cathedral, and it does not possess an amazing and strange beauty like the Guggenheim Museum Bilbao designed by the Canadian-American architect Frank Gehry. Nevertheless, it has something special, connected to its placement in the nature of the north, its coexistence with the scenery, and its struggling against the harsh climate and ever-changing seasons. Perhaps this also has to do with a feeling of harmony.

Maybe one could compare the beauty of an eider house with the beauty of a tool. In that case, the concept of beauty intertwines with a concept of utility or usefulness: it is possible to appreciate a hammer for its own sake, not knowing anything about its use, but you will understand and appreciate the beauty of the hammer even more in the moment you are familiar with its purpose. In a similar way, you might appreciate the beauty of an eider house. However, with some knowledge about the eiderdown harvesting tradition, you would appreciate the eider house as even more beautiful; in the moment you acknowledge it as an eider house, made for a certain purpose, useful and functional in the landscape and the coastal culture. Then we could also say that the required quality of \textit{Utilitas}, or usefulness and convenience, is fulfilled as well; the eider houses are most certainly useful for their purpose, in a tradition developed through the centuries, as literature describing the eiderdown harvesting tradition points out.

Further, the eider houses possess solidity, in the sense that they are supposed to endure inclement weather and a harsh climate. According to the three principles of Vitruvius, one could therefore possibly interpret and appreciate those small buildings as architecture, made for utilitarian purposes.

The treatise \textit{De Re Aedificatoria} or \textit{On the Art of Building} (exact translation: About the Building of Things) by the Renaissance architect, engineer, painter, and mathematician Leon Battista Alberti (1404–1472) can be interpreted as a reformulation of Vitruvius's \textit{Ten Books}, with the intention of clarifying the ancient concepts. In the first parts of his treatise, Alberti makes an attempt to define architecture, and in Chapter I, we can read that the art of building rests in the design, and in the structure.\textsuperscript{34} In Chapter II, he says
that “The whole Art of Buildings consists in six things, which are these: The Region, the Seat or Platform, the Compartition, the Walling, the Covering and the Apertures; and if these Principles are first thoroughly conceived, that which is to follow will the more easily be understood.”35 He continues: “… Each of them [the principles] be adapted to some certain and determinate Conveniency, and above all, be wholesome.” Further: “That they be firm, solid, durable, in a Manner eternal, as to Stability: And as to Gracefulness and Beauty, delicately and justly adorned, and set off in all their parts.”36

As Anthony Blunt points out in a book about artistic theories in Italy from 1450 to 1600, Alberti’s treatise is mainly about town planning. Alberti is primarily occupied with the notion of a civil architecture and perceives architecture as a civic activity, closely connected to the needs of man, and intending to bring glory to the city, in utility and in ornament.37

When it comes to beauty, Alberti gives a definition inspired by Aristotle. “I define beauty to be a harmony of all the parts, in whatsoever subject it appears, fitted together with such proportion and connection that nothing could be added, diminished or altered but for the worse,”38 which is nearly the same way that Aristotle put it in the Poetics, when characterizing a tragedy. In Chapter 7 of the Poetics, Aristotle claims that what is beautiful lie in size and arrangement. “… [S]ince a beautiful thing, either a living creature or any structure made of parts, must have not only an orderly arrangement of these parts, but a size which is not accidental – for beauty lies in size and arrangement … a certain size is required, but one that can be readily perceived as a whole” (50b34).39 To be beautiful, a thing must have a proper size and arrangement, not too small, not too large, be it architecture or a tragic plot.

SOME CONCLUDING REMARKS
Of course, the eider houses will not “bring glory to the city, in utility and in ornament”. They are not architecture with a capital “A” in the sense of Pevsner, for example. However, I would suggest that we not only consider their solidity, functionality, and utility aspects, which obviously are present, but also their special beauty as “anonymous architecture”. This beauty is in turn closely connected to the eiderdown harvesting tradition context, and to the eider duck architecture’s place in the scenery and in the coastal culture of Helgeland.
NOTES

1 Jon Suul, Edderdun fra nord: Det biologiske, kulturhistoriske og juridiske grunnlaget for fredning av egg- og dunvær samt anvendelsen av andre sjøfugler (Trondheim: Norsk ornitologisk forening, 2012), p. 43.
6 Suul, Edderdun fra nord, p. 33.
7 See “Vegåøyen – The Vega Archipelago”.
10 Berglund, “Fugela Federm in Archaeological Perspective”.
11 Bente Sundsvold, “Stedets herligheter”.
12 Næss, Med ea som husdyr.
13 Suul, Edderdun fra nord.
15 “E” or “ea” is the local name of the female eider.
16 Because of the situation some years ago, this knowledge was in danger of disappearing. Today, children learn about the building tradition at school. Nowadays, there is also a practice of making eider houses as designed houses and with new materials, due to courses meant for possible future bird tenders and other people interested in the coastal eiderdown harvesting and eider house building tradition. See for instance Nordland ærfugllag, http://www.eiderducks.no, and Suul, Edderdun fra nord, pp. 96–111 (about the future of the eiderdown harvesting tradition).
17 Næss, Med ea som husdyr, p. 11.
18 Suul, Edderdun fra nord, p. 45.
19 Ibid., pp. 45–46.
20 Ibid., p. 49.
21 For those who are interested, there are many photos of different eider duck houses on this webpage: http://www.verdensarvvega.no/images/stories/eksempler_ehusarkitektur.pdf?phpMyAdmin=250b6cb7847462343b7ba455760edecd, accessed 15 October 2016.
22 See Verdensarv Vegåøyen, “Cultural and architectural heritage”.
23 Suul, Edderdun fra nord, pp. 48–49.
26 Ibid., pp. 15–16.
28 Ibid., p. 16.
36 Ibid., p. 3.
ABSTRACT
Time is said to be the fourth dimension in architecture. Besides the stylistic history, material aging is another tangible and visual piece of evidence of the passing time in built environment. In some cases the visual results of aging are appreciated aesthetically and called *patina*.

This study defines patina as an indicator of age and of historical authenticity, meaning that the original material is believed to hold the essence of the historical object. Since the architectural conservation is an activity that is directed to historical building materials, it is, inevitably, connected with the concept of patina. The study discusses different interpretations and evaluations of patina in historical perspective and examines their relevance in modern conservation discourse. As a conclusion, this study suggests the principal requirements for appreciation of patina.

KEYWORDS
patina, attrition, time, material age, authenticity, conservation, evaluation

INTRODUCTION
Time has always fascinated human beings. It is both a self-evident context of our everyday lives and a “mysterious dimension of the physical reality and human consciousness”.¹ As time itself is difficult to define, physical changes in our environment are taken as its evidence and explanation.² David Lowenthal emphasizes the importance of the physical remains in experiencing history and memories. “Relics are”, as he claims, “essential bridges between then and now”; they are concrete pieces of evidence of passed times.³ Architecture and built environment are also concrete instruments that transmit to us the experiences of time and temporality. Architecture is, moreover, a media through which knowledge about history, different historical events and styles, is expressed in an understandable way. According to Juhani Pallasmaa,
“[t]owns, buildings, and objects are an extension of the collective memory of the community and its individuals.”

The starting point of this paper is to evaluate the environmental qualities that transmit the experiences of time and history in a certain place. Features of the stylistic history express the point in time when the building was created or renovated. The actual passage of time, on the other hand, leaves its marks on the building materials through attrition. These visual changes are, in some cases, called patina.

As an activity directed to historical building materials, architectural conservation is inevitably connected with the concept of patina. This paper examines how patina is defined and how it has been treated in the history of conservation. As a conclusion, this study suggests the principal requirements for appreciation of patina. These requirements also constitute a starting point for a conservation aiming at the preservation of patina.
This study presents the history of conservation theory from the angle of material authenticity, the main authorities being Jukka Jokilehto and John H. Stubbs. On the other hand, the experiential values of historical environment, and especially of patina, are examined through a review of the literature, including writers such as Juhani Pallasmaa and David Lowenthal. The aim of this study is to combine these two perspectives, one concerning patina as a restoration dilemma and the other presenting it as a valuable matter in environmental experiences.

**PATINA AS AN INDICATOR OF AGE**

The importance of history and historical remains has been discussed in the introduction of this article. Besides the stylistic history, material aging is another tangible and visual piece of evidence of the passing time in built environment. In some cases the visual results of aging are appreciated aesthetically and called patina. In this sense, the significance of patina is culturally constructed, and it would be nothing but dirt or attrition without symbolic meanings given to it by the society, and eventually by the viewer.5

Technically, patina is a result of uncontrollable environmental changes that mar the surface of a certain material. More specifically, it is a chemical term for oxidized metal, according to Merriam-Webster’s Unabridged Dictionary: “a usually green film formed naturally on copper and bronze by long exposure or artificially (as by acids) and often valued aesthetically for its color.”6

Patina, in its broader meaning, consists of material changes that appear ostensibly randomly in the course of time. Therefore, patina indicates the unpredictability and the uncontrollability in the built environment that otherwise is designed, built, and maintained by human beings. These random aspects are the result of natural processes acting on building materials. Georg Simmel describes architecture as a struggle between man and nature, and a lately completed building as a temporary triumph of man over nature. Any state of decay, in turn, stands for nature’s superiority.7

In most cases, the definitions of patina include both the technical and the aesthetic aspect of the concept. Weathering of material indicates the passage of time as visual aging. Due to practical reasons, structural decay has often been seen as a negative implication of weathering. On the other hand, some types of surface attrition enjoy acceptance, depending on, for instance, the age, material, or function of the object in question. Acceptable patina is, ac-
According to Frank Matero, “judged or measured to have little physical effect on the durability or performance of the material, or imparts an acceptable or desired visual aesthetic, as well as those changes that more or less preserve the historical form”.8

The term patina has been used at least since the seventeenth century to describe tolerable, acceptable, or even desirable traces of aging on building materials or on works of art. Patina became fashionable along with the concept of the picturesque and was interpreted as a finishing touch of time and nature on human creations.9

The indicators of age, including patina and style, became major issues in eighteenth- and nineteenth-century aesthetic theory, art history, and restoration philosophy, along with the concepts of authenticity and originality of a work of art.10 According to John Ruskin, a pioneer of modern conservation theory, a building only grows to its full perfection through decades or centuries, age actually being one of its most important components.11

CONSERVATION AS A MEDIATOR OF CULTURAL HERITAGE

As our culture is strongly tied to our built environment, conserving it is a logical part of transmission of culture to the next generations. According to Paul Philippot, the relation to the past is always within the present, and restoration, since it deals with materials, concretizes this relation in an indisputable manner.12 The concept of material authenticity is an important issue in conservation theory. Attrition, as an inevitable consequence of both passage of time and usage of material, is considered to be evidence of authentic historicity of the material.

The history of architectural conservation can be divided into pre-modern and modern phases. The important turn to a more theoretical approach took place in the eighteenth century.13 Before that, restoration, conservation, and reuse were activities that were practiced intuitively as required by the individual, practical situations.

Our early ancestors must already have realized the practical advantage of maintaining their utilitarian objects and constructions to keep them usable for a longer period of time. Through this intuitive preservation, their monuments, such as sacred places, temples, and churches, came across as important mediators of knowledge, understanding, and spiritual beliefs from
one generation to another. Therefore, preservation and conservation, even though practiced for thousands of years without a theoretical framework, became important for the transmission of cultural heritage.14

The first widespread manifestations of intentional attitudes for preservation of historical remains are found originating from twelfth-century China. This approach even included ideas about architectural conservation. Similar ideas first appeared in Europe in the fifteenth century as educated European humanists exhibited a growing interest in human history. The Age of Reason, from the mid-seventeenth century onward, developed our understanding about the arts and sciences, including history. As a result, from the Renaissance forward, humankind knew more about its past than ever before. This expanded awareness also established a new scientific approach to history, which replaced the traditional approach and continuity of traditions. The past was now regarded from distance apart from the present. This new approach enabled the modern interest in heritage and a romantic nostalgia for the past.15

The main principles and concepts of the conservation movement first appeared in the European context, in the eighteenth century. The Industrial Revolution denoted a turning point in Western culture and brought along cultural changes that transformed our views of history. Furthermore, the modern phase of architectural conservation now took its first steps. Accelerating changes in built environment gave rise to objections among the architects and reinforced the development of the restoration movement.16 Old environment now signified stability in a rapidly changing world. The modern concept of restoration was further defined in the debates of the nineteenth and twentieth centuries.17

In modern conservation practice restoration theory, one of the most important principles is that “the consequences of the ageing of the original materials (for example ‘patina’) should not … be disguised or removed”. to minimize physical loss of any original material.18 The patina of age, in turn, is considered as a piece of evidence of the originality of the material. This demonstrates the important connection between the development of restoration theory and the growing interest in patina during the last centuries.19

In the nineteenth century, the conservation of monuments was mainly about preserving the original style and harmonizing it. The main principle was to
remove all alteration and recreate an entity that was supposed to represent the original intention of the artist or architect. These alterations, meaning the later construction or restoration phases, were seen as undesirable additions that were to be removed in the name of authenticity. Therefore, an alteration can be considered as a counterpart for a natural attrition. Both of these occasionally undesired phenomena change the original appearance of the monument and both indicate its historicity, the first being mainly unintentional and caused by natural forces (in which I also include slowly progressing attrition caused by human usage) and the latter being intentional and man-made. Both of these indicators of age became more discussed and appreciated by the end of the nineteenth century onward.20

PATINA AS AN INDICATOR OF HISTORICAL AUTHENTICITY

“Why do so few modern buildings appeal to our emotions, when an anonymous house in an old town, or an unpretentious farm building, will give us a sense of familiarity and pleasure? Why is it that the stone foundations we discover in an overgrown meadow, or dilapidated barn, abandoned boathouse can arouse our imagination, while our own houses seem to stifle and smother our daydreams? The buildings of our own time may arouse our curiosity with their daring or inventiveness, but they give us little sense of the meaning of our world or our existence.”21

The experience of continuity is, according to Juhani Pallasmaa, “one of our basic psychological needs. He claims that [a]s well as experiencing place, we need to experience time. We need to reassure ourselves of existence here and now, and of how we fit into time’s continuum.”22 Peter J. Larkman has justified the psychological advantages of historical environment by quoting several interview studies mainly executed in the 1970s. The message seems clear: interviewees prefer, for instance, pictures of old environments when compared with pictures of new built environments.23 The reason is, most probably, the same as in the rapidly modernizing Europe of the eighteenth century. We need assurance of the rationality of our lives in the form of stability and permanence.

Built environment concretizes historical events and consolidates our memories, both personal and collective. Architectural structures facilitate memory,24 and they function as a reassuring setting for our understanding of time’s continuity. It has even been said that without historical buildings and places, civilization as we know it today would not exist.25 The need for memories is fundamental.
Interest in history and appreciation of age value are important requirements for the admiration of patina. Such an attitude, in the European context, has its roots in the Italian Renaissance, which is known for having rediscovered the value of ancient, especially classic, art. The Renaissance view did not yet recognize chronological and stylistic development, but the urge to learn about history through investigation of historical artefacts was a novelty. This new interest denotes the origins for the objective and holistic approaches to the study of history developed in the West, where historicity is considered to be tied to cultural production and especially to material culture.26

This means that the authentic material is believed to hold the essence of the historical object and, even more widely, the essence of the culture that created the object. Furthermore, for the visual arts in Western culture, the idea of the work is closely tied to materiality through form and fabric. These two reasons justify the consideration of conservation as an action of transmission and reception of cultural heritage. It enables the survival of the object in the future and transmits its immaterial contents.27

Even if authentic material is considered to be an important factor for the reliability and value of an object, natural degradation is, however, seen as a threat to the visual and structural integrity of the work. This leads us to one of the main dilemmas of conservation theory that has been discussed throughout its history. Generations of restorers have been debating whether the essence of the historical or artistic object is in original fabric or in original form: Which one should be preserved if one threatens the other?28

In the nineteenth century, one of the most influential conservation debates pitted the theories of Eugène Viollet-le-Duc against those of John Ruskin. Their approaches seemed to be extreme opposites, as Viollet-le-Duc promoted major, stylistic interventions, whereas Ruskin only required minor repair and maintenance. Both theories have profoundly affected the later development of architectural conservation. Moreover, both required authenticity and originality. The aspect that differed dramatically was their vision about the value of the historical layers, on one hand, and of the intention of the artist (architect), on the other.29 Patina as a concept is, in most cases, contrary to the original artistic intention of the artist or architect. Appreciation of patina therefore requires accepting the partial loss of the original artistic qualities.30
Ségolène Bergeon-Langle, the former director of conservation for France’s national museums, defines patina as *oeuvre du temps* (creation of time) and as a natural attrition of original materials. More distinctively, he defines the patina of usage as a specific and maybe less favourable type of patina. However, he admits the value of patina of this type in some specific cases, such as remnants of tea in Chinese pottery or marks of repainting in religious pictures. In these cases, the authenticity is not primarily authenticity of material but authenticity of usage.

Patina is inseparable from the materiality of the object where restoration and conservation are concerned. It also functions as evidence of material authenticity and cannot be reconstructed. Restoration is part of a process that transmits the building into the future. Restoration should treat its object as it appears today, not as an imaginary creation of its own time.
Age value is one of the key terms used by Austrian art historian Alois Riegl (1858–1905), who in his *Theory of Monuments* distinguishes between intentional and unintentional monuments. For intentional ones, the *original state* of the monument is crucial and any signs of decay diminish their historical or *documentary* value. Unintentional monuments are those having become monuments during their existence without having been purposely designed or built as such. These kinds of monuments support aging better, and they might even require it to become valuable. Their central values are attached not to their original appearance but to their history, as well as to their whole existence. According to Riegl, age value might even become so important that it is the fundamental value of the monument. *Decay* or patina is then the indicator that functions as the evidence of the age value.32

Georg Simmel describes the material changes caused by slow attrition, calling them “the charm of old materials”. He tells how, in the process of time, the tones of colours of a new construction become more and more similar to those of its surroundings. That is why an old building seems to belong to its environment, no matter if it is in a rural landscape or in a cityscape. This harmony is caused by patina and, according to Simmel, affects people in a comforting way.33

According to Pallasmaa, “materials and surfaces have a language of their own”, their own time scales, durability, and modes of weathering. Some materials, such as wood and bronze, speak through attrition “pleasurably of layered time as opposed to the flat and voiceless industrially manufactured materials of today.” Further on, Pallasmaa claims that “[a] truly material architecture does not struggle against time and makes time’s traces and marks comfortable and acceptable. This architecture seeks to accommodate rather than impress, to evoke the intimate sensations of domesticity and comfort, instead of external admiration and awe.”34

An important notion, when evaluating the importance of patina on a historical object, is that it has been more or less weathered for most of its existence, so patina has become an essential part of it, not only visually, but also chemically and technically. Instead, the pristine condition of the work existed only for a little while after the completion of the construction project or creation of a work of art.35 “A monument of the past, be it architecture, sculpture, painting or any combination of these forms of art, has come to man through time and history,” writes Paul Philippot. During this period, the monument...
has undergone many changes and modifications caused by men or nature. According to Philippot, all this history must be taken into consideration when planning further modifications. “Indeed, history and time cannot be undone; they are irreversible.” Philippot emphasizes the significance of the whole life span of the objects, and therefore it is precisely the “genuine voice of the past” that should be preserved.\textsuperscript{36} Philippot claims that “[t]he original state [of an object] is a mythical, unhistorical idea, apt to sacrifice works of art to an abstract concept and present them in a state that never existed.”\textsuperscript{37}

Even today, it is hardly applied to objects that are too young. As Frank Matero mentions, “[t]his is perhaps best observed in our taste for preserving archaic ‘old-fashioned’ things as aged or incomplete whereas no imperfection is tolerated for works of the recent past.”\textsuperscript{38}

According to widespread conviction, modern architecture, unlike other architectural styles, does not tolerate patina because of its materials, simplified forms, and especially because of its ideals of timeless essence.\textsuperscript{39} This notion proves how strongly an appreciation of patina is connected to historical and cultural frameworks. It is difficult to tolerate patina on something too proximate, and for today’s architects modernism seems to be near, both historically and stylistically.

When discussing the concepts of patina and restoration, it is important to realize the cyclic nature of these processes. Often, when giving value to patina, it is \textit{defined as} “beautiful marks of aging” in distinction to ugly and unwanted ones, as something that should be protected as it is. However, the process of weathering is an important part of patina. Some specialists define patina as something (beautiful) that can be preserved in any circumstances.\textsuperscript{40} I assert that patina can be valuable and still removed occasionally to avoid further damage. This need for regular maintenance, painting for instance, does not mean that these surfaces could not take on valuable patina between these operations.

One piece of evidence, not an actual requirement, of the admiration of patina is the concept of false patina, which means treating an object to look more ancient than it really is.\textsuperscript{41} According to Cornelius Holtorf, “the perception of pastness can be brought about by processes other than genuine aging over time.”\textsuperscript{42} The widespread admiration of false patina has been seen as an alarming sign of a rootless society, where unauthentic patina is used
to remind us of a real life that has slipped away from us. The theme of false patina is revealing about the admiration of patina in general. We can accept it, even admire it, but not without conditions. We prefer it clean, controlled, and invariable. However, this approach is contradictory to the real essence of authentic patina.

