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Design Developer Competition in Stockholm: A case study on innovation, architecture, and affordable housing

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Abstract

This case study examines a developer competition held in Stockholm in 2013-2014 organized by the municipal government. The objective was to develop good and affordable housing for young citizens. Fifteen design teams took part in the competition. The jury compared two different proposals in the final evaluation: one with separate rooms linked to a collective space and one that consisted of small housing units. This sorting of design proposals in two main categories had a major impact on the judging in the competition. The jury declared the solution with small housing units as the winner, which reinforced the overall category as the appropriate direction for the design solution.

There are three typical key players in the competition: the organizer, the jury, and the design teams. The organizer was responsible for the objective and terms presented in the brief. The jury was responsible to assign a winner. Architects, builders, and developers responded to the task by organizing design-teams and producing architectural design solutions. They had to understand affordability as both cost (rent level) and architectural design (area-effective apartments).

The competition in Stockholm was investigated in a case study. Research data was collected from archives and through questionnaires answered by jury members and design teams. Methods used for analyzing documents and design solutions were close reading and architectural criticism.

Twenty-two architectural students studied the competition in a course. In this case study, I compare how the professional jury evaluated the proposals to jury reports from the students focusing on innovative solutions. The professional jury and the student juries used the same criteria for judging but appointed different winners. The students preferred the solution with collective living. One explanation for this difference can be found in the structure of the evaluation process.

The results of the study can be summarized in ten conclusions that sort and rank design proposals, criteria for judging, marketing of the competition, uncertainty and knowledge, motives for competing, innovation, and the competition as a tool for the political ambition of the public organizers. The result produced new knowledge. There are few studies focusing on developer competition as the production of design proposals and architectural quality.

Keywords: Developer competition, quality, housing, and design-team

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1.0 Introduction

This paper presents a developer competition in Stockholm with the intention to investigate a specific competition and the organizer's demand for good solution to the task, cheap and area efficient housing. The developer competition is a common type of competition in Stockholm. However, a closer look at the practice reveals two types of developer competitions with separate objectives. One is about design, and the other focuses on economic issues and how builders get access to sites. In order to distinguish these different developer competitions, the competition about design will be called a design-developer competition or DD-competition in this article. In a DD-competition, the organizer asks for architectural solutions. The result is presented for the jury in the same way as proposals from architectural competitions organized according to international standard by UNESCO and guidelines from ACE (Architects Council of Europe).

In Sweden, DD-competitions are used by municipalities to transfer publicly owned land to developers, private constructors, and public housing companies. Through the competition, the organizers get access to thoroughly resolved design solutions through proposals for new construction. There are no national guidelines. Competitions are regulated locally by the municipalities through three methods: *politically* through land allocation policies that are adapted by Real Estate Committees or Municipal Councils; *professionally* through competition programs that describe the task and its conditions; and *administratively* through contracts with the winners.

The organizers begin the process by publishing a brief that describes the competition task and the competition terms. Next, the initiative is transferred to the market. Interested consultant companies, construction companies, and real estate companies assemble design teams that produce solutions to the task. After the jury has ranked the proposals and appointed a winner, the competition transforms into a process of implementation through contracts with the developer. The jury's decision culminates in a land allocation agreement that aims for design and construction. That is the fundamental features of DD-competitions and how they function in local practice.

The production of proposals in a DD-competition is a risky business, full of uncertainty and costs (Kreiner 2007). The competitors compete at their own expenses. In Sweden, there is usually no economic compensation for delivering approved design solutions. The profit for the developers lies in access to a buildable site. The competition brief appears as a double-edged sword with conflicting interests. The chance of success in competitions is opposed with development costs. The likelihood of becoming a winner decreases with the number of participants in the competition. For the organizers it is, on the contrary, crucial to attract as many competent competitors as possible to the competition. The larger the number of competent design teams that participate, the larger the chance that the organizer gets access to good solutions to the competition task.

A majority of research on developer competitions have investigated this practice as a question about economics, organization, regulation, and land policies. There are only a handful of scientific studies investigating DD-competitions as the production of architecture in Sweden, Finland, Denmark, and Austria. The first study of a DD-competition in Sweden aiming at architecture in terms of affordable housing was an evaluation of architectural projects by Hansson (1988). Liske (2008) studied the use of competitions in Vienna from a design perspective and Lahdenperä (2008) examined cooperation during the planning and formation of a DD-competition in Tammerfors. Östman (2014) examined DD-competitions in Helsinki. Kreiner (2016) has studied a DD-competition about an office building in Copenhagen, and I have investigated the prequalification of design-teams as well as examined DD-competitions in Gothenburg and Stockholm (Rönn 2014; Rönn 2016; Rönn 2017). This article is based on data from the DD-competition in Stockholm (Rönn 2017). In this case, architecture and housing affordability for the tenants were the two key issues for the organizer (Robinson el al 2006). The concept referrers to a relation between rent level and income for the target group – young people in Stockholm.

The DD-competition evolved as a tool in Sweden after the building sector was deregulated in the 1980s. In 2013, 19 of the 35 largest municipalities in Sweden had accepted policies for land allocation (Persson, 2013). A closer examination of the municipalities' policies shows that politicians and civil servants have

treated the competition simplistically. The policy in Stockholm from 2015 describes the developer competition like this:

When the city wishes to meet particular ideas about design a competition can be used… The proposals are evaluated by a jury where the composition is indicated by the conditions of the competition. At a contest, the pricing happens through a fixed price for the determined land value, alternatively through a land allocation agreement. (Developer policy, 6)

Stockholm City conducts several DD-competitions each year. The competition held in Stockholm in 2013-2014 was arranged as a general competition with qualification demands. In the invitation, the Development Administration wrote that they hope to find new thinking, and a smart, innovative solution to the competition task. One of the criteria was used for the foundation of the jury's assessment of submitted competition proposals was called in the invitation *"innovation and new thinking for area efficiency"* (competition brief, 6). Innovation and new thinking can in DD-competitions appear in four delimiting stages, each one with its own key actor (Rönn, 2014).

- *Planning and programming:* In the first stage of the competition process, innovation from the organizer can be expressed as competition forms, competition terms, and competency demands on the design-teams, or as demands on how the participants' solutions to the competition task are to be presented.
- *Design of the competition proposals:* In the second stage of the