CONCLUSION
This paper shows that patina has been widely discussed in Western conservation theory. It also demonstrates that appreciating patina is a cultural concept. The main purpose of this study is to introduce and justify some important requirements for the appreciation of patina and to function as an introduction for further, more detailed studies about historicity in built en-
vironment. One of the elementary requirements is the appreciation of age value, which is a result of interest in history. This interest, in turn, is a result of changes in Western culture since the Renaissance. A new, scientific world view came to replace the traditional relation to the past, and history was now regarded from a distance. This has deepened our interest in the past and in historical remains.

Another elementary requirement for the appreciation of patina is our attitude toward materiality (especially typical for Western cultures). We believe that the essence of an object is tied to its original material, so the attrition functions as evidence of its age. Therefore, if the age is appreciated, the attrition can also come to be appreciated as a result of aging. The third elementary requirement is acceptance of the partial loss of the original form and design of the monument. This requirement leads us to discuss the importance of the intention of the artist (or architect).

If these three requirements are implemented, then appreciation of patina is possible. However, the final judgment is often made through aesthetic evaluation. “Beautiful patina” is considered worth preserving, whereas unpleasant decay is not. This constitutes an unstable basis for conservation theory, as the aesthetical values are constantly changing. This dilemma also justifies the need for further research on the topic.
NOTES

8 Matero, “Confronting Time”, p. 3.
14 Ibid., pp. 157–58.
15 Ibid., p. 25.
19 Rahola, “Patinan arvoitus”, p. 35.
20 Ibid., p. 40.
21 Pallasmaa, Encounters 1, p. 87.
22 Ibid., pp. 76–77.
24 Pallasmaa, Encounters 2, p. 23.
25 Stubbs, Time Honored, p. 3.
26 Ibid., p. 42.
29 Stubbs, Time Honored, p. 208.
34 Pallasmaa, *Encounters* 2, pp. 53 and 55.
35 Matero, “Confronting Time”, p. 3.
37 Ibid., p. 372.
38 Matero, “Confronting Time”, p. 3.
40 According to professional discussion about patina held by the National Board of Antiquities in Helsinki, 6 March 2012.
41 Bergeon-Langle, “Patine”, p. 130.
MODERNIST AESTHETICS AND BUILDING DEFECTS: A STUDY OF HOW BUILDING DEFECTS ARE DEALT WITH IN ARCHITECTURAL LITERATURE

Ævar Hardarson

ABSTRACT
Knowledge about building defects has long been an important part of architecture theories. In the early twentieth century, there was a dramatic change when modernist architects started to disregard the knowledge gained from tradition and experience in favour of the new modernist aesthetic. A key aspect of this trend was when architects abandoned their responsibility for the technical aspects of constructing buildings in support of greater aesthetic freedom. This trade-off meant that architects eventually lost both the opportunity and motivation to learn from mistakes in construction techniques, including how to avoid building defects. This created a new problem. Recent research has shown that modernist aesthetic design can lead to design-induced building defects.¹

KEYWORDS
Building defects, design-induced building defects, innovative modernist architecture, modernist design ideology, concept of honesty, traditional architecture

INTRODUCTION
In connection with a PhD study on the relationship between modernist architecture and building defects, literature reviews were carried out to establish a theoretical framework for exploring this subject. Several interesting issues unexpectedly came to light during this study. It was found, for example, that only a few references dealt with the connection between modernist design and building defects. For this reason the study turned to older architecture literature, and this brought different facts to light. It was obvious that knowledge about building defects was an important part of architecture theories until modernism marched us into the twentieth century.
This paper discusses reasons for the absence of references to building defects in modernist architecture literature, and the consequences this has had for our approach to issues relating to building defects in the profession of architecture.

The paper is part of the presentation of findings in a recent doctoral dissertation at the Norwegian University of Science and Technology (NTNU), Faculty of Architecture and Fine Art. The title of the dissertation is Dristinge detaljer: Studie av designforårsakede byggskader i innovativ modernistisk arkitektur (Daring Details: Study of Design-Induced Building Defects in Innovative Modernist Architecture).

The research thesis for the focus of this work is that building defects are expensive and could be the source of a health risk for building residents. Such illnesses as allergies or asthma may arise in houses with too high moisture content due to the growth of mould in the internal environment. Building defects also cause unnecessary extra expenditures for the homeowner. It is estimated that approximately 5 to 10 per cent of the annual turnover in the construction business is expended on repairing building defects. These expenses are also linked to the level of technical innovation. Thus the cost of repairing building defects in an innovative building project may be several times higher than in a house with standardized solutions. A good example is Frank Lloyd Wright’s Fallingwater from the 1930s, an expensive innovative building which has recently undergone complete renovation due to building defects caused by the design.2

To introduce discussion on this topic, some key concepts will first be presented. These have in part been developed and defined by the author, but they build on existing knowledge about architecture and design, building physics, construction processes, and building defects.

**Building defects:** “Negative deviation that manifests itself through reduced functionality or performance and subsequent deterioration, new investments and/or increase of planned maintenance costs.”3 This is a collective term for all building defects, whether they are defects caused by flawed construction, inadequate maintenance, overload, or inappropriate use. This paper focuses on building defects that arise in the construction process and are due to inadequate design, here called design-induced building defects.4
Design-induced building defects: These are building defects caused by work a decision-maker and/or designer has carried out or neglected to carry out due to ignorance, indifference, or negligence when it comes to circumstances that may cause building defects.

Innovative modernist architecture: This paper uses the term “modernist” to refer to architecture from 1900 to the present. These are buildings that depart from traditional architecture in design, method, or choice of materials. What characterizes innovative modernist architecture as dealt with in this paper are clean surfaces, streamlined appearance, large glass surfaces, flat roofs, and minimalist details. The term innovative is used to focus on a key element in modernist design ideology: the demand for continuous renewal of modernist architecture, even if this requirement increases the risk of design-induced building defects.

Modernist design ideology: This term describes the ideological underpinning of the design of modernist architecture. The ideology may comprise ideals, models, and/or examples, but also statements and unwritten value norms and attitudes relating to design used to define what the architect is striving for and what constitutes acceptable aesthetic design, choice of materials, and details. Key elements of modernist architecture are the demand for continuous renewal of architecture and the concept of honesty, which is dealt with later in the paper.
Traditional architecture: A building designed and erected according to traditional building principles. Traditional architecture is divided into many styles and subcategories, including vernacular architecture. In this paper, the term is used to describe a building tradition that is the opposite of innovative modernist architecture as described above. It is also used as the rival theory of modernist architecture.

THEORETICAL FOUNDATION
The method used is to review available literature dealing with design and building defects to discover what knowledge is available in this field. An important tool used in the analysis is the two rival theories: traditional architecture and modernist architecture. These rival theories represent different design strategies, values and standards, as well as differing views on building defects.

An important contribution to the analysis of the rivals comes from Christopher Alexander, who highlights the difference between traditional architec-
ture and modernism by introducing four constructs used in the analysis of
the relationship between design and building defects. First is the construct
pair “fit” and “misfit”. For Alexander, “fit” means design that is functional in
a wide sense, while “misfit” means defects and flaws, what are here called
building defects. The two other constructs used in the analysis are “the un-
selfconscious process” and “the self-conscious process”. These constructs are
used to analyze and describe the various design processes or strategies on
which traditional and modernist architecture are founded.

According to Alexander, traditional architecture has evolved through “un-
selfconscious processes”. In this system, building forms are created in ac-
cordance with local traditions, taboos, and rituals. An important part in this
system is that knowledge from misfits is used to develop architecture that is
better adapted to local conditions. But modernist architecture has evolved
through “self-conscious processes”. Importance is attached to individual ex-
pression, allowing innovative design to break with traditional architecture.
Typically, experiences gained from misfits are neglected and not used to im-
prove the designs.

FINDINGS
The theoretical discussion is presented in chronological order, where the
oldest references are given first. The purpose is to highlight the differences
between the theories in relation to design, aesthetics, and building defects.

Figure 3 Examples of traditional architecture: A) A cluster of houses on the Greek island of Santorini, anonymous architectu-
re. B) Keldur in South Iceland, an example of the oldest surviving type of turf buildings in Iceland. C) Wooden houses with
corrugated metal roofs in Reykjavik from the early twentieth century. Source: Ævar Hardarson, private photo archive.
The First Known Building Defects in History

The very first known building defect in history is the collapse of the Tower of Babel, which is mentioned in the Bible in the Book of Genesis. The biblical narrative tells of the construction of a tall tower, which then collapsed when God played havoc with the languages of the construction workers. Archaeological excavations suggest that the story relating the construction of the Tower of Babel is more than a myth. Remnants of a tall tower have been found in historic Babylonia from around 2100 BC. Matthys Levy and Mario Salvadori point out that the probable cause of the collapse of the Tower of Babel was an inadequate binding agent between the stones in the construction, which could not withstand the weight of the tower, in addition to vibrations caused by wind and/or earthquakes. Thorsten Nolting links the story of the Tower of Babel to the discussion on building defects and “tower buildings” in more recent times, where the underlying driving force often has been exhibitionism and the desire to win honour and fame, but these are forces that are also found in many ambitious modernist construction projects.

Another interesting historical reference linked to building defects can be found in the Book of Leviticus in a chapter called “Cleansing Houses”. Here the problem of mould in houses is discussed for the first time. Mould due to dampness in a house is thus an ancient problem, just as hazardous to health then as it is now. This source thus serves as a reminder that much can be learnt from studying history.

Vitruvius: Strong, Useful, and Beautiful Architecture

An important reference is *Ten Books on Architecture* by Vitruvius, and his definition of good architecture through the concept of *firmitas* (strength), *utilitas* (utility), and *venustas* (beauty). Vitruvius describes what an architect should master to be able to create good and lasting architecture. It is important to design a building that will fit with the local conditions. One building style is suitable for damp climates in the north, while another is appropriate for the arid climate in the south. A fitting saying attributed to Vitruvius is: “Thus we may amend by art what nature, if left to herself, would mar.” In other words, an architect should use his knowledge to design houses that can withstand the local climate. This is a problem we also face today.

Theories on Building Defects from the Renaissance

Leon Battista Alberti’s work *Ten Books on Architecture* from around 1450 is important in this context. It builds on the works of Vitruvius and develops
the profession of architecture as an academic subject. Alberti was greatly interested in beauty, but he was also a practical man with house-building experience. He deals with building defects in several of his books, in particular Book 10, in which he devotes a whole chapter to building defects, stating: “The greatest Injury to all Parts of a Building is the Neglect and Carelessness of Men.”

Another important Renaissance architect who wrote about building defects is Andrea Palladio (1508–1580). Needless to say, he was interested in classical order, but also in practical aspects, such as reasonable use of building materials and designing a house and its details so that it would not be ruined by mould.

Building Defects in Architectural Theories up to the 1900s

The architectural theories that were used up to the modernist age were generally based on experience, the so-called “rules of thumb” used by architects and master builders when designing and building houses. The heritage after Vitruvius and Alberti was an important part of these theories. An example of such theories from the Nordic countries is Theodor Broch’s *Lærebog i Bygningskunst* (Textbook for the Art of Building) from 1848, which was used when teaching architects and engineers up to our time. The heritage from Vitruvius is clearly visible in this quotation:

> The science that teaches the construction of all kinds of buildings that will be solid, useful and beautiful is called the Art of Building.

In Norway, German textbooks on architecture and construction techniques were widely used. One of these was *Handbuch der Architektur* (Textbook on Architecture) from 1881. Kerstin Noach believes that Bredo Greve, the architect who designed the main building of the Norwegian University of Science and Technology in Trondheim, turned to this work for inspiration and guidance. The following quotation by Greve from 1905 testifies to a prescient attitude towards architectural design that tried to prevent climate-related building defects:

> Due to the vulnerable position of the main building, being subjected to gales and rain in Trondheim that usually drive in from the north and the west, the north, east and west façades of the building have been clad with cut natural stone. The rear façade, which is less subjected to the detrimen-
tal effects of the weather, is intended to be covered in rough cast made from cement-lime mortar.\textsuperscript{17}

From Traditional Architecture to Modernist Architecture

In the transition from traditional architecture to modernism, the architectural theories of Eugène-Emmanuel Viollet-le-Duc (1814–1879) are important.\textsuperscript{18} He gave us several key modernist design principles, in particular the principles of rational (functional) architecture and the concept of honesty. Viollet-le-Duc was also a practical man, and as was the case with Vitruvius and Alberti, he was interested in issues of technology and what needed to be done to prevent building defects such as leaking gutters and drainpipes. In 2005, William B. Rose stated that Viollet-le-Duc was one of the few architects to have written about the importance of designing solid gutters and drainpipes to avoid damage from mould.\textsuperscript{19}

Figure 4 Hellman’s ironic sketches showing traditional and modern facades side by side. One facade hides defects behind decorations, while the other exposes everything. Source: Hellman 1988, p. 163.
Development of Modernist Aestheticism

A key moment in the development of modernist aestheticism is the publication of Adolf Loos’s famous article *Ornament und Verbrechen* (Ornament and Crime, 1910). In this text, Loos argues for doing away with ornaments and decorations because they do not fit to the new time. Moreover, ornaments are expensive and do little but cover up defects and flaws caused by the builders, i.e. what is here called building defects. According to Loos, the true and honest building quality will only appear when the ornaments are removed. Loos’s text came to have great impact on the development of modernism.

An interesting approach to the relationship between ornaments and building defects comes from Louis Hellman, the architect and artist, in his 1988 book *Architecture for Beginners*, in a humorous drawing (see fig. 4). Hellman points out that a modernist may have misunderstood the function of an ornament, bearing in mind that ornaments are not merely decoration but had the important function of leading humidity away from critical joints and covering over something that was not intended to be displayed, such as cracks and defects. This contrasts strongly with modernist, naked details that expose vulnerable joints, thus omitting the necessary protection of sections of buildings that are exposed to the climate.

One of the innovative centres in the development of modernist architecture was the Bauhaus school in Germany, established in 1919. A significant part of the Bauhaus ideology was to distance oneself from tradition and older building styles, as stated in the basic tenet “starting from zero”. The idea was to establish a new aestheticism founded on creative ability that was to be completely different from traditional architecture. It was also in this aestheticism, so strongly linked to creativity, that modernist architecture found its authority and visual impact, according to Tom Wolfe in 1983.

Another key factor in the development of modernism is Le Corbusier’s (1922) book *Vers une architecture* (Toward an Architecture). Le Corbusier’s aim was to create “a clean, neat, clear, orderly and sound architecture” which would be the complete opposite of the over-decorated, messy and unhealthy traditional architecture. Le Corbusier saw the work of the architect as art, equal to other fine art which aims to evoke sensory impact, i.e. appeal to visual and perceptual qualities. More recent studies have drawn attention to the fact that Le Corbusier’s architecture was neither particularly healthy nor impervious to leaks.
The Concept of Honesty in Architecture
The concept of honesty in architecture is a key aesthetic ideal in modernist design ideology, where the aim is to expose the function, components, and materials of a building, while avoiding the use of ornaments. Louis I. Kahn, a firm believer in this concept, stated that an architectonically designed room is a room that reveals how it was made.26 An example of the application of the concept in practice is to display supporting structural elements in reinforced concrete without hiding these behind other materials or details. This ideal arose as the opposite of the over-decorated and “false” traditional architecture from which modernist architects endeavoured to distance themselves through different designs, details, and choice of materials. Even if the concept of honesty in architecture has a key place in modern aesthetics, there are few sources in the literature that describe the concept explicitly.

Figure 5 Hedmark Museum in Hamar, Norway. Constructed to cover Middle Age ruins. This is one of the principal works of architect Sverre Fehn (1924–2009), and is a fine example of the concept of honesty in designing the construction, use of materials, and in detail. Source: Magne and Siri Kvam, private photo archive.
Today the concept of honesty in innovative modernist architecture is practised across the globe. The concrete architecture designed by Tadao Ando bears witness to this, as do Norman Foster’s high-tech buildings. Norwegian architect Sverre Fehn was an ardent spokesperson for the concept of honesty in his designs and his teaching. A famous example by Fehn featuring the concept of honesty is Hedmarks museet (the Hedmark Museum) in Hamar (fig. 5), where exposed concrete, laminated wood, brick, steel, and glass in a modern version reveal a modern contrast to old stone walls from the Middle Ages.

**The Naked Detail**

An integral part of the concept of honesty is what may be called the naked detail. A naked detail in a climate screen is a detail where everything that may remind a viewer of traditional ornaments has been removed. The aesthetic ideal is to display the materials and how they are put together without covering them up with extra elements. Such elements may be mouldings or flashings which were called ornaments in traditional architecture. The rationale offered by architects who eschew such designs is that mouldings and fittings are ugly. Examples of naked details are shown in Figure 6.

---

**Figure 6 Details from Fallingwater.** A) Original details from 1937, without flashings. This naked detail has caused unwanted deterioration and leakage from the beginning. B) Renovated details from 2005. A new waterproofing system by using three plies of membranes and flashing to cover the critical joints. Source: Hardarson 2012.
The consequence of naked details is nevertheless the display of exposed and vulnerable parts of a climate screen. At a later stage, this leads to unwanted deterioration and leakage. The majority of the building defects analyzed by the author (Hardarson 2012) are of this nature.

The Flat Roof
An important element of modernist aesthetics is the flat roof. The great breakthrough for this type of roof in modern times was the Weißenhof Estate in Stuttgart in 1927. However, it must be pointed out that the flat roof is not a modern invention. Quite to the contrary, it has been used in traditional architecture in many parts of the world for millennia, particularly in arid areas in the East and around the Mediterranean. Modernist architects appear to find this roof style pleasing and feel that it fits well with light, undecorated wall surfaces, as Tom Wolfe writes.

The pros and cons of flat roofs have been debated since the 1930s right to the present. It is interesting to note that the arguments for and against flat roofs are the same today as they were in the 1930s.

Even though it has come under much criticism, the flat roof has survived. Studies of recent architecture built after 2000 show that modernist architec-
ture with a flat roof is very popular and has become the dominant form of aesthetic expression, at least in the Nordic countries. In Iceland alone, almost 20,000 houses were built between 2000 and 2008, most of them according to the modernist aesthetic. Many of these houses have been found to have major building defects.

Innovative Modernist Architecture Today
The innovative modernist architecture produced today generally builds on the ideological heritage of the modernist pioneers before and after the Second World War. But there has been an important change. Among the architects adhering to the modernist design ideology, far less importance is attached today to function in designing architecture than one would think when considering the tenet that form should follow function. This change can be traced back to the 1940s and to increased awareness among leading architects, that they had special artistic obligations that weighed more heavily than function and user needs. One of those on record in this line is Philip Johnson, who stated: “Where form comes from I don't know, but it has nothing at all to do with the functional or sociological aspects of our architecture.”

Similar attitudes are expressed by Peter Eisenman, an important pioneer and expert authority among avant-garde architects on the East Coast of the United States. He is known for his inimical attitude to function: “I don't do function. … None of my houses is shaped for client's needs. They are designed to shake them out of those needs.”

Several well-known architects primarily consider themselves as artists creating works of art. Whether or not some building defect or other should occur is rather inconsequential. This would be something to take for granted, as seen in the following statement by Frank Lloyd Wright: “If the roof doesn't leak, the architect hasn't been creative enough. … That's how you can tell it's a roof.”

Of course this was meant as a joke, but it is very much a cousin to the aphorism “All good architecture leaks”, heard by the author during his time as a student at the Oslo School of Architecture and Design in the 1980s.

Modernist Design and Building Defects
With the emergence of modernist architecture, compartmentalization of knowledge, and increased specialization, construction and technical build-
ing concerns generally disappeared from the basic architectural literature. This also applied to building defects. New disciplines have been established to deal with technical issues. One such discipline is building physics, which arrived on the scene in the 1940s.

One contemporary writer who has specifically discussed building defects in modernist architectural literature is Jonathan Ochshorn, who points out that the reason why architects started to ignore the issue of building defects is in part due to the fact that the architect no longer is fully responsible for designing the climate envelope, including full control of details. According to Ochshorn, the problem stems from the fact that the architect relinquished technical responsibility in the construction process in favour of aesthetic freedom. This was a kind of trade-off that modernist architects opted for quite early, and it relates to Le Corbusier’s claims that architecture was primarily art subjected to artistic criteria. In Ochshorn’s view, one consequence of this is that the architect eventually lost the opportunity and motivation to learn from the construction engineering work, including building defects.

Building Defects and Preservation of Modernist Architecture

An interesting phenomenon which was discovered during this literature review is that even though the combination of the search terms “building defects” and “modernist architecture” yielded few hits, much knowledge was found about technical problems in modernist architecture. The solution was to use other search terms, such as “repair” and “preservation”. An important knowledge centre in this context is the international association Docomomo, which works with the documentation and preservation of modernist architecture.

A general problem with modernist architecture that has undergone repairs is that it has not withstood the ravages of time well. The problems are tied to new materials and details that are not robust in relation to the impact of the climate over time. A highly relevant reference about problems in modernist buildings is Susan Macdonald, who describes building defects in concrete constructions. Climate and physical problems in buildings are described by Jos Tomlow. There are many important new publications describing the preservation and repair of building defects in innovative modernist architecture, such as Pamela Jerome, Norman Weiss, and Hazel Ephron, who discuss the problems relating to repairing the Fallingwater house designed by Frank Lloyd Wright. Another interesting reference describing building defect
problems in modernist architecture is *Conservation of Modern Architecture*, edited by Susan Macdonald, Kyle Normandin, and Bob Kindred.\(^{40}\)

Premature aging and defects relating to appearance are general problems in modern architecture. Making a very perceptive point, John Allen states: “Unlike many historic buildings modern architecture generally needs to look new in order to look good.”\(^{41}\)

This points out that part of the problem lies in modernist aesthetic design, which, as mentioned above, does not withstand the ravages of time very well.

**DISCUSSION**

This paper has examined the reasons for the lack of discussion on the building defect issues relating to modernist architecture theories and the consequences these issues have for the way to approach this problem in the architectural field. The paradigm shift that occurred when modernist architecture started to disdain knowledge inherent to experience-based traditional architecture is striking. This included ignoring knowledge about building defects and favouring the new modernist aesthetic. The aesthetic linked to creative artistic design then becomes a powerhouse for creative architects with the right taste, who seek to legitimize their professional authority. Niels L. Prak discusses such forces in the architecture profession, pointing out the strong psychological driving force which is linked to being perceived as a creative artist, because this confers high status among colleagues and the public at large.\(^{42}\) The criticism levied by Christopher Alexander on modernist design ideology indicates the same idea that Ochshorn has posited.\(^{43}\) He finds that modernist architects have lost the opportunity and motivation to learn from previous techniques used to construct houses and to learn from actual building defects.

The logical conclusion of these arguments is that the architects who endorse modernist design ideology tend to design new buildings with a greater number of building defects than those who do not. The main argument is that demands for creative design and individual expression tend to trivialize the problem of unsuitable design in modernist architecture that leads to building defects. One possible way out of this problem is research and teaching aimed at creating design that makes building defects into an interesting architectural problem.
ACKNOWLEDGEMENTS
This paper was made possible by funding from NTNU, the Faculty of Architecture and Fine Art, the Department of Architectural Design and Management. I would also like to extend my gratitude to Professor Tore Haugen and Professor Geir Hansen. A special thank you goes to Jan-Henrik Ingebrigtsen for proofreading and translation of the text into English.
NOTES


2 Ibid.


12 Ibid., Book 10: “Of the Defects in Buildings, whence they proceed, and their different Sort; which of them can be corrected by the Architect, and which cannot; and the various Causes of bad Air”, p. 209.


28 Wolfe, *From Bauhaus to Our House*.


35 Ibid.


38 Jos Tomlow, “Building Science as Reflected in Modern Movement Literature”, in Tomlow, *Climate and Building Physics in the Modern Movement*.


44
DESIGN VERSUS ECONOMY: ON PREQUALIFICATION IN DEVELOPER COMPETITIONS

Magnus Rönn

ABSTRACT
This paper presents results from a research project studying prequalification for restricted developer competitions aimed at housing in Sweden. The methodology includes an inventory of competitions, case studies, document reviews, and interviews with members in the organizers’ selection committees. The case studies comprise three restricted developer competitions in Danderyd, Nacka, and Trelleborg organized by the respective municipalities.

The design teams are selected by prequalification in restricted competition. The organizer starts prequalification by inviting candidates to the competition. The organizer’s invitation contains a short description of the competition task, the aim of the competition and the conditions, submission requirements, and criteria for the evaluation of applications. The essential demands are general and based on Swedish law on public procurement. The evaluation criteria are experience-based and reflect professional merits for the competition.

The three developer competitions generated a total of sixteen applications from candidates, teams of constructors, and developers in cooperation with architect firms. The lead applicant was the constructor or developer – not the architect firm. Eleven design teams were invited to the developer competitions after prequalification.

Winners in developer competitions receive building permits and can implement their proposal, either by purchasing the land or acquiring the leasehold. Building costs (economy) and design quality (aesthetics) are key factors for organizers. The invited teams generally take part in the developer competitions at their own expense. This was the case for two of the competitions studied here, while in one the invited teams each received 50,000 SEK for their design proposals, which is very low compensation for design proposals as compared with architecture competitions.
The organizers were pleased with the information in the candidates’ applications and the selection committees were easily able to choose teams for the competitions, which can be explained by the low number of applications. According to the selection committees, the prequalification process worked well, although the organizers had expected wider interest from the building sector and more applications from constructors and developers.

KEYWORDS
Developer competitions, prequalification, selection, organizer

INTRODUCTION
Prequalification in developer competitions (real estate competitions) is a form of competition used by municipal authorities in Sweden to enable builders, construction companies, and real estate managers to procure publicly owned land. These developer competitions give companies access to property for the planning of new buildings and constructions, the location of enterprises, and the development of areas. The municipal authorities regulate development through detailed plans, which are drawn up in connection with the competitions. Without building permits, the sites concerned are of no interest for housing.

Property use in Sweden is regulated in the Planning and Building Act (Plan- och bygglagen). There is no law specifically for developer competitions. The Law on Public Procurement (Lag om offentlig upphandling, LOU) is therefore used for choosing companies in developer competitions and for the implementation of designs. The winning design proposal is controlled by an agreement between the municipal authority and the prizewinner. Municipal authorities define the land allocation in a common way. For example, Sollentuna, in the Stockholm region, describes the concept as follows:

Land allocation means the right of a party, during a limited amount of time and in accordance with a predetermined set of conditions, to cooperate with a municipality to build or develop a project within a specified land area owned by the municipality.

The Swedish Agency for Public Management notes that it has become increasingly common for municipal authorities to draw up their own policy documents for land allocation, approved by the municipal council, technical council, or real estate board. These target and steering documents contain a
series of general goals. Sollentuna wants to: a) become competitive, b) meet municipal and societal needs, c) consider the effects on the environment and climate, and d) create diversity by land allocation. Similar statements of intent can be found in documents from other municipal authorities. According to the land allocation policy for the municipality of Sollentuna, developer competitions should be used in special cases “where the place or purpose so demands”. A project is taken as an example where architecture, new thinking, technical development, economics, and a challenging topography are important. Another motive is the desire for a landmark. However, there is no detailed discussion of the competition form in Sollentuna municipality’s policy document, e.g. invited or open developer competition. Practice must therefore be created in the specific use of the competition instrument.

Research Overview

The organizer initiates the competition with an invitation to prequalification. The companies who wish to participate in the competition reply by sending in their application. If there are more applicants than places in the competition, the organizer must make an evaluative selection whereby some candidates must be deemed to be more suitable than others. This is the basic problem, common to all competitions with a limited number of participants.

This study examined three invited developer competitions, organized by the municipalities of Danderyd, Nacka, and Trelleborg in Sweden. The design teams were chosen by prequalification, which is a selection process. The number of applicants reflects how attractive the competition task is for the building sector and how tough it is for the competing design teams to gain a place in the competition. The three competitions in this study attracted twenty-one applicants. Of those, sixteen design teams were invited to participate in the competition. It is that selection (prequalification) process which is examined in this study.

A general model (Figure 1) was constructed on competitions as a research field, in order to put the investigation into context.

The specific subject of this investigation was developer competitions. This special kind of competition is marked in blue in the general competition model depicted in Figure 1. The developer competitions in Danderyd, Nacka, and Trelleborg were all organized as restricted competitions on a national level. They were project competitions orientated towards implementation.
A typical feature of national competitions in Sweden is a language demand in the invitation for the brief to be written in Swedish and the design proposals to be presented in Swedish. There is sometimes also a demand in the invitation for knowledge about the Swedish building codes.

There is a lack of research about prequalification for developer competitions, which is surprising considering the popularity of these competitions. In fact, there are more developer competitions organized in Sweden than architecture competitions, but the literature appears to contain only one study focusing directly on developer competitions and how they produce architecture and urban design. This study, a conference article by Leif Östman, examines developer competitions in Finland and describes a significant case study in Helsinki. Prequalification for architecture competitions is also a neglected area of knowledge, but there have been some studies on restricted architecture competitions in Denmark, Sweden, and the Netherlands.

The material available on developer competitions in Sweden is dominated by documents from government agencies, research reports, and university ex-
amination papers, but prequalification does not play a leading role in any of these items. Instead, the focus is on land allocation agreements in municipalities and procurement, and the material rarely mentions whether an invited or open developer competition is used for land allocation agreements. This is a troublesome omission. Thus, the present study aimed to contribute new information that is important for understanding developer competitions and their specific conditions.

Cost and quality are two important factors in developer competitions. The winner in Danderyd was able to purchase property at the market price, which in this case is the best offer, and therefore the economic aspect was focused on during the judging of competition proposals. The price of the land appeared to be more important than the project’s architectural merits. The second way to determine the selling price is to set the value of the land ahead of time. This would encourage the companies to compete on quality instead of property price. Trelleborg municipality used this approach. In both of these cases, the land was sold at market value. These two principles for determining property value are important for the impact of quality on developer competitions.

The Swedish Agency for Public Management (Statskontoret) has been asked by the government to describe and evaluate municipal land allocation for housing. In 2006, the agency investigated land allocation in six municipalities: Stockholm, Gothenburg, Malmö, Västerås, Linköping, and Uppsala. According to its reports, direct order is the most common method used by municipal authorities to allocate land for housing. Developers in those studies preferred direct order, because calls for tender and competitions were considered to be unpredictable and costly. The picture is not clear-cut, however. Companies who wish to establish themselves in Stockholm are positive to developer competitions, which have enabled some companies to establish themselves in cities. The Swedish Agency for Public Management is cautiously positive and thinks that municipal authorities should use “developer competitions periodically to open up the market”.

In 2012, The Swedish Agency for Public Management continued to map land allocation in sixteen municipalities. It noted that Linköping municipality has used developer competitions extensively since 2010. Criticism from developers and constructors involve competition costs, vague evaluation criteria, and the price of land having too great of an impact. At the same time, construc-
tors, builders, and real estate managers point out that carefully prepared developer competitions are the “best way to provide all interested parties with the possibility of establishing themselves in a municipality under equal and open conditions”. Only developer competitions with clearly defined evaluation criteria can guarantee that companies are treated equally, but the planning process is then “longer and more expensive”. According to The Swedish Agency for Public Management, there is a risk that candidates with fewer resources may not participate in the competition. However, the empirical evidence for competitions resulting in longer planning and building procedures is very weak.

The Swedish National Board of Housing, Building and Planning (Boverket) has reviewed land allocation in thirteen municipalities. According to its report, smaller constructors are critical of developer competitions, which they see as an instrument that requires resources to create good housing. A closer look reveals the source of this information to be a Master’s dissertation from the KTH Royal Institute of Technology in Stockholm, in which thirteen informants from private companies were interviewed. However, the criticism of competitions was not as great as claimed in Boverket, since a “clear majority felt a call for tender and developer competitions were acceptable”. One reason why it is costly to participate in public developer competitions is that they are carried out at the participant’s own expense. This makes the competition a risky investment for the future. The prize is an agreement giving the building company the exclusive right to negotiate with the municipal authority on realization of the project, either through land purchase or leasehold. Therefore, only the winner of the developer competition can expect to cover their costs for the competition from future income. Prequalification is a way to limit the costs of competitions for the competing design teams. Economic compensation for the competitors would partly solve the problem of high costs for the development and design of the competition proposals. It is a dilemma for both organizers and competing design teams.

**Aim and Research Questions**

The investigation reported in this paper was of an explorative nature and dealt with the selection process in prequalification for three developer competitions organized by the municipal authorities of Danderyd, Nacka, and Trelleborg. The research concentrated on the invitation, application, and selection of participants (design teams) for the developer competition. The aim
was to acquire knowledge about prequalification, from the organizer’s decision about the competition and the review of applications to the final choice of the winner. The relationship between design and economy was taken to be illustrated in the prequalification of design teams. This analysis was based on evaluation criteria listed in the initial invitation to potential candidates.

**Theory and Method**

The theoretical frame for collecting and processing data can be summarized as follows:

- **Inventory**: The study began with an inventory of the developer competitions organized during the period from 2010 to 2012. The search concept was prequalification and housing. The inventory showed that most of the land allocation competitions were organized as open competitions. The opposite is true in architecture competitions.\(^{17}\)

- **Case studies**: The inventory resulted in selection of developer competitions with housing provision as the competition task. Three of these competitions were chosen as case studies. By questioning the organizers, it proved possible to obtain access to the invitation, applications from the selected candidates, and internal competition documents from the selection procedure.

- **Document review**: The competition documents describe the “exterior” of the prequalification process and were used in two ways: partly as a source of knowledge about the choice of candidates for the competition, and partly to identify the organizer’s informants who participated in the evaluation of applications. Further scrutiny of the documents provided information on the process from the invitation to the final choice of candidate.

- **Interviews**: Experience-based data from the “interior” of the informal prequalification were obtained by interviewing individuals who participated in the selection and judged the applications. The interviews were based on an interview guide with open questions about the competition background, competition form, judging process, and reviewers’ experience from prequalification. These data provided information about prequalification from the organizer’s point of view.
Informants/Sources
A total of ten informants from the organizers recounted their prequalification experiences in the interview guide. There was an equal gender representation among the sources. The response frequency was good, and ten of the twelve individuals who participated in choosing candidates for the competitions answered the questions in the interview guide. Of those, two were politicians and eight were municipal employees.

A group of experienced individuals, most aged over forty and with at least ten years of professional experience, reviewed the companies’ applications and shortlisted candidates for the developer competitions. The professional qualifications of these individuals were of an interdisciplinary nature, with roots in planning, architecture, and care of the ageing. There are no grounds for criticism of the informants’ collective competence for the task.

CASE STUDIES
A short description of the three cases is provided below, based on the organizers’ invitation to prequalification for developer competitions and the organizers’ decision to invite design teams after evaluation of their applications.

Case 1: Senior Housing in Danderyd
Danderyd municipality issued an invitation in 2011 to a developer competition for senior housing. Interested companies were invited to consult the municipal authority’s website for further information. The municipality also sent out a special circular to fifteen construction companies and real estate managers in Greater Stockholm. According to the invitation, three to six constructors would be invited to participate in a developer competition. The municipality had two main goals for the competition: i) to sell the land to the winner; and ii) to obtain suggestions for around thirty-five senior apartments suitable for the needs of the elderly. The building had be two to four stories high and 50 per cent of the apartments had to have a quiet side facing the common courtyard, to minimize noise pollution from traffic in the area. The municipality set up a land allocation agreement for realizing the winning proposal, with an option for the winner to directly negotiate the purchase of the property.

The invitation stated that a selection committee of three individuals would evaluate the companies’ applications and reduce the number from three to six. The development manager would then review the companies regarding
agreements and technology, the city architect would judge the design references, and a representative from social services would examine the documents describing the housing. The committee reported that the invitation generated six applications from companies, all of which met the application demands and matched the maximum number of places in the competition. For this reason, all applicants proceeded to the competition. The following six design teams from companies were invited to the developer competition by the organizer:

- Bonum Seniorboende; representing a major developer.
- NCC Construction; representing a major constructor.
- RCC Stockholm; representing a regional constructor.
- Seniorgården; representing a developer.
- Skanska; representing a major constructor.
- Strabag Projektutveckling + Turako Fastighetsutveckling + Conara; representing a major international constructor with a Swedish branch, in cooperation with two small Swedish developers.

Case 2: Rental Apartments in Nacka

In 2010, Nacka municipality invited companies to participate in prequalification for a housing development competition. According to the invitation, five design teams with constructors or real estate managers and architects would be asked to participate. The purpose was to designate a builder to construct apartment houses with their own long-term management. The invitation stated that the new housing would serve as a model, and that economic, social, and environmentally sustainable construction would be preferred. The area was deemed suitable for a block of thirty to fifty apartments. At the same time as the competition was being prepared, the urban planning work began to make the site accessible for housing purposes. The municipality decided to sign a land allocation agreement with the winner, in which the property would be granted a leasehold. Detailed planning of the new property usage would be made in cooperation with the winner.

The invitation also stated that the organizer planned to invite three to five companies to take part in the competition. A selection committee of three individuals from Nacka municipality would choose the participants for the competition. The municipality received seven applications, from which five design teams were chosen. The committee that made the selection consisted of the municipal authority’s technical and property director, the city ar-
chitect, and the head of the environmental office. The municipal authority’s project leader was present at the selection meeting, together with an external consultant acting as secretary. After examining the applications, the following teams were invited to participate in the competition:

- Botrygg Gruppen + Erséus Arkitekter; representing a developer in cooperation with an architect’s office.
- Bygg Vesta Bo + White Arkitekter / Johan Kirsh; representing a developer in cooperation with a major architect’s office and a small architectural firm.
- Peab Bostad + Engstrand och Speek; representing a constructor in cooperation with an architect’s office.
- Stockholms kooperativa Bostadsförening / kooperativa hyresgästförening + Kjellander och Sjöberg Arkitekter; representing a regional developer in cooperation with an architect’s office.
- Wallenstam + Semrén & Månsso; representing a developer in cooperation with an architect’s office.

Case 3: Apartment/Housing Block in Trelleborg

In 2011, Trelleborg municipality invited companies to the prequalification for a competition on housing with space on the ground floor for commercial activities. The competition was advertised both on the municipal authority’s website and through direct contact with twenty-four companies. The municipality described two purposes for the developer competition: i) to invite five teams of construction companies and architecture firms to take part in the competition; and ii) to sign a land allocation agreement with the company behind the winning proposal, which would be the basis for continued planning, design, and implementation. According to the invitation, the municipality was seeking a design team with a strong interest in taking on the future of the Trelleborg city centre. The development had to have innovative architecture, communicate the quality demands of town building, and be environmentally sustainable. The price of the land was set by the municipality at 2,000 SEK per m². The cost for development of the site would be entirely the responsibility of the company behind the winning competition proposal.

The invitation also stated that five design teams would be chosen for the competition. A jury would make the selection in Trelleborg (not a specific selection committee as in the other two cases). Four members from the competition jury would evaluate the applications and choose design teams.
for the developer competition. The invitation resulted in eight applications from construction companies in cooperation with architecture firms. The following five competition teams were invited to participate by the organizer:

- JM / Seniorgården + Plan och byggnadskonst i Lund; representing a constructor in cooperation with a local architect’s office.
- Peab Sverige + Grotmij; representing a Swedish constructor in cooperation with a department in a major architectural and engineering firm.
- + Arkitektlaget Skåne; representing a developer in cooperation with an architect’s office.
- Trelleborgshem + White Arkitekter; representing a local developer in cooperation with a major architect’s office.
- Veidekke Bostad + Metro Arkitekter; representing a constructor in cooperation with a department in a major architectural and engineering firm.

**INVITATION**
The invitations in all cases contained (a) general regulations, (b) requirements (must-haves) that applications from design teams had to meet, and (c) criteria that the organizers intended to use for evaluating the applications. Based on this information, together with a short description of the task, the design teams had to produce a competitive application for the competition. Similarities and differences between the organizers’ invitations are summarized in Table 1.

Following prequalification in all three cases, only three to six design teams were invited (Table 1). This kind of limitation is typical in restricted competitions in architecture and urban design, at least in the Nordic countries. Daneryd was an exception in that there were no architects in the invited teams, just developers and constructors. Nacka and Trelleborg demanded both developers (constructors) and architect’s firms in the design teams. However, the allocation agreements were negotiated only with representatives of the developer (constructor), which reflected a power dimension in the construction of design teams driven by the organizers.

How developers would gain access to the site was one economic issue in the general regulations (Table 1). In Daneryd, the developers in their applications also had to indicate the (cash) value of the land and its building permit. The price of the land competed with design in this case. In Nacka, the organizer
focused on rental level and not on selling the site to the highest bidder. The organizer in Trelleborg set the price of land ahead of time in order to promote competition by *design* instead of *economy*. Another important aspect is compensation for the design proposals. The design teams participated at their own expense in Danderyd and Nacka. In Trelleborg, the organizer tried to attract applicants by offering 50,000 SEK to design teams for approved design proposals. However, this is very low compensation compared with that awarded in architectural competitions for the same task.\textsuperscript{26}

The language demands in the invitation reflect the national character of the three competitions. Nacka and Trelleborg requested Swedish as the competition language. There was no specific demand on this point from Danderyd, but all the information about the competition was issued in Swedish, including the invitation and the brief. It is obvious that the organizers were not looking for foreign companies or to facilitate their participation in the local construction sector.

According to Table 2, the concept *design* appears as design ideas and architectural design in reference projects. *Economy* from the organizers’ perspective is a question of the developer’s financial status and proof of taxes paid. The requirements are a combination of professional practice and rules in LOU,\textsuperscript{27} the Law on Public Procurement.

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Danderyd</th>
<th>Nacka</th>
<th>Trelleborg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of teams to be invited and their competence</td>
<td>3–6 constructors (no architect’s firms).</td>
<td>3–5 design teams (constructors / developers + architects).</td>
<td>3–5 design teams (constructors / developers + architects).</td>
</tr>
<tr>
<td>Benefit to the winner</td>
<td>The winner receives a land allocation agreement.</td>
<td>The winner receives a land allocation agreement.</td>
<td>The winner receives a land allocation agreement.</td>
</tr>
<tr>
<td>Compensation for design</td>
<td>No compensation for the design proposals. The winner is offered the chance to buy the site.</td>
<td>No compensation for the design proposals. The winner is offered the chance to lease the site.</td>
<td>50,000 SEK per invited team. The winner is offered the property at a fixed price.</td>
</tr>
<tr>
<td>Language</td>
<td>No specification.</td>
<td>Swedish as application and competition language.</td>
<td>Swedish as application and competition language.</td>
</tr>
<tr>
<td>Economic value of land</td>
<td>Indication of price and its building permit.</td>
<td>Indication of rental level for the planned building.</td>
<td>The price of the land was determined in advance.</td>
</tr>
</tbody>
</table>

*Table 1 General regulations in the invitations to prequalification in the three case studies*
The other demands can be seen as a search for safety from the client horizon, but these requirements have a downside and do not promote competition as a professional laboratory for innovation and experimental arena. New thinking is a risky business, and the traditional architecture competition has introduced special procedures to deal with surprising design solutions. The developer competitions were more orientated towards safety than innovation in the case studies because of the demands and prequalification of applicants. Requirements such as an implemented reference project, relevant for the

<table>
<thead>
<tr>
<th>Specific Demands</th>
<th>Danderyd</th>
<th>Nacka</th>
<th>Trelleborg</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of enclosed material</td>
<td>No demands.</td>
<td>A list of documents in the application.</td>
<td>A list of documents in the application.</td>
</tr>
<tr>
<td>Company presentation / Information</td>
<td>Presentation of the company (applicant) and its experience.</td>
<td>Presentation of companies in the design team.</td>
<td>Presentation of constructor, including contact information.</td>
</tr>
<tr>
<td>Design ideas and building programme</td>
<td>Design ideas, general programme for housing, principal standard and equipment for elderly.</td>
<td>No demands in the invitation.</td>
<td>No demands in the invitation.</td>
</tr>
<tr>
<td>Quality of life</td>
<td>General programme for activities/social life.</td>
<td>No demands.</td>
<td>No demands.</td>
</tr>
<tr>
<td>Company strategy and collaboration</td>
<td>No demands.</td>
<td>Presentation of property management + references.</td>
<td>Presentation of collaborating companies + architects.</td>
</tr>
<tr>
<td>Reference project</td>
<td>Similarly implemented projects by the design team (housing for senior citizens).</td>
<td>3–5 implemented projects demonstrating the applicant’s ability.</td>
<td>2 similar implemented projects by the applicant + the role of the design team in these.</td>
</tr>
<tr>
<td>Project organization</td>
<td>No demands in the invitation</td>
<td>Organization for the design team + CV for key persons and their role.</td>
<td>Professional qualifications of design team members.</td>
</tr>
<tr>
<td>Financial status and economic issues</td>
<td>An indication of the value of the site and its building permits from the constructors.</td>
<td>Ambitions for rental. Document showing financial status. Minimum rating of 3 on the credit scale.</td>
<td>Document showing credit rating from credit authority.</td>
</tr>
<tr>
<td>Taxes</td>
<td>No demands (the organizer conducts tax control).</td>
<td>Show paid taxes through document from tax authority.</td>
<td>Tax payment documents from tax authority.</td>
</tr>
</tbody>
</table>

Table 2 “Must-haves” in invitations for prequalification in the three case studies
competition task, excluded all new firms and young candidates. This had a negative impact on the competition as a professional laboratory for developing innovative design solutions to meet future-orientated challenges in society. The renewal of the construction sector was thus reduced and the competition potential as an experimental arena was limited.

As Table 3 shows, the organizers intended to choose design teams based on “soft” criteria. Design in the prequalification was understood as an ability to find creative solutions, design in reference projects, and capacity to add value by interior and architectural design. Economy was used as tool for attracting and finding developers with financial stability and a long-term interest in facility buildings. Design and economy stood out in the invitations as the two most important criteria in the final selection of candidates.

The evaluation criteria were based on professional practice and were adjusted to the competition task. They were of a very different nature compared with the “hard” must-haves and can only partly be measured in a meaningful way. In Danderyd, the organizer tried to convert the soft criteria into numbers for design, but it was impossible to do this in a fair way in the invitation, which

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Danderyd</th>
<th>Nacka</th>
<th>Trelleborg</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
<td>Interior design and architectural design could bring 10% + 10% added value.</td>
<td>Design references (preferably rental houses at complicated sites).</td>
<td>Ability to solve assignment and find creative solutions in all phases from design to implementation.</td>
</tr>
<tr>
<td><strong>Professional merits</strong></td>
<td>No specific evaluation criterion.</td>
<td>No specific evaluation criterion.</td>
<td>1) Competence 2) Experience 3) References</td>
</tr>
<tr>
<td><strong>Environmental goals</strong></td>
<td>Environmental design and construction + programme for heating could bring 15% added value.</td>
<td>Energy-efficient housing.</td>
<td>No specific evaluation criterion.</td>
</tr>
<tr>
<td><strong>Housing management and economic standpoint</strong></td>
<td>No specific evaluation criterion.</td>
<td>Long-term facility management, rental level, economic and project organization.</td>
<td>Economic and organizational capacity + the developer’s stability.</td>
</tr>
</tbody>
</table>

Table 3 Evaluation criteria in invitations to prequalification in the three case studies
provided no guidelines. The organizers used soft criteria to separate candidates and rank the applications from the organizers’ perspective. That was the whole point, as soft criteria are constructed for assessing qualities – not quantities – and this requires good judgment, experience, and professional competence on the part of selection committees.

PERSONAL EXPERIENCES

Why did the municipalities organize restricted developer competitions? The informants from Danderyd, Nacka, and Trelleborg put forward different kind of motives behind this decision. The explanations are connected to ideology, economy, and the site itself. First, they referred to the political goal of using market solutions and competitions for housing. The second reason was economic: developer competitions are seen as a good way to achieve competitive prices in the area. The third explanation was the strategic location of the site in the municipality. The location raised architectural ambitions, even if good architecture was not obvious as a motive for the developer competitions. Illustrative interview responses from reviewers of applications were:

We have had a number of buyers interested in purchasing the site for various ends. The competition was a way for the municipality to show what kind of building it wanted and at the same time give the actors the possibility to present their ideas on an equal basis.28

The political administration in charge was positive (towards competitions). The site was good … The competition form was a way to reach out and open up for constructors and administrators to apply. We were unsure as to how many could be interested and wanted to make it possible for as many as possible to show their interest without investing too much work for the first round.

(The municipality) always uses competition and market solutions when possible and feasible … We had a long list of companies who had expressed an interest in land allocation … but no idea about their exact interest, so an open competition was arranged. It was a pilot project to assess the interest for building rental housing …

Since the site and location are a bit unique, the municipal administration reasoned that perhaps they should go for a different configuration rather than a traditional one. Various suggestions were presented and the pros
and cons weighed, but there were members of the group with good experience from this type of competition, so they prevailed.

Invitation and Communication

The municipal authorities advertised the competitions on their websites and via electronic databases. In addition, direct mailing was used to contact companies. The invitations were the object of internal consultations among officials. The invitation was drawn up early in the competition process and outlined the competition conditions for the companies. In spite of the document’s strategic importance, the informants viewed formulation of the invitation as a practical assignment, a question of using the regulations in the LOU and following the practice of the building sector.

Only Nacka municipality stated already in the invitation to prequalification that one of the demands was a sustainable community building. The other two municipalities – Danderyd and Trelleborg – described general goals for sustainability and developed the theme later on in the competition process as programme demands for environmentally friendly solutions with low energy consumption. The invitation from Nacka municipality had a three-page appendix with energy requirements for the planned housing, with follow-up before the agreement and leasehold and after two years in operation.

The informants only briefly commented upon the must-haves in the invitation. The applicants had to present documents certifying their economy, tax status, and references as outlined in LOU. The criteria in the invitation for evaluating the applications, on the other hand, were based on experience. They were of an open nature and gave the organizer a great deal of influence on the choice of design team for the competition. Leeway for negotiations was limited mainly by the poor response from companies to the organizers’ invitations.

Three enlightening responses to the question of how organizers decided upon the application demands and criteria for evaluation of the candidates are:

The invitation was drawn up by a group of officials, which includes the municipal director, real estate manager, planning and building director, technical director, and vice presidents from the municipality’s leading businesses. Requirements and criteria were decided upon by this group. As project manager, I oversaw the invitation. The must-haves were ar-
rived at in conjunction with the negotiating party using LOU as a model (land allocation does not come under LOU, but we chose to use this procedure since it should be familiar to the construction firms and thus ensure a broad participation). The upcoming judging group contributed to the document, which was first approved by the client … and then by the municipal board’s working committee.

I prepared the program (invitation) … The intention was that the city architect should judge the proposals for their suitability/possibility of fitting into the plan program. The practical aspects would be judged by managers specializing in senior care services. The development manager would oversee the follow-up of companies, the financial verifications, and the agreements. Everyone who expressed an interest was written to … The competition was advertised through companies that cover the building market for constructors and consultants.

The informants described the regulation of language and economy in the following way:

The project is rather small so you could not expect any huge contribution of competition proposals or any great international interest. Therefore we chose to limit the amount of material submitted to the absolute minimum and did not offer any prizes. Land allocation was “the prize”. The development manager at the time decided upon the forms. Most developers working in Sweden have Swedish as their language. This is a tender competition which focuses on price – not an architecture or project competition, so no compensation was offered.

The municipality had good experience from similar procedures used for the development of a commercial area. That competition was used as a model. We didn’t think about the competition language. The competition prize was the land allocation.

Information in Application
The invitation from the organizers resulted in applications filled with information from applicants. Only at the final judging did a municipal reviewer request additional information from a single design team. The informants were generally satisfied with the contents of the applications. The following two replies illustrate the information in the applications:
There was enough information about the companies. I didn’t have any contact with the company in connection with the competition.

We found the two reference projects to be sufficient for selecting the participant. In many cases, the reference projects were already known to us, as well as the other contributing constructors and architectural firms.

Judging Procedure

There are no national competition rules for developer competitions. Companies in the three competitions were chosen according to a judging process that was of a simple and informal nature. However, in spite of local differences and the lack of common regulations, developer competitions have a judging process similar to that of architecture competitions. However, it is much easier for selection committees to identify design teams in developer competitions because of the smaller number of applicants.

The choice of participants was made in two steps. First, there was an initial check of the companies’ applications to determine whether they met the application demands and could proceed to the next step in the process. Second, there was an evaluation of the candidates’ professional qualifications for the competition task. The final choice of company was made at a single meeting in three competitions. Only one of the competitions used a protocol from the selection with a clear motivation to legitimize the decision. Two petitions lacked protocols for ranking the candidates and summarizing the grounds for the decision. The informal nature of the judging process is evident in the following reply:

… there is no other document which regulates in more detail the must-haves, criteria or model for selection/evaluation of constructors’ applications … It must be remembered that, above all, this is a developer competition where the highest prize wins, not an architecture competition … I don’t think there are any notes from the meeting which took place when the applications were evaluated.

The judging in Danderyd was simplified due to receiving so few applications. Only six teams sent in applications and therefore all candidates with approved applications could participate in the competition. “We realized early on that all the applications were interesting and we didn’t need to choose”, replied one informant. In the other two municipalities – Nacka and Trelle-
borg – the judging process included an evaluative selection of design teams. There were more applicants than number of places in both competitions, but here, too, the choice was described as simple and uncomplicated. Only a few candidates had to be eliminated because of the low interest from companies in the building sector. Three informers replied:

Only those who could be of interest continued on. Therefore the process was rather simple.

The selection committee put great importance on the companies’ actual capacities to realize their project, meaning that the company had its own financial means to accomplish a building project of this nature. Another important parameter was the references from previously completed projects, as well as the reputation of the contractor and the architecture firm.

Of seven applications, two could be easily eliminated. The others fulfilled the demands we had established. There was no reason to eliminate any more, so all five participated … The choice centred around finding a company which focused on the long-term facility management of rental housing, since that would probably lead to long-term sustainable solutions. Experience in building for self-management was especially interesting information. We also had high ambitions for design since the site was difficult, and therefore looked for reference examples which reflected this type of challenge.

Selection Principles
The selection of design teams was made by three to four individuals. The organizers in Danderyd and Nacka both used an expert model for the selection. A selection committee of municipal officials with expert knowledge in the fields of architecture, economy, and negotiating led the choice of participants in the developer competitions. There was no influence from laymen. On the other hand, in Trelleborg the choice of design team was made by a competition jury, which included a number of local politicians. The choice in that competition was based on a democratic model used in architecture competitions in Sweden. The thought behind this is that the interested parties should be represented in the decisions concerning the areas that involved them.

In Danderyd and Nacka, the municipal officials and property manager administration organized the competitions, supported by the architecture of-
office. In Danderyd, the municipal welfare office was also involved, which can
be explained by the nature of the competition task (senior housing). Trelle-
borg municipality organized its competition through the community plan-
ing office, with a jury appointed by municipal politicians. The members of
the jury selected both the competition team and the winning design propos-
al. This competition was highly influenced by laymen, with eight politicians
on the jury. Because of conflicts of interest and other hindrances, only four
jury members were able to participate in choosing the design team. Officials
examined the applications and brought proposals for a decision to the jury
for selection. One informant described the choice of participants in Trelle-
borg in this way:

There was a clear wish for politicians to have an active role in the jury
work. Apart from six politicians, the municipal manager and community
building manager were appointed to represent the officials … The eval-
uation group was made up of the jury excluding the external architects
(who were not employed at that time). Two of the jury members declared
a conflict of interest because of relationships to the competitors; two more
were not able to attend at the set time.

In Danderyd municipality, the development manager appointed a selection
committee to evaluate the companies’ applications, with the municipal ex-
cutive department as the decision-making authority. The members met
only once. The decision was easy, all applications were approved, and the
applicants were invited to participate in the competition. In Nacka, too, the
choice of participants was simple. Three municipal head employees, appoint-
ed by the property manager, were on the selection committee. To support
their evaluations, the committee had access to external consultants and the
municipality’s project manager. Even in this case, one meeting was enough to
choose the design teams for the competition.

Experience from Prequalification
The informants were positive towards prequalification as a selection method
for developer competitions. However, they were disappointed in the lack of
interest on the part of contractors and architecture firms. There was no crit-
icism of bureaucracy or excessive demands in the invitation. The organizers’
reviewers were satisfied with the information received from the companies/
teams. Still, a competition is an exception and only used in special cases.
Although the informants who participated in selecting candidates were ex-
perienced and competent, they had limited experience from competitions:
This was the first time for me with this form (developer competition), but I have been involved with many other types of evaluations.

This was the first time I was able to participate in this form of competition. Previously, I have only evaluated tenders for larger consulting assignments. Nevertheless, there are some similarities.

Two informants had previously participated in prequalification for competitions and negotiations of services and described their experiences from the selection of companies as follows:

I have done this several times … [I] think it is a good method for getting a good level of design in combination with a market price.

I have extensive experience from negotiations with entrepreneurs, consultants, and real estate management agreements.

The planning and implementation of design proposals in competitions were based on a mix of legal requirements, project-targeted goals, and practice, as is routine. The surprise for organizers was that the prequalification invitations for developer competitions generated so little interest. A typical answer is:

We thought there were too few [applications], considering the location in the town, but understand that these are economically difficult times for many constructors. Otherwise, the process worked satisfactorily.

DISCUSSION AND CONCLUSIONS
The three prequalification processes resulted in a total of twenty-one applications (Table 4), of which sixteen (76 per cent) were invited to the developer competition by the organizers. There was a good chance for design teams to be invited to the developer competitions, since there were few applicants from the building sector as compared with the situation in architecture competitions. From this point of view, the relationship between attracting candidates to the competition and organizer gatekeeping by imposing demands on the applications seemed to be a mismatch for the building sector.

The prize awarded to the developer was a land allocation agreement with building permits, either through the winner purchasing the land or the land
being made available by leasehold of the site. The competition was at the cost of the participants in Danderyd and Nacka, which is common practice for developer competitions. The organizer in Trelleborg tried to attract candidates to the competition through economic compensation for the development of a proposal, but this did not result in increased interest; the number of applications generated was still weak (Table 4).

The prequalification process for the developer competitions in Danderyd, Nacka, and Trelleborg can be summarized in the following points:

- There is a lack of clear and uniform professional practice on developer competitions within the municipalities. This observation reflects a problem in developer competitions. The competition process differs when it comes to the conditions stated in the invitations. There is no common regulation on a national level, in contrast to architecture competitions.

- The developer competitions involve transfer of power in municipalities, where property offices, which control the land, are seen as the key player rather than the town architectural offices, which traditionally organize architecture competitions and make detailed plans for sites. The developer competitions focus on the sale of land or providing a leasehold of the site, regulated in the land allocation agreement. In the formation of design teams, the results again reveal a transfer of power from architect firms to developer and constructors. The municipal authorities make land allocation agreements with building companies in the design team.

- The choice of competition form, restricted developer competition including prequalification of candidates, is motivated in several ways, such as minimizing the cost of the competition, finding out the company’s interest for sites to build on, and testing an alternative to the ordinary planning process. Informants in Danderyd and Nacka found it exciting

<table>
<thead>
<tr>
<th>Restricted Developer Competition</th>
<th>Number of Applicants</th>
<th>Invited Candidates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011, Developer competition, Danderyd</td>
<td>6</td>
<td>6 (100%)</td>
</tr>
<tr>
<td>2012, Developer competition, Nacka</td>
<td>7</td>
<td>5 (71%)</td>
</tr>
<tr>
<td>2012, Developer competition, Trelleborg</td>
<td>8</td>
<td>5 (63%)</td>
</tr>
<tr>
<td>Total:</td>
<td>21</td>
<td>16 (76%)</td>
</tr>
</tbody>
</table>

Table 4 Applicants to prequalification in the three case studies
to work with competitions as compared to distributing land via direct allocation and bids. Trelleborg municipality organized its developer competition in the same way as architecture competitions, awarding a competition prize in an attempt to attract more participants.

- The invitations infer internal collaboration in municipalities based on a combination of legal regulations and professional practice. The informants seemed happy with the situation. The invitations are compiled by officials from the real estate and development office, the town building office, and the negotiating parties. The must-haves in the invitation are based on legal requirements (LOU). The evaluation criteria are based on experience and give the organizer a great deal of influence on the choice of participants in the competition.

- The invitation closes the doors to potential competition companies/teams and favours the financially strong constructors and real estate managers active in Sweden. Invited competition becomes a limiting factor in the building sector as compared with open competitions. In two cases, the organizer requested teams of constructors and architecture firms. In one case, the organizer turned solely to construction companies. Compared with architecture competitions, developer competitions give constructors, builders, and real estate managers more influence at an early stage of the planning process.

- Design and economy are used in invitations both to attract and exclude candidates from sending in applications. Design is included through criteria for ranking the application by design ideas, architectural design, and creative ability in the construction of the design team. The compensation paid in Trelleborg did attract only one more applicant than in Nacka because of the economic demands of good financial status and capacity for long-term management of housing. In Danderyd, “money talks” had a determining impact, and the developer competition became a price competition. The winning proposal was by Stragab, which offered a much higher price for purchase of the land than the other competitors. At that time, Stragab was planning to “increase turnover from 2 billion to 6 billion [SEK] in Scandinavia.”30
The organizers were satisfied with the information in the prequalification applications and were able to select participants for the developer competition in a simple way. There was no criticism about the invitation being too complicated, too bureaucratic, or leading to unnecessary paperwork. The lack of applications and candidates was not seen as a significant problem, nor did the organizers consider the demands in the invitation and the requested professional merits to have negatively influenced the number of applications.

The selection of the companies/teams for the developer competition took place in a two-step judging process. First, the applications were checked for the must-haves in the invitation. Then, the candidates’ competence for the task was evaluated. The judging process thus went from checking the “hard” requirements to an evaluation of the “soft” merits. Demands on energy consumption and economy in the form of land prices, leasehold, construction costs, and rent came into the picture later in prequalification and became a dominating factor in the judging process when the winning proposal was chosen.

The choice of participants took place in a simple and informal evaluation process. The minutes from the selection meeting were very brief. One meeting was sufficient, due to the small number of applicants. Another reason for the informal nature is that developer competitions are not regulated by national rules and have no external controls, as is the case in architecture competitions. The choice of participants in developer competitions is an internal affair for a group of municipal officials.

The organizers used two different models for making decisions in the competitions: the expert model and the democratic model. The expert model steered prequalification in Danderyd and Nacka. A selection committee, a group of experts in the municipality, reviewed the applications and chose the participants. In Trelleborg, a jury with laymen picked the design teams for the competition. The idea behind the democratic model is that those who are involved and depend upon the architecture should be represented in the judging processes. There were a surprisingly large number of politicians on the jury, a sign that the competition was of great importance to the future development of the city.
• The developer competitions generated considerably fewer applications than architecture competitions. A possible explanation for such low interest from companies in developer competitions may lie in the invitation and the requirements to present implemented reference projects and to account for competence, experience, and resources. Invited developers and constructors in Daneryd, Nacka, and Trelleborg are major companies running international and national businesses or well-known regional developers. Small, newly started local companies apparently do not think they have a chance and are not attracted by the invitation. Their applications are therefore missing from the archives.

• The lack of response on behalf of the building sector did not result in any self-critical comments. The informants were only disappointed that so few companies showed an interest in the competition. They were satisfied with prequalification as a method for identifying suitable design teams. This is a surprising result, which has led to a new important research question for future work: If the organizers are so positive towards prequalification, why do they not organize more invited competitions?

ACKNOWLEDGEMENTS
The research project behind this paper has been financed by the Gunvor och Josef Anérs Foundation.
NOTES

3 Land allocation in Sollentuna (Markanvisning i Sollentuna) (Sollentuna: Sollentuna kommun, 2012), p. 3.
4 Land, housing and competition (Mark, bostadsbygande och konkurrens) (Stockholm: Statskontoret, 2012).
5 Land allocation in Sollentuna (Sollentuna kommun, 2012), p. 5.
9 Ibid., p. 28.
10 Ibid., p. 13.
11 Land, housing and competition (Statskontoret, 2012), p. 105.
12 Ibid., p. 130.
13 Land politics and municipal land prizes (Markpolitik och kommunala markpriser) (Karlskrona: Boverket, 2005).
14 Maria Remnås and Stefan Norrman, Developers cost (Byggherrekostnaderna) (Stockholm: KTH, 2003).
15 Land politics and municipal land prizes (Boverket, 2005).
16 Remnås and Norrman, Developers cost, p. 33.
17 Rönn, Prequalification – architecture competition vs developer competition.
19 Danderyd municipality, Developer competition on housing for senior citizens in Danderyd (Markavisningstävling för seniorbostäder i Danderyd), Invitation 1 April 2011, Application 13 May 2011, Land allocation agreement, KS 2010/03 00, Report 19 May 2011.
22 Ibid., Invitation, 16 March 2010.
24 Trelleborg municipality, Developer competition Bävern 1 (Markanvisningstävling Bävern 1), Invitation (no date), Protocol 27 February 2012.
25 Ibid., Protocol 27 February 2012.
26 In an architecture competition, the compensation (prize money) for this task would be around 300,000 SEK per design team for an approved design proposal.
27 Law on Public Procurement, LOU (2007:1)
28 All responses quoted in this section originate from internal reviewers.
29 Rönn, Prequalification – architecture competition vs developer competition.
30 Danderyd municipality, Developer competition on housing for senior citizens in Danderyd, Application 13 May 2011.
FUNCTION AND ORNAMENT: THE MODERN OF LOUIS SULLIVAN AND ELIEL SAARINEN

Minna Chudoba

ABSTRACT
This article explores the search for modern architectural expression in the texts of Louis Sullivan and Eliel Saarinen. The latter was influenced by the former’s architecture, but the main focus of the study is the comparison of their texts on architectural design process, or search for form. The similarities found in the texts tell of a like-minded design philosophy, which was based on observation and appreciation of nature. Nature contained ornaments; therefore architecture could do so as well. The applications of the ideas prompted by the common source differed in the work of these two architects, but the premise that ornaments could be a useful part of a modern architect’s design vocabulary remained the same. The understanding of both architects’ versions of contemporary form language has suffered from a strict modernist interpretation. The canonical image of functional architecture has resulted in the dismissal of many divergent interpretations of modern architectural language, including that of Sullivan and Saarinen. Although current use of architectural ornamentation stems from various sources and not necessarily nature, a look at the aesthetic search of these two architects at the turn of the previous century may lend some historical perspective to the use of architectural ornament today.

KEYWORDS
function, ornament, modern, Sullivan, Saarinen

INTRODUCTION
When the Provincial Archives Building in Hämeenlinna, Finland, started flexing its tattooed flanks of graphic concrete in many architectural magazines a few years ago, historically inclined readers were reminded of Adolf Loos and his text on ornament, written about one hundred years before. While discussing the criminality of contemporary use of ornamentation, Loos had compared ornaments on building facades to tattoos on human skin. For him, the latter was an acceptable norm in primitive societies, but a sign
of degeneration among the civilized. Nevertheless, tattoos have since been civilized, also on architectural skins – as the award given to the Hämeenlinna Archives Building from 2009 clearly shows. The tattooed building wears its intricately curling alphabets and classical female figures (designed by graphic artist Aimo Katajamäki) proudly – as it well should. In recent years, similar “printed” patterns have appeared on many other surface materials (fig. 1). Ornament has not been a crime for a while now.

There was a time when ornament was not so easily accepted, when a modern label indicated that a certain lack of surface decoration was the norm. That this was not always the case has already been noted by researchers, indicating that there were chapters in the story of modern architecture that did not fit the strict and stereotypical image of what modern buildings should look like. In the style-based paradigm of modern architecture, the field of vision was restricted, as Sarah Goldhagen has noted. Reducing one’s vision in this way has left out many necessary facts; but her proposal offers an alternative view, modernism as a discourse. This new paradigm gives room for many architects who worked alongside mainstream modernism, combined dichotomies, and came up with a more inclusive approach.
This article will concentrate on one such sideline of the modern story: juxtaposing the interpretations of the idea of modern architecture by two architects: American Louis Sullivan (1856–1924) and Finnish/American Eliel Saarinen (1873–1950). Both have designed architecture that was labeled modern, but their design work did not fit into strict modernist categories. In studying the form and ornament issue in the texts of the two architects, the following questions will be asked: What connects their work or what is the influence between them? What meaning did ornament have for them? What could each architect’s interpretation of what was modern tell us of this one chapter in the story modern architecture? The juxtaposition of the two architects’ texts – which are complemented by a few examples of their work – follows the tradition of historically interpretive architectural research and writing. Interpretation is offered as the story unfolds, but causal relationships are not necessarily implied. The objective of the article is to shed light on the reasons for the use of ornamentation in the architecture of the studied designers, who were both searching for a modern form language.

ORNAMENT AND CRIME

When the Austrian architect Adolf Loos (1870–1933) criticized the use of ornaments in his article in 1908, his text had soon been condensed into a simplified, easily repeated statement (“ornament is a crime”) that captured the essence of modernism’s search for honesty in architectural expression. Loos’s text was, of course, more subtle and finely nuanced than the blunt statement. “Ornament and Crime” began by contrasting modern man’s ornament with the skin decorations of so-called primitive cultures. The reasons for ornaments were the same, but where primitive man’s tattoos were an expression of his culture, in modern man they were criminal or degenerate – literally, in Loos’s opinion. That these ornaments might have had a meaning in a contemporary subculture was beside the point; the words “crime” and “ornament” had appeared in the same sentence.

For Loos, the lack of ornamentation was a sign of intellectual strength, as modern man should concentrate his creative energy on more important things than the search for suitable ornamentation. The tattoo comparison seems to indicate that for Loos, ornament was defined as surface decoration. When ornaments were tacked onto buildings, they could easily be taken away. The crime was not just the use of ornament, but using them when they were not necessary – simply copied from previous ages and separated from their original meaning.6
Although Adolf Loos’s attitude towards ornament was possibly not quite as frugal as his words-become-slogan would suggest, he was not alone in criticizing contemporary use of ornament. Already in 1892, Louis Sullivan had recommended discarding ornaments from buildings for a while to enable architects to concentrate on designing buildings “well-formed and comely in the nude”\(^7\). It is not known whether Loos was familiar with Sullivan’s text, although he went to the United States to see the Chicago World Exhibition of 1893, a year after Sullivan’s article was published.\(^9\) A link between Loos and Sullivan has nonetheless been noted\(^10\). A link between Sullivan and Saarinen also exists, although not defined distinctly by attitude to ornament. Sullivan had praised Saarinen’s prize-winning skyscraper entry for the Chicago Tribune tower competition in 1923. In Sullivan’s view, the celebration of verticality in the second prizewinner had overshadowed the neo-Gothic ornamentation of the winner. He actually suggested that these ornaments could be pried loose; therefore they were not an integral part of the building. In Saarinen’s
design, on the other hand, he saw the continuation of his own work on the skyscraper as a building type, using “the logic of living things”. This logic permeated the whole building, imbuing any possible surface ornamentation with meaning that went beyond mere decoration. In Sullivan’s view, true ornaments could not be separated from the architecture. 

In the following chapters, Sullivan’s and Saarinen’s views on ornament and form will be introduced. Both architect’s ideas and work are first briefly portrayed in individual chapters. In the fourth chapter the focus is primarily on a textual comparison, with the aim to investigate possible similarities in their attitudes. The question will also be asked whether Saarinen could be said to have continued Sullivan’s work in more than just the design of the skyscraper type. The article concludes with a brief discussion of the role of the two architects in the story of modern architecture.

FROM NATURE TO FUNCTIONAL ORNAMENT
Louis Sullivan wrote the article “Ornament in Architecture” in 1892, thirty years before the Chicago Tribune tower competition. At about the same time, he had been designing for the Chicago Fair of 1893, where his ideas on ornament were manifested in the spectacularly decorated Transportation Building (fig. 4).

Sullivan’s article – and definitely the building – both show that in his case, just as in Loos’s, the criticism towards ornament was not prohibitive. Sullivan believed that ornaments should only be used to enhance the beauty of already beautiful structures. If mass and proportion of a building did not convey noble and dignified sentiments, ornaments could not remedy the situation. However, ornaments brought forth in the right spirit – the same spirit that permeated the whole skillfully designed building – were inspiring and beautiful, and therefore desirable. They were an integral part of the architecture and could not be separated from the building without destroying its individuality. Sullivan admitted that ornamentation of this kind required a creative intensity, and thus was not easy to achieve.

Sullivan saw his ornamentation as a contemporary product, an expression of “the voice of our times”. It was to be a part of the building that received it in the same way that a flower appeared among the leaves of a plant – Sullivan called this an organic system of ornamentation. In using nature as both the inspiration for his architectural ornaments and the source of their justifica-
tion, Sullivan had several predecessors. Decades before, William Morris had called for use of ornament based on abstractions of nature (“Of the Origins of Ornamental Art”, 1886), and before that John Ruskin had referred to nature as a source of ornamentation in his texts on architecture (Seven Lamps of Architecture, 1849). Also, architects of the art nouveau period had striven towards the creation of a new contemporary style, deriving its source from nature, not historical examples of previous times.

Sullivan's attitude towards nature was reverential. His examples and analogies revealed a deep appreciation of the lessons nature could provide. Observations of the natural world were even behind Sullivan’s famous slogan – “form follows function” – which was later used to capture the idea of functionalism. His words were eventually lifted from their written context, and even separated from the architect, whose design work did not conform to the established functionalistic code. Sullivan’s use of ornament was consistent with the definition he had used in his texts. Ornament was an integral part of his architecture, growing out of the surfaces like the flora he had taken as an analogy. Intricate patterns of foliage covered the eaves, and vines of stone crept up the facades. Indeed, they were not only embedded into the surface; they were the surface. The idea of ripping them away without damaging the building seems impossible. For Sullivan, however, the designed ornaments were not only an important part of his buildings; they had a function. He saw them enhancing the proportions of his buildings. Beauty fulfilled a purpose; it was not merely a superfluous addition.

In a story told by Thomas van Leeuwen, one of Sullivan’s most famous buildings – the Carson Pirie Scott department store (1899) – illustrates the differences in the interpretation of the word function, as understood by Sullivan and some of his critics. The department store had been used as an example by Sigfried Giedion, when he needed to explain the beginnings of the newly developing functionalist language in his Space, Time and Architecture (1940). Giedion had noticed the horizontally oriented windows, which coincided with the structural framework but downplayed the role of ornamentation between the second and third floors. Nevertheless, they were an enhancing part of the building, emphasizing the importance of the first two floors, and in keeping with the original function of the building. According to Thomas van Leeuwen, Giedion was not the only one who was twisting the facts. In Walter Curt Behrendt’s book Modern Building (1937), the ornaments of the Carson Pirie Scott building had been completely covered in the photograph.
Figure 5. Ornaments on the facade of L. Sullivan’s National Farmer’s Bank in Owatonna, Minnesota (1903). The brickwork is accented by terra-cotta strips resembling leaves and berries, as well as mosaic bands of color. Photo: Minna Chudoba.

Figure 6. Eliel Saarinen, Museum and Library, Cranbrook Academy of Art (1940–43). Detail of wall with ornament. Photo: Minna Chudoba.
by a black shadow. Both writers of architectural history had here mistaken functionalism for a visual image of a style, when Sullivan’s original saying had called for solutions to needs. The primary function of a department store was to attract customers, whose eyes did not usually see beyond the first two stories. The ornaments, as van Leeuwen aptly puts it, “line the windows like seductive eyelashes.”

Sullivan’s idea of the function of ornamentation was not often appreciated or even understood. Some dismissed him as a decorator, while others simply disregarded the parts that did not fit a preconceived picture. Another example given by Thomas van Leeuwen is even more disturbing. In H. P. Berlage’s Travel Recollections (1913), two buildings are attributed to Louis Sullivan, one by name and the other by implication. Both are hipped-roofed buildings with Tudor detailing, designed by Burnham and Root. When ornamentation was not allowed, there were no subtle differences in the matter; all decorated buildings could be gathered in the same category. The story of modern architecture would not have needed this kind of misrepresentation. Nevertheless, reality was often simplified or even twisted in architectural photography, even when buildings were attributed to the right architect. With black-and-white images, color could be disregarded or cropping used to obliterate context.

Louis Sullivan was influential in the development of a very modern and very American building type, the skyscraper, but his ideas did not fit into the prevailing interpretation of modern architecture. When his work was later labeled traditional, calling him one of the founding fathers of functionalism appears contradictory. He was, after all, obviously guilty of using ornament in his architecture.

FLORA, FAUNA, AND PURE ABSTRACTION
Although Louis Sullivan was dismissed as a decorator by many writers of the history modern architecture, and not widely read or understood in his own country, he had a profound influence on many European architects. In addition to Adolf Loos, Eliel Saarinen has been included among those who were inspired.

Eliel Saarinen was starting a practice in Helsinki around the time Sullivan’s article about ornament was written. He and his colleagues became nationally famous while still students, designing buildings in a new style influenced by
the European Jugendstil and Art Nouveau, as well as American sources like H. H. Richardson and Louis Sullivan. Although the architecture of the office Gesellius – Lindgren – Saarinen has also been called national romanticist, in reality it had many international influences. It was, however, characterized by ornaments derived from northern plants and animals. Stone frogs stared from the walls, squirrels nibbled at pine cones, woodpeckers were forever poised to hack at tree trunks, a bulky bear guarded an entrance. These ornaments made the otherwise international art nouveau more local, or national, as it was called.

The abundant amount of abstracted leaves, flowers, and animals was later toned down in the more rational period of Eliel Saarinen’s career. For example, in the Helsinki railway station (1905–19) ornaments were already used sparingly. Saarinen’s architectural ornamentation eventually evolved from national-romanticist flora and fauna to the abstracted lines of his American period (see figs. 2 and 3). Nature-derived ornaments would nevertheless reappear even during that period, if the use of them was justified: in Crow Island School (1939), designed together with his son Eero Saarinen, ceramic animals again climb the walls, surely to the delight of the pupils.

In the buildings of Saarinen’s last decade, however, rationality was taken much further. The buildings designed by his office in the 1940s were consistently called modern. From afar, they were not unlike other modern buildings of the same period. On closer inspection, however, the surface planes sometimes revealed crisscrossing orthogonal lines with occasional curved arcs. They serve no apparent purpose, and the links to nature’s ornamentation seem remote – although one could imagine the designs evolving from the bare branches of winter trees. Or perhaps they could even be seen to bear some resemblance to fragmented meander borders of classical architecture. When asked, Saarinen called these ornaments “pure abstractions”, while speculating that perhaps he was expected to answer that they were Finnish script. As ornaments they were simple, but able to articulate surfaces like Sullivan’s elaborate swirls had done. As Sullivan had demanded, the ornaments were supposed to be an integral part of the building. In some instances that assessment could be questioned. The simple forms of the building masses and series of surrounded spaces would easily be enough. Perhaps there is a whimsical desire for contradiction in all this, to thus decorate a building that could otherwise have well fitted the strictest modernist definitions. The articulating function of the orthogonal lines is clearly visible in Saarinen’s draw-
ning for the Des Moines Art Center (1944, formerly Edmundson Memorial Museum, architects Saarinen, Swanson & Saarinen), where the textile-like weft and weave of the pencil markings are echoed in the window sashes and multiplied in the reflecting pool (fig. 7). Saarinen had also compared ornaments to clothing\(^3\), which is an interesting simile in light of Loos’s tattoo example mentioned earlier.

In spite of the many modern buildings that Eliel Saarinen was involved with during his long career, the stamp of a romantic period has been a burden in the interpretations of his work. Like Sullivan before him, Saarinen has often received an evaluation that is too simplistic. One summary of his role in American architecture is found in the article “U.S. Architecture 1900–1950” published by *Progressive Architecture* magazine in 1950\(^4\). There, the American architecture of the past five decades was reviewed with chronologically
presented collages. Eliel Saarinen’s works were described as fluctuating between the romantic and the rational. In the text, Saarinen was connected with European influences such as Richard Neutra, Rudolph Schindler, Walter Gropius, and Le Corbusier. It is therefore surprising that the article mistakenly presented Christ Church in Cranbrook as a work by Saarinen, although the neo-Gothic church was designed by Bertram Grosvenor Goodhue Associates. The inaccurate image is fortunately supplemented by the collage of 1942–50, where the Des Moines Art Center is displayed, a clearly modern building. Saarinen’s office designed many such buildings: museums, churches, schools, where the simple form is sometimes accented by script-like ornamental details (e.g. Cranbrook Academy of Art Museum and Library, 1940–43, fig. 8).

COMPARISON: KINDERGARTEN CHATS AND THE SEARCH FOR FORM

Louis Sullivan’s ideas on architecture were condensed in his articles, published in 1918 as Kindergarten Chats. Saarinen’s architectural credo is found
in the book *The Search for Form in Art and Architecture* (1948). Originally, *The Search for Form* had a pedagogical purpose; it was written for young architects.36 The same is true of Sullivan’s collection of articles. When the articles were published as the book *Kindergarten Chats*, Sullivan expanded the script to suit a wider audience37. The pedagogical purpose notwithstanding, neither architect listed specific design guidelines in his book. The scalar scope of Sullivan’s designs was not as comprehensive as that of Saarinen, since Sullivan was not an urban planner. The same design principles, however, were used at all levels; text comparison is therefore possible. A comparison of the two books also reveals reasons for including ornamentation in their individual interpretations of an architecture that was suitable for modern times.

Parallels to the following themes in Sullivan’s *Kindergarten Chats* can be found in Saarinen’s texts from the 1940s, especially in the book *The Search for Form*38:

1. **Critique of classicism**

   Both Sullivan and Saarinen criticized style imitation. The eclecticism of the late 1800s led Sullivan to seek his own anti-classical expression. He especially protested against the selection of the classic style as the only true style of American urban design39. He understood, however, that a style could represent a security linked to the permanent values of the past40. In turn, Saarinen had become acquainted with the laws of classicism in his student days and did not believe they corresponded to the needs of contemporary time41. In Finland of the late 1800s and early 1900s, the search by Saarinen and his colleagues had developed into an architectural expression that was branded national-romanticist. The ornamentation of this architecture was derived from native flora and fauna. It was not surprising that at this stage in his career Eliel Saarinen was influenced by the Transportation Building at the Chicago Fair of 1893 (fig. 4) and impressed by Sullivan’s nature-derived ornamentation.

2. **Nature used as a source for form**

   In Louis Sullivan’s *Kindergarten Chats*, nature was described with ecstatic, poetic examples. For Sullivan, nature was an inspiration for design creation and a model of processes, which could be compared to the human life cycle.42 Even the structure of Sullivan’s book was based on nature: the seasons offered a metaphor for the development of design consciousness. Similarly, nature as a source for form was the main theme in Saarinen’s *The Search for Form*. The exemplary role of nature was illustrated with elated descriptions that ap-
pealed to the senses: the reader was told to stand on a hill and look at the beauty of the landscape or was taken inside the forest to witness the mating dance of a wood grouse.43

3. Order is born out of the relationship between the parts and the whole
Sullivan had used the word organic already at the beginning of Kindergarten Chats, but his organic quality was only gradually revealed in the text. The concept was born of the interplay between the whole and its parts.44 The organic order of Saarinen resembled Sullivan’s organic quality. Saarinen used examples from nature in describing the relationship between the parts and the whole, and found both a correlative and an expressive order in nature. Together they constituted his idea of an organic order.45

4. Form follows function
When Sullivan explained the connection between function and form, he returned to nature: to search for a definition meant reaching for a star in the sky or a call in the woods.46 The form-function concept remained elusive. The same can be said of Saarinen’s concept of fundamental form. When describing his concept, Saarinen referred to Sullivan’s idea of function and form.47 According to Saarinen, form must be functional, but a culture focusing solely on practical function was in danger of becoming materialistic. Saarinen’s book portrayed a search for an idea that, at the end of the design process, still remained an intriguing mystery.48

5. Architectural ornament
Both Sullivan and Saarinen had a critical attitude towards superficial decoration. This was different from the use of architectural ornament. Sullivan’s main purpose had not been the prohibition of ornaments, but their inclusion in the building as an integral part.49 Saarinen, as well, criticized imitative decoration, but true ornaments were not imitative. Saarinen referred again to nature: “Nature is not decorative, she is functional.” If nature’s ornaments were not in vain, this was proof that rationality was not enough. “The sparse ornament is the poetry of form,” wrote Saarinen. Both Sullivan’s and Saarinen’s texts on ornament show an inclusive attitude: simplified form is praised, but necessity of ornament is noted. They hoped to see architecture based on harmonious relationships and not decoration, and encouraged architects to solve design problems honestly and simply.50 Thus suitable ornaments would be created for each time. During the construction of Cranbrook, Saarinen even suggested that all empty decorations should be avoided.51 This attitude is similar to that expressed by Sullivan in his article “Ornament and Architec-
ture”. Both architects referred to ornament as clothing, but Sullivan put it especially poetically; it was “the raiment of which we dream”\textsuperscript{52}. Their attitudes towards ornament were ambiguous and sometimes contradictory – the issue was clearly not a simple one.

Comparison of the two texts has revealed several obvious similarities: critique of classicism or any kind of style imitation, nature as a source in the search for a contemporary architectural language, use of the word organic in describing the new form order, and, finally, including ornamentation in functional architecture. Was Saarinen really influenced by the design philosophy of Sullivan, or were the similarities simply a natural resemblance of thoughts of two like-minded designers? One answer to this question could be found in the background of the architects’ texts. Their writings were influenced by the same sources. The names of many architects, poets, and philosophers mentioned by Saarinen in his books had also appeared in Sullivan’s texts\textsuperscript{53}, and several books by the same philosophers were in the architects’ libraries\textsuperscript{54}. Nature was a design inspiration in both books. Saarinen could have got the nature theme from a variety of sources – he did not use references but mentioned several names as influences. Louis Sullivan was one of them. Sullivan was presented as the inventor of the saying “form follows function”\textsuperscript{55}. In the same context, the concept organic was linked to style, thus referring to Sullivan’s ideas. However, these were not explained in detail. Similarities between Sullivan’s and Saarinen’s texts were noticed already when Saarinen’s previous book The City (1943) was published – some even wondered why Saarinen had not mentioned Sullivan as a source\textsuperscript{56}. This is hardly surprising, as Saarinen did not credit anyone as a major influence.

It has been speculated that Sullivan influenced more through his writings than through his architecture, even though he designed several significant buildings\textsuperscript{57}. Eliel Saarinen was clearly influenced by both. He appreciated Sullivan’s Transportation Building in the early stages of his career\textsuperscript{58} and had most likely also been aware of Sullivan’s other buildings and design ideas before emigrating to America – at least they were reported in magazines such as the Architectural Record\textsuperscript{59}. If Saarinen had not been familiar with Sullivan’s texts before, he became acquainted with them soon after arriving in the United States\textsuperscript{60}. Saarinen later wrote that Sullivan’s impact on architecture was more extensive than it had seemed\textsuperscript{61}. This also applies to Sullivan’s effect on Saarinen’s own work. Although he did not list direct influences, Saarinen referred to similar thinking in his preface: “The nearer the thoughts of the indivi-
ual approach indispensable fundamentals, the closer will they contact the thoughts of others engaged in the same search. Sullivan and Saarinen even had time to meet, although Sullivan died only a year after Saarinen's arrival to the United States. Saarinen wrote later about his design discussion with Sullivan, indicating that they had not quite agreed on everything. What they had agreed on was the freedom to disagree. Searching for form was an individual process; it was only natural that differences would occur.

Even if similarities exist in the texts, one should not presume that similar ideas cannot be born independently. An approach that presumes cause-effect relationships in too linear of a fashion has been called *fallacy of sources* by R. G. Collingwood. Leonard Eaton has likewise warned against simplistic causal interpretations. Citing Carl Becker's book analogy, Eaton has pointed out that in order to receive an idea expressed in a book, the reader must previously have had thoughts somewhat similar to the presented idea. This concept can be applied to Sullivan's influence on Saarinen. When the two like-minded designers met, they emphasized the importance of an individual search for form. Both based this search on nature. Their form included ornament, because they saw that nature – the source of their design inspiration – contained it as well. The applications of this source in architecture could be different; from Sullivan's swirling foliage to the crisp lines and curving arcs of the architecture designed in Saarinen's last decade.

It is also important to note that Sullivan's *Kindergarten Chats* articles were an expression of architectural thought by an architect interested in pedagogy. This kind of example would have been useful for a teaching architect like Saarinen, who eventually wanted to express his pedagogical insights in writing. Sullivan was also an example of an architect writing in English – a new language for Saarinen. Even Sullivan's prose had an intense, exuberant quality similar to his lavish ornaments, and the style of both the texts and the architecture was distinctive and compelling.

**CONCLUSION**

Louis Sullivan had seen in Saarinen's skyscraper design a continuation of his own form search. Although there was never a master-apprentice relationship like that between Sullivan and Frank Lloyd Wright, both Sullivan's writings and his architecture influenced Eliel Saarinen at various points in his career nonetheless. The two architects suffered from a similar evaluation in the story of modern architecture – from being first considered modern to
being later labeled as traditionalists. The definition of modern was constantly re-evaluated as the story of modern architecture unfolded. This was visible, for example, in Henry-Russell Hitchcock’s books on modern architecture, written over several decades (for example, *Modern Architecture: Romanticism and Reintegration* [1929] and the many editions of *Architecture: The Nineteenth and Twentieth Centuries*). Sigfried Giedion’s influential book *Space, Time and Architecture* (1940) noted Eliel Saarinen only as the designer of the Helsinki railway station, but Louis Sullivan was mentioned several times for his comments, his theater designs, the Transportation Building, and, of course, Carson Pirie Scott, although the latter, as mentioned, was shown in the light that reinforced the writer’s image of modernism.

Louis Sullivan and Eliel Saarinen both practiced during a transitory period and saw changes in the definition of the word *modern*. They viewed themselves as architects who were searching for a contemporary form language for their time, even though they were, towards the end of their careers, both relegated to the role of traditionalists. Neither really fit the style-driven paradigm of modernism. However, when modernist architecture is viewed as a discourse, as suggested by Sarah Goldhagen, the ornamented architectures of Sullivan and Saarinen can well join the conversation—the same conversation that is today continued by new buildings, once again clothed – or tattooed, as you will – with intricate patterns that could be called, as Sullivan did, a “garment of poetic imagery.” This interpretation can give a historical perspective to the current use of architectural ornament, which is again used to enhance what is already there.
NOTES

1 The winner of the Finnish best concrete building of the year award in 2009, architects Heikki-nen & Komonen from Helsinki.


3 Ibid., p. 167.

4 The word modern is used here to describe something that is contemporary and novel for its time – the definition of the word is therefore constantly changing. Modernism is a term that needs defining as well – in this article it is used to describe the particular, style-based notion of modern architecture, visible in the most iconic buildings of Le Corbusier, for example, and described famously in Sigfried Giedion's book Space, Time and Architecture (1940). The narrow definition has long been challenged; see, for example, Sarah Goldhagen, "Something to Talk About: Modernism, Discourse, Style", Journal of the Society of Architectural Historians, 64/2 (June 2005), pp. 144–67; Hilde Heynen, Architecture and Modernity (Cambridge, MA, London: MIT Press, 1999); Andrea Oppenheimer Dean, Bruno Zevi on Modern Architecture (New York: Rizzoli, 1983); and David Watkin, Morality and Architecture Revisited (1977; repr., London: John Murray, 2001).


6 Loos's article also contained social criticism: he lamented that the craftsmen were not paid decent wages for their labor. Ornament meant wasted labor, wasted health, and wasted capital. Loos, Ornament and Crime, p. 171.


10 See Eaton, American Architecture Comes of Age, p. 139–40, and Kruft, A History of Architectural Theory, p. 359. Kruft has also noted a link between Sullivan's and Loos's ornament articles; Sullivan's ideas on architecture have been seen as an influence on Loos (Kruft, loc. cit.). According to Robert Twombly (Louis Sullivan: His Life and Work [Chicago: The University of Chicago Press, 1986], p. 433), Loos had been inspired by Sullivan while in the United States in the 1890s and had planned to ask Sullivan to teach at his architecture school.

11 Sullivan wrote of Saarinen's entry: “... there is revealed a logic of a new order, the logic of


AESTETICS - THE UNEASY DIMENSION IN ARCHITECTURE

17 Rykwert, The Necessity of Artifice, p. 68.
19 On "form ever follows function", see Louis H. Sullivan, "The Kindergarten Chats", in Kindergarten Chats and Other Writings, pp. 42–48, first published in The Interstate Architect and Builder (1901–02); Sullivan, "The Tall Office Building Artistically Considered", in Kindergarten Chats and Other Writings, p. 208, first published in Lippincott's (March 1896). The sentence is found in Sullivan's texts in 1896, but according to Morrison, the idea most likely existed earlier (Morrison, Louis Sullivan: Prophet of Modern Architecture, p. 231).
22 A decade later, Alfred Loos would use a distinct change in materials, colours, and intricate detailing to create a similar emphasis of the first two floors of his house on the Michaelerplatz in Vienna (1909–11).
27 Eaton, American Architecture Comes of Age, pp. 206–08 and 237; Twombly, Louis Sullivan: His Life and Work, p. 425. Sullivan's fame in Europe is underlined by the story of how Sullivan got the commission for the People's Federal Savings and Loan Association building in Sidney, Ohio. According to Twombly, it was largely because the secretary of the bank had vacationed in Europe in 1914 and had there "heard Sullivan's name everywhere":
30 Already the early 1920s, his architecture was being described as cool and rational. Carolus Lindberg, "Ragnar Östberg ja hänen kaupungintalonsa", Arkitehti, 7 (1923), p. 99.
32 Saarinen quoted by Christ-Janer, Eliel Saarinen, p. 113.
Christ Church in Cranbrook was finished after Goodhue's death. Bertram Grosvenor Goodhue (1869–1924) did not have time to even begin the design; see Marsha Miro, *A Life Without Beauty Is Only Half Lived* (Bloomfield Hills, MI: Cranbrook Art Museum, 1999), p. 10.


Sullivan, “The Kindergarten Chats”, p. 15. The Kindergarten Chats articles published in *Interstate Architect and Builder* did not have the effect Sullivan had hoped. According to Twombly (Louis Sullivan: *His Life and Work*, pp. 372–75), the magazine did not have a wide enough circle of readers for Sullivan's message to spread.

In addition to these main sources, additional texts by the architects have been used to help clarify their ideas.


Sullivan, “The Kindergarten Chats”, p. 32. It has been thought that the organic-functional aesthetics in Sullivan’s writings has been influenced by American transcendentalism, originally formed in literary circles in the 1830s. In addition, ideas were tinted with a touch of romanticism. The effect of transcendentalism is particularly evident in Sullivan’s “Essay on Inspiration” (1886), where nature is presented as an inspiration and a source of rhythm and cyclic processes. The thoughts had been popular for nearly a century, so Sullivan could have been able to absorb them through a variety of routes. Narciso Menocal, *Architecture as Nature: The Transcendentalist Idea of Louis Sullivan* (Madison: University of Wisconsin Press, 1981), pp. 12–15; Kruft, *A History of Architectural Theory*, pp. 347–50; Twombly, Louis Sullivan: *His Life and Work*, pp. 374–75.


Saarinen, *The Search for Form in Art and Architecture*, p. 73.

Ibid., pp. 14–16, 216, and 316.

Sullivan's thoughts on ornament were most clearly expressed in his article “Ornament in Architecture” (1892), pp. 187–90.


Saarinen was quoted as saying: “solve the problem in an honest, simple way, let the sculptural quality come if it will and we will have characteristic ornament in time” and “ornament is like clothing”. Johns, “Finnish Architect Prescribes for US”; cf. Saarinen, “Untitled manuscript: Part II”, pp. 5–6.


For example, Schopenhauer and Nietzsche. Sullivan owned books by these authors; see Elaine Hedges, “Introduction”, in Louis H. Sullivan, Democracy: A Man Search (Detroit: Wayne State University Press, 1961), p. xii. Both were also included in Saarinen’s library. For the library inventories, see Jenni Meskus, Inventory of the library of Hvitträsk Museum (2006); Roberta Gilboe, “Inventory of Eliel and Loja Saarinen Books”, Cranbrook Art Museum, Cranbrook Academy of Art (2006).

Saarinen, The Search for Form in Art and Architecture, p. 73.

Louis Sullivan, for example, was not presented as a source of the idea of the organic, although his name was mentioned. This omission was noted by Martin Wagner (a former city planning director of Berlin and a professor at Harvard) in his letter to Eliel Saarinen on 30 May 1943; see “A Letter to Eliel Saarinen 30.5.1943”, Saarinen Family Papers, Cranbrook Archives.


The magazine was known in Finland; Saarinen’s teacher Gustaf Nyström subscribed to it in the 1890s when Saarinen was a student of architecture; see Chudoba, Kaupunkia etsimässä, p. 78. Adler and Sullivan’s projects or Sullivan’s projects and ideas were presented in the following issues of Architectural Record: Chicago Auditorium, Architectural Record (1891–92), pp. 415–34; Transportation Building and Chicago architecture in general, Architectural Record (1893–94), pp. 294–95; Adler and Sullivan works, Architectural Record (1895), pp. 13–37; Bayard Building, Architectural Record (1898–99), pp. 254–56; “Nature as an Ornamentalist”, article with Sullivan’s illustrations, Architectural Record (1899–1900); pictures of cenotaphs, Architectural Record (1900–01); Sullivan as a designer of skyscrapers, evaluation of the Chicago school, Architectural Record (1904), pp. 53, 61, 274–84, and 361–84; Sullivan’s summer home in Ocean Springs, Mississippi, Architectural Record (1905), pp. 471–90.

Saarinen admitted to having been aware of Sullivan as a writer; for example, he wrote in an obituary for Louis Sullivan that he had appreciated Sullivan’s thoughts on architecture, as well as his buildings. Saarinen, “An Obituary for Louis Sullivan and Bertram Grosvenor Goodhue”; see also Saarinen, “The Cranbrook Development: My Point of View of Our Contemporary Architecture and Architectural Education”, address given at the AIA Convention in San Antonio, Texas, April 1931.


Saarinen, The Search for Form in Art and Architecture, p. v.


Eaton’s comment concerned the influence of Sullivan and Richardson on Finnish architecture at the turn of the previous century. Eaton, American Architecture Comes of Age, p. 206.


Giedion, Space, Time and Architecture, pp. 10, 275, 388–390, and 623. For more mentions


AESTHETICS AND ARCHITECTURE FOR THE DEPENDENT AGEING PROCESS: SIX ARCHITECTURAL COMPETITIONS IN SWEDEN, 1907–2012

Jonas E. Andersson

ABSTRACT
In Sweden, the search for an appropriate space for accommodating dependent older people can be associated with the construction of the development of the modern welfare society. Despite different political paradigms, the notion of a comfortable ageing process in a familiar home environment, complemented by individualized caregiving, has become the dominant idea for architecture for the frail ageing process. This study explores the evolution of this particular aesthetics by examining six architectural competitions that were organized during the period from 1907 to 2012. These competitions served as research material. The documentation of each of these competitions was subjected to a close-reading and drawing-analysis procedure. Being national, these competitions forged the positive connotations of the locus of home into aesthetical criteria for a normative homeliness, which was implemented by the Swedish municipalities. In the course of time, homeliness has changed from an emotional understanding into an approach for architectural critique. Based on the six competitions, this study postulates that the aesthetics of homeliness involves the following aspects: 1) small-scale buildings with interior space that is designed for communal or individual usage; 2) small-scale buildings in a large-scale configuration with space for individual and communal use; 3) integration in and location to surrounding areas for residential use; 4) exploration of sensory aspects of the indoor and the outdoor environment that the architectural design created; and 5) architectural design promoting the individual process of appropriating it into becoming a locus of home.

KEYWORDS
architectural competitions, programming space for frail ageing, aesthetics, socio-politics
INTRODUCTION
During summer or autumn, when realizing a journey into the pastoral Swedish countryside, the perspicuous observer might resort to pattern-seeking: protruding from the heavy greenery, often in close proximity to the village church, or, in the outskirts of the rural community, a larger two-storey building with a systematic fenestration or higher, often in a wooden construction with exterior panelling or plasterwork, will majestically dominate the landscape. Random passers-by might ask themselves:

Could this building be the home of the wealthiest local farmer, the communalized chateau of a destitute aristocracy, or, simply, grandiose megalomania of past times?

With all probability, a simple answer suffices: the spotted building represents the architectural realization of Swedish social ambitions for the twentieth-century welfare state. These buildings were the icon achievement of the liberal fin-de-siècle movement, which lobbied for reforming the old class society’s obsolete poor relief aid to small people, so that a dignified social support to this group of people would attenuate difficult transitions in life like orphanage, unemployment, or a dependent and frail ageing process. Until the beginning of the 1970s, the conception of such buildings was based on normative drawings.

When discussing buildings for older people, the architectural design can be linked to the outcome of three national architectural competitions in 1907, 1948, and 1979. These competitions explored the notion of a homelike space, since the competition programmes labelled this aspect as a fundamental design criterion for architects to explore in their design proposals. Hence, the locus of home became a generating image for the conception of this type of architecture. Despite different paradigms in the development of the Swedish welfare regime, this idea of a locus of home for ageing was deemed as being the appropriate type of space for dependent and frail older persons. The positive connotations of home forged a normative homelike aesthetics. The quest for homelikeness has continued to influence architecture for the frail ageing process even during the new millennium. In 2012, three competitions of the governmental initiative “Growing Old, Living Well” confirmed the locus of home as a criterion for innovative housing for senior Swedes.
Aim and Working Hypothesis

The aim of this study is to investigate the constituents of the normative homelikeness that developed during the twentieth century in architecture for dependent and frail people. The competition documentation and the proposals, which were developed in response to the organizers’ programming requirements for three architectural competitions in 1907, 1948, and 1979, constituted one half of the research material for this study. The research material revolved around proposals that were identified as those winning either first, second, or third prize, proposals attributed with an honorary mention, or proposals that were purchased. In addition, the proposals (winners and runners-up) of the three municipal competitions, which were organized over the course of the year 2012, along with programming documents, form the other half. The research material allowed for a comparative analysis of the strength in spatial aspects associated with the notion of homelikeness.

The study departed from a working hypothesis: the research material suggested that homelikeness coincided with an original meaning of the word aesthetics in Greek language, but, once detected, it developed into a criterion for evaluating the appropriateness of proposals in other competitions. In that sense, aesthetics of architecture was associated with an individual emotional relationship between the architectural space, activities taking place there, and adjustments of the space for personal use. The appropriateness of space incarnated the perceived fit between the architectural design, material, and the future group of users. Homelikeness seemed to cause a gut-like sensation of being at ease or in discomfort by the jury boards. A phenomenological understanding of aesthetics was found that activated the fundamental meaning of being and living, something that could be labelled as a poetics of space.

AESTHETICS AND ARCHITECTURE FOR DEPENDENT AND FRAIL OLDER PEOPLE

The Swedish evolution of architecture for the frail ageing process was guided by a search for homelikeness in large institutional environments, perceived as inhumane. Various benevolent and political groups that were active by the end of the nineteenth century focused on the aesthetic criterion of homelikeness in architecture for older people and the recurrent use of architectural competitions for defining the locus of home. This inquiry-by-design approach unified the movement. Firstly, the organizers synthesized their different opinions about appropriate homelike milieus into the competition documentation (briefs and other supplementary documents) that launched
the competitions. Secondly, architects supplied their architectural realizations of the envisioned homelike space in their different proposals that were submitted. The architects’ involvement in six national competitions defined the spatial parameters of the ideal homelike architecture for the frail ageing process. During the twentieth century, the notion of home went from being a unifying concept for the political awareness of the fin-de-siècle movement, so that century-long cultural beliefs about dependency and social aid could be overthrown, into becoming an innovative new interpretation of homeliness, so that the existential connotations of home as a personal realm were forwarded.11

In its entirety, this procedure suggests that architecture is widely seen as a vernacular art, which is the outcome of various everyday arrangements that aim at defining the perimeters of being human.12 The evolution of the homelike aesthetics was guided by a sensory approach towards space for the frail ageing process. In that sense, when writing the programming documentation, the organizers used the word aesthetics with a connotation that refers closely to the etymological meaning of the Greek word αισθάνομαι (aisthanomai) – I feel, I perceive, I sense.13 The Kantian meaning of aesthetics that the word assumed during the Age of Enlightenment – a harmonious reconciliation of rational elements and sensory stimulations in order to achieve an ultimate representation of beauty14 – was activated among architects who participated in the competitions. When assessing the different proposals in terms of appropriate architecture, the jury went for the proposal that projected the strongest feeling of a locus of home. In this assessment, the word aesthetics assumed an understanding that was introduced by the German philosopher Alexander Gottlieb Baumgarten in 1750: the study of appropriate and misappropriate constituents of a certain design, architecture, artistry, or other artefacts.15 Here, aesthetics refers to a sort of quality assessment of the perceived level of harmonious reconciliation of rational and sensory aspects in order to achieve the desirable homelike aesthetics.

In consequence, the assumption of this paper is that the Swedish aesthetical predilection for a homelike architecture for the frail ageing process can be analyzed through the writings and the representations that each competition generated. This assumption is consistent with other research on various types of architecture that have evolved for a special purpose. The aesthetic preparations for the central parliament square in Oslo expanded from a town-planning matter that was not settled until the 1950s.16 In this case, the evolution
can be retraced by a comparative study of competition programmes for the site, along with proposals that the architects submitted in response to the presented visions. A recent study on the spatial evolution of contemporary national libraries in the Western democracies during the period from 1981 to 2009 is another poignant example of how architectural representation, which is present in the submitted proposals for the different architectural competitions, describes aesthetical tendencies in an ongoing discussion about the appropriate solution for a grand library.17

DESIGN OF STUDY
The research material was assembled by juxtaposing information retrieved from the Swedish journal on ARCHITECTURE (tidskriften ARKITEKTUR in Swedish). Since its founding by the late nineteenth century, architecture, competitions, and related matters can be found in its archive. In addition, the research material comprises material found in national libraries, municipal archives, museum archives, or the national archives. The study evolved through a close-reading process of the competition documentation,18 and an attentive analysis of the architectural representation in the submitted proposals for the six competitions.19 The analysis focused on the detection of elements that assumed a role as generator images for the envisioned space:

1. Programming requirements found in the competition documentation that entail criteria for the envisioned space (competition programme or the jury assessment report)
2. Format and requirements for submitting proposals in the competitions
3. Format for presenting the proposals (floor plans, elevations, facades)
4. Drawing technique (ink, pencil, crayon, watercolour, gouache, digital visualization)
5. Representation of the envisioned space in the proposal
6. Three-dimensional renderings: presence of building model or axonometric representation
7. Representation of user groups, either 1) dependent and frail older people; or 2) members of the staff20

The study focused on the presence of aesthetical epiphanies that would explain the aesthetical nature of the concept of homeliness. Based on previous research on housing for dependent and frail older people, the paper assumed that homeliness may result in four dominant types of architectural space: a residence-like, hotel-like, hospital-like, or institution-like built space.21 In or-
order to systemize the empirical findings, a theoretical matrix was conceived in order to explain the main constituents of these four types of built space. The model expanded from other research that had aimed at situating architecture and building shaping work in relation to influential and formative factors.22 The model described two axes with four quadrants. The vertical axis related to the building’s scale factor, and stretched from small-scale built space to large-scale buildings. The horizontal axis suggested the level of privatization in the architectural space and spanned from space for collective usage to space for private activity. At the intersection between these axes, the possible outcomes as four different types of built space were presented; see Figure 1.

![Figure 1 A matrix on architectural space for the dependent and frail ageing process](image-url)
The study was performed as a single case study with sub-studies on the individual competition documentation and submitted competition proposals that belong to one of the six architectural competitions that were realized in 1907, 1948, 1979, or 2012. The programme, the jury assessment report, and the submitted proposals from each competition were explored, all in all thirty proposals conceived by approximately the same number of architect teams.

RESULTS
This section is divided in four separate parts that are based on the seven-item list of potential generator images that was presented previously. The first section will explore “Programming Requirements in the Six Architectural Competitions”. Under the title “Architectural Representation”, the second part will present submission formats, drawing techniques, spatial representation, and three-dimensional rendering. The third section will convey the presence of representations of human beings, that is, residents and members of the staff, in the submitted proposals. This section is called “Human Representation”. The fourth section, “The Submitted Proposals and the Locus of Home”, will situate the submitted proposals in the matrix defined for this study. The main characteristics of the competitions are presented in Table 1.

1. Programming Requirements in the Six Architectural Competitions
The initial cornerstone for the envisioned homelikeness was laid in 1907, when the first national competition that concerned the design of small-scale paupers’ asylums was organized by the lobby organization SAPRA, the Swedish Association for Poor Relief Aid (Svenska Fattigvårdsförbundet). The organization invited the Swedish corpus of architects to submit innovative design solutions for the specified design task. Based on the competition programme and the jury assessment report, the key outcomes of this competition can be summarized as follows:

Outcome of the 1907 Competition:
1. Definition of homelike aesthetics
2. Suppression of large-scale institutional environments
3. Promotion of small-scale building for up to twenty-five residents
4. Introduction of new building materials, building and ventilation techniques (public health)
5. Sustainable architecture (building costs, maintenance, rationality, and staffing)
6. Emergence of private space in rooms for 1–4 residents
During the period from 1910 to 1929, additional cornerstones were added to the general idea of homeliness. In 1910, the second prize winning proposal from the competition in 1907 was converted into a prototype for old people's homes (OPH), in the following OPH, dressed in a Swedish adaptation of art nouveau, in order to promote a national expansion of municipal OPHs. From 1910, the concept of OPH replaced the nomination paupers’ asylums. With the reform of the Poor Laws in 1918, OPH was introduced as the correct denomination. In 1930, the first architectural critique was raised in the magazine *Architecture* against the uncontrolled expansion of these buildings in the countryside. The critique pertained mainly to an overly emphasized rationality at the expense of necessary space for furniture and passages in communal and private space. In 1938, the Swedish parliament allowed state subsidies for the construction of a new type residential building for elderly people, the so-called pensioners’ homes, within the ordinary stock of housing. This housing was inspired by Danish models. World War II put investment in new housing for older people on hold. In 1947, the introduction of public pensions revolutionized living conditions for the elderly, since the system provided older persons with a very low income with the means for paying a monthly rent in case of dependency on care and caring.

The second cornerstone for homelike aesthetics was laid in 1948. This year the Royal Board of Social Welfare and Health (RBSWH) organized a second national architectural competition on the matter. With the introduction of old-age pensions in 1948, the OPHs were excluded from the Poor Law, which was replaced by the first Social Act in 1956. As a consequence, the existing OPHs became an type of housing for older people with small incomes within the ordinary stock of housing. Given the social changes of the dawning Swedish welfare state, the RBSWH tried to defend the idea behind the OPHs. The RBSWH forged the idea of the “New OPH”, which would be an alternative form of housing within the ordinary stock of residential solutions for frail older persons in need of regular caregiving. The competition programme and the jury assessment report forwarded the following key outcomes of this competition:

**Outcome of the 1948 Competition**
1. Confirmation of the merits of the small-scale built environment over the large-scale one
2. Promotion of usefulness in interior space (possible to furnish, and thereby install, the sensation of a locus of home)
3. Expansion of individualized space for a large number of single users and maximization of shared space to a maximum of two users (the four-bed rooms were abandoned)
4. Slight correlation of the older person's needs with the design of a home-like environment
5. Rethinking the localization of the OPH as integrated into surrounding residential areas
6. Sustainable architecture (building costs, maintenance, rationality, and staffing)25

The outcome of the RBSWH competition in 1948 was not acclaimed by the public, mainly because of the compact resistance among older people against the idea of converting the defamed OPHs, a vivid image of the old society for people with low income, into an ordinary type of housing. Interest organizations in defence of older people's rights started a fierce campaign against this idea.26 However, the local municipalities and regional counties applauded new state subsidies for the construction of the new OPHs that the architectural competition had visualized. However, the competition designs were compromised by the underlying wartime restrictions that permeated the competition programme, jury assessment report, and civil administration. Therefore, communal lavatories, bathrooms, and kitchens were imposed. New OPHs assumed a larger building scale with seventy residents on average, which was considerably larger than the recommendation of the competition jury, a maximum of thirty residents. The group of frail older persons with medical diagnoses was separated from the larger group of older people and accommodated at geriatric wards in the large hospitals that were built from the 1950s onwards.

In 1982, with the introduction of a new social act, still in use today, the OPH as a building type came to an end. However, home as the ideal place for growing old continued to flourish as a structuring element for architecture for the frail ageing process. The essential constituents for creating an individual locus of home were forwarded. The definition of these constituents started with the third architectural competition, organized in 1979 in order to rethink OPHs. Here, the key outcomes of this competition were:

**Outcome of the 1979 Competition**
1. Return to small-scale buildings; localized to surroundings for residential use that aimed at integrating older people in an existing social context
2. Emphasis on the individual home as the ideal place for ageing with a long-term medical condition; ageing in a familiar environment at an individual pace
3. Being in reach of social activities open for participation according to personal liking
4. Being in reach of both indoor and outdoor space for individual or communal use
5. Being in reach of caregiving provided by professional care staff
6. Focus on sensory aspects in architecture and the indoor-outdoor relationship27

The competition preceded the forging of a new maxim for the Swedish policy for dependent and frail older people. The new aim was to allow for ageing in place, meaning to grow old in a flat or a house within the ordinary stock of residential buildings. In case of dependency, individualized eldercare would help one stay in this familiar environment. The new maxim also changed the view on geriatric wards in large hospitals. Instead, small-scale housing with individual studio flats in a group-living concept would accommodate dependent and frail older persons, who experienced cognitive problems or complex functional impairments. These facilities for group living replaced the old OPHs. In 1992, the Swedish system for accommodating dependent and frail older people was reformed completely, so that the municipalities became solely responsible for providing appropriate housing, even for this group of people. Many existing facilities were refurbished according to the idea of group living, but as separate units in larger buildings, the so-called residential care homes (RCHs). During the first decade of the new millennium, the number of available flats in RCHs for frail older people dropped considerably, with 15 per cent during the period from 2000 to 2005.28 The drop was due to the municipal trimming of costs for municipal eldercare, mainly restricting access to RCHs for elderly persons with a diagnosed form of dementia.29 On the other hand, older people with functional impairments or other long-term medical conditions remained in ordinary housing, depending on the provision of medical care by primary health care or special care at the hospitals. Parallel to this development, a new type of housing surfaced, often called “senior co-housing”; however, to a large extent, it involved conversions of former RCHs into flats available on the open housing market.

The shrinking number of RCHs became a political matter for the election campaign of 2006. As a consequence, a special committee was nominated by
the resigning government and taken over by the entering one. Special allocations were introduced in order to increase the number of RCHs. This investment in exploring appropriate housing for older people resulted in three architectural competitions on appropriate space for ageing, organized in 2012. The key outcomes of these competitions were:

**Outcome of the 2012 Competitions**
1. Small-scale and residence-like architecture
2. Balanced integration in existing residential areas or nature by respecting climate, topography (sustainable building)
3. Confirmation of the maxim of ageing in a familiar milieu appropriated during the course of life
4. Locus of home as the ideal place in which to grow old, even for dependent ageing
5. Appropriate space for ageing is sensory and inspirational architecture
6. Architecture that promotes a sense of well-being and personal usefulness

The three competitions were organized as part of the governmental program “Growing Old, Living Well”. The program was opened for the period from 2010 to 2012. It aimed for a programmed innovation of housing for older people through various research projects or inquiry-by-design projects on essential aspects of housing for the later stages in life. Despite a generous allocation of 50 million SEK, only 6 million SEK were used for organizing three architectural competitions in three municipalities. The main cause for the low number of competitions was due to a clash between the timeline for the governmental programme of two years and municipal physical planning that in general exceeds two years.

2. Architectural Representation
The stipulated form for submitting a proposal in response to the competition documentation can be characterized as consistent for most architectural competitions of any type: open, invited, or special competition form. Common to all of the six competitions was the fact that no three-dimensional models were allowed, although some proposals included photographs of simple models in Styrofoam. The authors strived to supply a realistic-aiming demonstration of the proposed architecture. Axonometric representations were used to present spatial and technical solutions for the suggested architecture. The requirements listed below were the same in all of the three ar-
architectural competitions, organized in 1907, 1948, and 1979, but also for the ones that were realized in 2012:

1. Floor configuration in a scale of 1:100
2. Facades from all cardinal points in a scale of 1:100
3. Elevations and sections in a scale of 1:100 to the extent that the author(s) deemed necessary
4. Views or visualizations (exterior or interior) of the proposed building to the extent that the author(s) deemed necessary
5. An accompanying text that explained the main characteristics of the suggested building design
6. A specification of materials that were to be used
7. 3–6 drawings in A1 format mounted on cardboard
8. Drawing methods that architects traditionally use in order to present their ideas

In the competition of 1907, the programme emphasized the need to supply an estimate of the building investment costs. In this competition, none of the participating architects chose to supply any visual representation other than the facade drawings with a suggested fore- and background. The proposals submitted for this competition were hand-drawn ink drawings on canvas.

In the second competition of 1948, the programme stipulated exterior or interior views. The competition proposals in both categories were made with lead pen on transparent paper. The competition task was dual: either an accommodation for thirty residents or a larger one for eighty residents. In the first category, architects submitted exterior views of their designs, and floor plans with different imagined two-dimensional arrangements of furniture. In the second category, the architects supplied both exterior and interior views, while the floor plans contained elaborated two-dimensional furniture arrangements for rooms intended for individual users or shared by no more than two residents.

In the competition of 1979, the competition programme specifically imposed the need for exterior and interior visual presentations of the suggested architecture. These imaginary renderings of interior or exterior space were intended to present the view of one or more residents, or, more accurately, the patient's look on things. The programme used the designation “patients” for the residents in the envisioned local nursing homes. Several representations of the architectural spaces assumed the position of a bed-confined person,
who contemplated the exterior and interior environment. The images forward sensory stimuli: a tree, a fireplace, or a sunray. In-depth analyses of spatial experiences that the proposed building conveyed to persons with long-term medical conditions were presented by the architects. These visualizations were executed in various drawing techniques of great artistic quality – linear or freehand drawings in lead or ink and applied aquarelle or gouache techniques. In comparison with the two earlier and the three later competitions, the proposals stand out as lavishly illustrated architectural space with a perspicuous eye to the relationship between poor health, dependency, and the state of no longer being able, fit, and independent.

In the competitions of 2012, the presentation techniques are chronologically motivated: computer-aided drawings and visualizations are used extensively. The proposals reflected the increasingly larger use of Photoshop methods and digitally rendered images in the architecture profession. Exterior views were frequently used in order to illustrate the integration into the surrounding environment. The interior views were of poor quality, mainly suggesting an openness and transparency towards the outer space. The visual representations of these competitions, similar to the earlier ones of 1907 and 1948, adopted a technical approach to present spatial qualities rather than the sensory experience of the space, which is unique for the competition of 1979.

3. Human Representation

The human representation in the submitted proposals from the six competitions demonstrated two principles: either the omnipresent author who presented spatial qualities of the proposed architecture or an anonymous spectator who scrutinized the proposed type of architecture. In the architectural competitions of 1907, the older residents were indicated indirectly: thin lines described one to four beds in designated rooms, while the staff remained absent.

In the 1948 competition, the omnipresent author’s view was dual. In the proposals for the smaller OPH type, most of the floor plans of the flat were not furnished, but sketches of the older residents were found on the drawings in between facades, floor plans, and exterior views. On the other hand, the floor plans for the larger OPH type were illustrated with furniture arrangements. Exterior and interior views contained artefacts that demonstrated the presence of older residents, but also the architects’ sense of alienation.
from the design task: artefacts and the manner in which the older persons were dressed suggested that this group belonged to the lower working classes; older farmworkers with small economies, who had survived harsh living conditions. This discriminatory tone was also found in the competition programme. The staff was absent in all of the submitted proposals.

The anonymous spectator was present in all of the proposals that were submitted for the architectural competition in 1979. His or her eyes caught a glimpse of the exterior or the interior space, or exchanged an invisible glance or a smile with the staff. The human being is present through artefacts that express a personal taste or an individual idea of how to furnish the different types of flats. The user has assumed a position behind the spectator of the boards. The interior and exterior views focused on positive details, such as a set table, a fireplace, or flourishing flowers and growing gardens. In some proposals, design furniture could be found as time markers. Members of staff are occasionally present, mainly in a nurse outfit.

In the architectural competitions of 2012, the omnipresent author’s view was adopted once again. Human beings seemed to be cut from commercial material or newspapers and integrated into the visualizations. The computer-aided renderings demonstrated a poor interaction between the cut-out persons and the proposed type of architecture. The older persons were incarnated by active senior citizens with some assistive equipment, but with seemingly slight caregiving needs. One representation of the same older person, an elderly woman wearing a red jacket and holding a dog on a leash, was found on two out of three winning proposals. The floor plans demonstrated flats of different sizes, some combinable in order to allow for an older couple’s living. The flats were furnished in a stereotypical way that focused on displaying two possible stations for the bed. The communal spaces were mostly left empty. Occasionally, some decorative elements were used in order to cover up for the undefined and void space. The staff is absent.

4. The Submitted Proposals and the Locus of Home

Given the slower pace of change in architecture, the full sample of the thirty rewarded or purchased proposals in the six architectural competitions during the period from 1907 to 2012 can be seen as formative steps in the evolution of an aesthetic vision for the locus of home for the frail ageing, the homeliness. In this context, chronology has a lesser importance, since the proposals can be seen not only as architectural prototypes, but also as visualizations of changes in sociopolitical ambitions.
By use of the jury assessment reports, the motives behind the first, second, and third prizes, along with purchased proposals, allowed for a distribution of the proposals along the four quadrants of the theoretical matrix for theorizing about architecture for the frail ageing process. This distribution resulted in the following order (see fig. 2). The jury assessment reports suggested what type of architecture was the most in line with the envisioned type of architectural space as stipulated in the competition programme. The distribution of the proposals in the matrix allowed for the following set of conclusions about the constituents of the homelike aesthetics for the frail ageing process. Hence, it could be said that homelikeness relies on the following perceived aspects in the architectural design:

1. Individual small-scale buildings with space that was designed for an individual and communal use, but opened for personal adjustments of the space
2. Small-scale buildings in a large-scale configuration with space that was designed for an individual and communal use and opened for personal adjustments of the space
3. Integration in and location to surrounding areas for residential use
4. Exploration of sensory aspects of the indoor and the outdoor environment that the architectural design created
5. Affirmation of the individual appropriating process of making architectural space into a locus of home

These aspects are in line with other research on homelike aspects in architecture for the frail ageing process. The overarching conclusion of an evaluation study of the three competitions of 2012, which were part of the governmental programme “Growing Old, Living Well”, also detected this inclination for seeing homelike architecture as a user-friendly and adjustable architecture, which in turn was integrated in existing built environments with various types of residential housing.

In conclusion, the aesthetics for the frail ageing process is mainly an exploration of a direct relationship between the ageing person, the imminent personal space, and space for socializing for a smaller group. The desirable type of architectural space can be found in Quadrant 3: small-scale buildings and individualized space. To a lesser degree, and mainly focusing on the configuration of small personalized space into units, this applies to Quadrant 2: large-scale buildings and individualized space. The non-desirable type of ar-
### Large-scale buildings

<table>
<thead>
<tr>
<th>Quadrant 1.</th>
<th>Quadrant 2.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communal space and large-scale buildings</td>
<td>Individualized space and large-scale buildings</td>
</tr>
<tr>
<td><strong>Architectural competition 1907:</strong></td>
<td><strong>Architectural competition 1907:</strong></td>
</tr>
<tr>
<td>Purchased proposal</td>
<td>-</td>
</tr>
<tr>
<td>Architectural competition 1948:</td>
<td>Architectural competition 1948:</td>
</tr>
<tr>
<td>-</td>
<td>2nd, 3rd prize, purchases, (80)</td>
</tr>
<tr>
<td>Architectural competition 1979: none</td>
<td>Architectural competition 1979:</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Architectural competition in 2012:</td>
<td>Architectural competition 2012:</td>
</tr>
<tr>
<td>-</td>
<td>1st prize winning proposal along with other proposals from the competition in Burlöv</td>
</tr>
<tr>
<td></td>
<td>1st prize winning proposal from the competition in Linköping</td>
</tr>
</tbody>
</table>

### Individualized space

<table>
<thead>
<tr>
<th>Quadrant 3.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individualized space and small-scale buildings</td>
</tr>
</tbody>
</table>

### Communal space

<table>
<thead>
<tr>
<th>Quadrant 4.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communal space and small-scale buildings</td>
</tr>
</tbody>
</table>

| **Architectural competition 1907:** | **Architectural competition 1907:** |
| none | 2nd, 3rd prize winning proposals |
| Architectural competition 1948: | Architectural competition 1948: |
| none | 2nd, 3rd prize winning proposals along with purchased ones (40 residents) |
| Architectural competition 1979: | Architectural competition 1979: |
| none | 8 proposals |
| Architectural competition 2012: | Architectural competition 2012: |
| Two alternative proposals from the competition in Linköping | The winning proposal along with three proposals from the competition in Gävle |

### Small-scale buildings

- Hotel-like environment
- Hospital-like environment
- Institution-like environment
- Residence-like environment

---

Figure 2 The distribution of competition proposals in the matrix
CONCLUSIONS AND DISCUSSION
The present study started out from six Swedish architectural competitions that were organized during the period from 1907 to 2013 in order to define an appropriate type of space for the dependent and frail ageing process. Architectural competitions, with their programming documents, jury assessments, and competition proposals, submitted in response to programming documentation, suggest a particular setting, in which the word aesthetics is active. The paper assumed that architecture for the frail ageing process evolved in a tripartite understanding of the word aesthetics during the competition process: 1) the etymological meaning of aesthetics (programming); 2) a harmonious reconciliation of rational elements and sensory stimulation (design process); and 3) the study of appropriate and misappropriate constituents (jury assessment). The study suggested that the notion of homeliness must be considered in this cyclic way. In consequence, this study demonstrated the shifting use of aesthetics in competitions on appropriate space for the dependent and frail ageing.

In architectural competitions, aesthetics is used close to the etymological meaning during the programming phase as an instrument for defining immediate sensory requirements for the envisioned architecture to meet. During the competition phase, aesthetics serves as an instrument for assembling rational aspects with sensory ones, while the evaluation phase employs aesthetics as a tool for identifying desirable and less desirable qualities in the submitted architectural solutions.

This conclusion suggests a close relationship between aesthetics and architectural critique. Architectural critique constitutes a creative and integral force for the creation of various architectural designs, in which the detailing of space later becomes subject to aesthetical judgements. This study lends support to a previously formulated conclusion that aesthetics in architecture implies an evaluative approach towards the spatial configuration of architectural space and a close analysis of its constituents. In addition, this study has shown that, ultimately, aesthetics is also a matter of defining the right and wrong type of space. In the context of architectural competitions
for dependent and frail older persons, large-scale buildings with primarily communal space were perceived as reprehensible, while small-scale building designs that paid close attention to individual needs and the sensory experience of space were perceived as desirable – a moral balance between rational requirements and existential needs.
<table>
<thead>
<tr>
<th>Year</th>
<th>Competition</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1907</td>
<td>SAPRA architecture competition</td>
<td>This architectural competition was launched in order to manifest the liberal movement’s quest for reforming the old Poor Laws of pre-industrial society, and to introduce modernized support of self-aid in troubled circumstances.</td>
</tr>
<tr>
<td>1948</td>
<td>Royal Board of National Health and Social Welfare competition</td>
<td>This architectural competition aimed at redefining the old people’s home (OPH), which during the period from 1896 to 1947 became the denomination of a building type that included basic caregiving for dependent and frail older people on the fringe of society.</td>
</tr>
<tr>
<td>1979</td>
<td>SPRI competition</td>
<td>This architecture competition was organized by the national research institute SPR in order to innovate and produce alternative solutions to old people’s homes and long-term care in hospital wards or nursing homes that had become obsolete due to overly stringent requirements.</td>
</tr>
<tr>
<td>2012a</td>
<td>Municipality of Gävle competition</td>
<td>The competition was sponsored by the governmental program “Growing Old, Living Well”.</td>
</tr>
<tr>
<td>2012b</td>
<td>Municipality of Linköping competition</td>
<td>The competition was sponsored by the governmental program “Growing Old, Living Well”.</td>
</tr>
<tr>
<td>2012c</td>
<td>Municipality of Burlöv competition</td>
<td>The competition was sponsored by the governmental program “Growing Old, Living Well”.</td>
</tr>
</tbody>
</table>

Table 1 Overview of the six architectural competitions in the research material. Source: Andersson 2011; Andersson and Rönn 2013.
NOTES

2 Magnus Rönn Sten, *arkitektur och designkriterier* (Stockholm: KTH Royal Institute of Technology, 2002).
4 Andersson, *Architecture and Ageing*.
19 Gomes and Haskins, “Analysis of Architectural Representation as a Research Method”.
AESTETICS - THE UNEASY DIMENSION IN ARCHITECTURE

AESTETICS - THE UNEASY DIMENSION IN ARCHITECTURE

129


23 Andersson, Architecture and Ageing.


27 Andersson, Architecture and Ageing.


32 Jonas E. Andersson and Magnus Rönn, Arkitektur för bo bra på äldre dar – tre tävlingar i Burlöv, Gävle och Linköping (Stockholm: KTH Royal Institute of Technology, 2013b).

33 Scruton, The Aesthetics of Architecture.

34 Ibid.

Pragmatism is a North-American philosophy with its origins in the late 19th Century and beginning of the 20th Century. The question is if and what the pragmatist ideas about aesthetic have to offer architecture and urban planning. The paper investigates the ideas of John Dewey about aesthetic experience and its meaning for architecture and human life. The inherent implication is that we must shift focus from the object to the processes and the aesthetic qualities of architectural processes, and that there is a major professional task to provide opportunities for intensified experiences of architecture in ordinary life in the social setting of professional practice.

Keywords
Architectural theory, design, aesthetic experience, Pragmatism

Inledning
hur vi borde handla. De filosofiska teorierna blir till stöd för förståelse och handling i vardagen.


Min presentation består av fyra delar: en redovisning av aspekter av Deweys estetik och förhållningssätt mellan individen och gemenskapen, en positionering beträffande arkitekturteorins art, samt en artikulering av vilka krav detta ställer på arkitekturområdet. Texten baserar sig främst på litteraturstudier och analyser av tankesätt, samt deras omtolkning till arkitekturområdet. Slutresultatet av denna text och analys är ett arkitekturteoretiskt resonemang, en argumentation gällande krav på formgivningsprocessen för att stärka delaktigheten i processer och erfarenheter. Målet är att utveckla och klarlägga begrepp och teorier som stöd för diskussioner, undervisning och projektledning gällande utformningsprocessers upplägg.

ARKITEKTURTEORI
TEORIER OCH EN HISTORISK-TEORETISK FÖRANKRING
Det är svårt att hitta definitioner för vad arkitekturteori är. Kruft framhåller att idén om en universell arkitekturteori förefaller opraktisk och sett i ett längre, historiskt perspektiv omulig. Enligt Kruft måste man se en arkitekturteori i sitt sammanhang och i hans tolkning är det ofta fråga om ”ärkeologi” men med en normativ tendens i form av förebildlighet. Nesbitt konstaterar i inledningen till sin omfattande antologi bestående av arkitekturteoretiska texter att arkitekturteorier kan ha fyra olika ansatser: preskriptiva (normativa), proskriptiva, kritiska och affirmativa. I förordet konstaterar hon att hon ser arkitekturteorier som ”a catalyst for change within the discipline, in both its academic and professional aspects.”
Ett viktigt tankespår i den pragmatiska filosofin är betoningen på experiment och utveckling. Rajchman konstaterar: ”To think about things in the making is thus to think, and think of ourselves, ‘experimentally’.” Donald Schön och Chris Argyris är de mest kända sentida pragmatiskt förankrade forskarna som starkt betonat utvecklings- och handlingsperspektivet i forskning. Argyris är känd för texter om organisationsutveckling och aktionsforskning, där målet är utveckling genom metodiska ansatser och förändringsarbete. Detta har också anammat i teorier om design och designforskning. Enligt Campbell handlar Deweys pragmatism om att kontinuerligt undersöka erfarenheter, begrepp och teorier för att utveckla dem och göra dem bättre lämpade för de situationer vi möter i livet.


Jag utgår här från att en arkitekturteori handlar om att tänka och skriva om arkitektur, och att den har en mer eller mindre tydlig normativ ansats som anger vad som vore lämpligt, som ett framtidsorienterat förslag om hur arkitektur borde vara. Detta står i samklang med Nesbitts inledande förklaring att teori inom arkitektur ”describes the practice and production of architecture and identifies challenges to it.” I min pragmatiska tolkning finns det många ansatser och synsätt som har en legitimitet. Det finns inte bara en rätt idé, stil, form eller metod. Man måste dock se att det finns skillnader och att det är viktigt att diskutera olika aspekter och jämföra synsätt för att se vilka som är mest värdefulla eller betydelsefulla. Man kan se det som att det finns ett kunskapsteoretiskt perspektiv i arkitekturteori och att påståenden måste vara välgrundade och logiska, och de ska tjäna ett socialt sett bra syfte.
BETYDELSEN AV ESTETISKA ERFARENHETER

Deweys estetiska teori liknar inte de nu dominerande analytiska eller kontinentala filosofiska tankesätten eller däri förekommande estetikteorier. Deweys estetiska teorier handlar primärt om formgivningsprocessen och att göra estetiska erfarenheter och som ett förhållningssätt med en klar betoning på att utveckla, förbättra och nå goda estetiska erfarenheter. I boken *Art as Experience* avhandlar Dewey konstens art, men han redovisar liknande tankesätt även i sina förklaringar till forskning i boken *Logic – The Theory of Inquiry* och samma processförståelse och grundansats framträdde i de flesta av hans skrifter. Det är klart att hans teorier primärt inte är en stilla eller en demarkativ konstteori utan det handlar om ett förhållningssätt till gagn för männens utveckling och väl, och för samhället. Skapandet är inte något som är förbehållet vissa genier utan något vi alla kan och något som bidrar till vår upplevelse av delad meningsfullhet i kollektivet. Min redovisning blir, p.g.a. syftet att belysa vad pragmatismen har att ge och att skapa en bild av Deweys tankegång beträffande konstnärligt-kreativa processer, en sammanställning av olika påståenden och tolkningar som ska lyfta fram kärnan i hans argumentation.


They [highly familiar matters] may then become stimuli to direct an overt activity but they have as yet no logical status. Every idea originates as a suggestion, but not every suggestion is an idea. The suggestion becomes an idea when it is examined with reference to its functional fitness; its capacity as means of resolving the given situation.

Det finns inte heller någon definativ skillnad mellan konst och andra verksamheter, alla former av verksamhet kan ge resultat som kan ge fulländning av erfarenhet – benämnt ”consummation” på engelska. I det föregående fallet kanske vi är nöjda med resultatet, vi har granskat och värderat skisserna vi gjorde till sist, så vi vet vad vi ska gå vidare med. De facto har vi nu en ny idé om vad vi ska göra. Detta är en väsentlig del i Deweys teorier om skapande arbete. Idéer är viktiga för att vi ska hitta vidare, ha tillgång till uppslag om hur vi ska handla och agera. Idéer är oundvikligen kopplade
till värderingar, men de är inte oberoende av situationen, som en fristående idéexercis, utan är helt pragmatiskt kopplade till den empiriska matris som karaktäriserar den föreliggande situationen och invävd i omgivningens soci-ala föreställningar och förväntningar²⁶.

I *Art as Experience* framhåller Dewey att det är ett krav att individen måste skapa sin egen erfarenhet, som betraktare av konst. Detta gäller även andra processer:

The most elaborate philosophic or scientific inquiry and the most ambitious industrial or political enterprise has, when its different ingredients constitute an integral experience, esthetic quality.²⁷


Estetik handlar vanligen om objekt, konstobjekt. Inom den pragmatiska filosofin handlar det främst om erfarenheter man gör. Jag använder här det svenska ordet erfarenhet och att göra erfarenheter, för att komma bort från ordet ”upplevelse” vilket väl starkt betonar det sensitiva, sinnesmässiga, och för att komma nära Deweys användning av det engelska ordet "experience".

INDIVIDEN I GEMENSKAPEN OCH UTFORSKANDE PROCESSER

Den andra viktiga aspekten i Deweys filosofi, vilken jag anser har betydelse för en pragmatiskt sinnad arkitekturförståelse är förståelsen och betydelsen av individen och det sociala sammanhanget för en god utveckling. Denna sida av arkitekturförståelsen hör främst ihop med förståelsen av projektering som en form av en social institution. Min tanke är att projektering inte sker i ett vacuum utan att arkitekten interagerar i ett socialt sammanhang, som dessutom är rätt klart reglerat av rutiner, avtal och praxis. Här har Deweys förklaringar en intressant relevans om man vill fördjupa och förbättra arkitekturskapande processer och tillhörande estetisk erfarenhet. Min redovisning baseras främst på James Campbells sammanställning av Deweys idéer om individualitet, social gemenskap, samt metodik för utforskning av sociala frågeställningar42.

Den första grundläggande tanken är att Dewey hävdar att det finns potential, en större potential för (livs-)uppfyllelse i en social gemenskap, framom den som kan finnas i den ensamma, individcentrerade erfarenheten. Dewey talar om en förhöjd erfarenhet som bottnar i utbyte mellan kulturer och med den sociala gemenskapen och en möjlighet att växa43,44. Vi är säkerligen som arkitekter överens om att arkitektur kan ge estetiska erfarenheter, men frågan är där huruvida vi låter den utvecklas i en gemenskap som ger rum åt andra i gemenskapen att utvecklas.

en form av social utveckling i denna gemenskap. Lärande spelar därvid en stor roll men ska inte bygga enbart på ensidig instruktion utan det handlar om lärande som en delad utveckling⁴⁹. Härvid uppstå en slutsats om smak och omdömen ur situationen och gemenskapen, som ett reflegerat smakomdöme som inte baserats på förutfattade åsikter eller en fixerad stiluppfattning⁵⁰.


Mycket av Deweys tänkande bottnar i en kollektiv och socialt inriktad förståelse av mänskans tillvaro, varvid det är naturligt att vi samverkar genom att dela med oss av våra erfarenheter, genom att ge vägledning och genom att de som är specialister på något bistår med sitt kunskap för att man ska nå dit man anser det vara viktigt att nå. Det är trots allt inte så att man ska se hans transformativa ansats beträffande omsättandet av estetisk erfarenhet i vardagen som starkt individualistisk utan generellt sett måste man utgå från att det alltid finns sociala dimensioner. Utgående från Deweys så är ett socialt välfungerande samfund bestående av självständiga individer ett viktigt ideal, där det är klart att vi behöver specialister och samordning av mänsklig insats kring större och mindre projekt, men där ändå den estetiska kvaliteten på det skapade bör ge goda erfarenheter åt många i samhället⁵⁶.

Det är uppenbart att vi också har ett behov av demarkativa studier av arkitektur, som en form av kritisk arkitekturteori som granskar vad som producerats och kvaliteterna i det producerade. Neopragmatisten Shusterman kritiserar bristen på demarkativitet i Deweys teorier eller närmare bestämt den brist på tydlighet som kan ge stöd för definierandet av konstnärlig kvalitet, som
en funktion som behövs för demarkativ konstkritik. Deweys uppfattning av estetisk erfarenhet är att den inte kan beskrivas, i Shustermans tolkning är den ”tyst” och därför oanvändbar för det demarkativa syftet. Utgående från Määttänens kritik av Shusterman är detta dock inte något man ska söka i Deweys utläggning om estetik. Vi måste skilja på syftet att analysera och beskriva arkitektur och det att vi konstaterar att det finns erfarenheter att göra i mötet med arkitektur. Det senare är också ett legitimt och allmänt önskvärt syfte oberoende av det demarkativa syftet. Allas estetiska erfarenhet är i princip lika värdefull och det lägger ett visst ansvar, för att främja detta, på dem som jobbar med arkitektur.


This task (att skriva konstfilosofi) is to restore continuity between the refined and intensified forms of experience that are works of art and the everyday events, doings and sufferings that are universally recognized to constitute experience.

**SAMMANFATTANDE DISKUSSION**

till stöd för diskussioner och tänkande om arkitektur och planprocesser. Begrepp och teorier som underlättar och klargör olika sätt att se på saker och fenomen, och därigenom kan ge bättre fördjupning och bättre förståelse, är betydelsefulla. Det är viktigt att notera att denna argumentation och tolkning förutsätter att läsaren klarar av ett perspektivbyte gällande estetikbegreppet, från fokus på arkitekturobjekt och deras kvaliteter till formgivningsprocessen och upplevelser samt fördjupade erfarenheter i denna.

Resonemanget består av en diskussion till frågan om syftet med arkitekturteori, samt till vad pragmatisk filosofi är. Utgående från förslagen om estetisk erfarenhet och demokrati hos den pragmatiska filosofen Dewey, samt tolkning/artikulering har jag försökt utveckla förståelsen för detta och argument för delaktighetskrav i formgivningsprocesser inom arkitekturområdet. En uppenbar slutsats av resonemanget är att man måste öppna upp formgivningsprocessen till berörda utgående från den sociala agenda som finns i Deweys resonemang. Målet måste vara att öppna processerna så att flest möjliga blir delaktiga i erfarenheterna och berikande för flest möjliga. Ett syfte är att arkitekturprocessen skapar förståelse för vad delaktighet i skapande processar kan ge för individen och kollektivets fysiska utformning. Det är viktigt att notera att det inte bara handlar om input från berörda eller om att säkerställa en legitimitet för beslut, utan det borde handla om en genuin upplevelse av att vara delaktig i formgivningsprocesserna. Processen bör då utmynna i en välavvägd process som når en fulländning som alla känner är bra. Detta måste anses vara bättre och värdefullare än att det är ett resultat av t.ex. folkliga och amatörmässiga diktat eller isolerad professplanering. För att detta ska lyckas behövs:

- Ömsesidigt förtroende i processen
- En professionell medvetenhet om sitt ansvar som arkitekt för gemenskapens och möjlighet till delaktighet i skapandet av estetiska erfarenheter och utveckling
- Professionell formgivningskompetens finns tillgänglig
- Öppenhet för olika synsätt och att man får ifrågasätta och diskutera dem
- Pedagogisk och kommunikativ skicklighet gällande kvaliteter och formgivningsprocesser
- Projektledning, metodisk planering och genomförande av kollaborativa processer

Faktum är säkert att dylika genomförande förekommer redan idag. Resultatet av ovanstående text är alltså bara att vi fick fler begrepp och argument att stöda oss på. Vi vet alla att det är bra att lyckas genomföra formgivningspro-

NOTES


8 Ibid, s 13.


16 Ibid.

17 Ibid, s 499.


19 Ibid, s 16.


29 Ibid, s 72.

30 Ibid, s 93.

31 Ibid, s 103.

32 Ibid, s 101.
33 Ibid, s 103.
36 Ibid, s 139.
37 Ibid, s 41.
38 Ibid, s 55.
47 Ibid, s 164 och 172
48 Ibid, s 150.
49 Ibid, s 138 och s 213.
50 Ibid, s 110.
52 Ibid, s 5.
53 Ibid, s 251.
54 Ibid, s 163.
55 Ibid, s160.
59 Ibid, s 190.
60 Ibid, s 298.
62 Ibid, s 3.
PEER REVIEWERS

Ulla Berglund, Assistant Professor, PhD
Ultuna. SLU
Ulla.Berglund@slu.se

Vania Ceccato, Associate Professor, PhD
Royal Institute of Technology, Stockholm
vania.ceccato@abe.kth.se

Ylva Dahlman, Associate Professor, PhD
Ultuna. SLU
Ylva.Dahlman@slu.se

Carsten Friberg, PhD
University of Southern Denmark
carsten.friberg@gmail.com

Sten Gromark, Professor, PhD
Chalmers University of Technology
sten.gromark@chalmers.se

Hilde Heynen, Professor, PhD
Katholieke Universiteit Leuven
hilde.heynen@asro.kuleuven.be

Ari Hynynen, Professor, PhD
Tampere University of Technology
ari.hynynen@tut.fi

Mary-Ann Knudstrup, Professor
Aalborg University
mak@create.aau.dk

Toni Kotnik, Professor, PhD
Aalto University
toni.kotnik@aalto.fi

Athanasios Kouzelis, Professor, PhD
Technological Educational Institute, Athens
indesignbureau@gmail.com

Kristian Kreiner, Professor Emeritus, PhD
Copenhagen Business School
kk.ioa@cbs.dk

Ragni Linnet, Associate Professor, PhD
University of Copenhagen
ragni@hum.ku.dk

Tor Medalen, Professor, PhD
NTNU, Trondheim
tor.medalen@ntnu.no

Branko Mitrovic, Professor, PhD
NTNU, Trondheim
branko.mitrovic@ntnu.no

Anders V. Munch, Professor, Dr.phil, PhD
University of Southern Denmark
avm@sdu.dk

Jorma Mänty, Professor Emeritus, PhD
jorma.manty@kolumbus.fi

Riitta Nikula, Professor Emerita, PhD
Helsinki University
riitta.nikula@helsinki.fi

Henrik Reeh, Associate Professor, PhD
University of Copenhagen
reeh@hum.ku.dk

Torsten Schmiederknecht, Associate Professor, PhD, University of Liverpool
Torstens@liverpool.ac.uk

Elisabeth Tostrup, Professor, PhD
Arkitektur- og designhøgskolen i Oslo
Elisabeth.Tostream@aho.no

Panayotis Tournikiotis, Associate Professor, PhD
The School of Architecture of the National Technical University of Athens
tourni@central.ntua.gr

Inga Britt Werner, Associate Professor, PhD
Royal Institute of Technology
ingabritt.werner@abe.kth.se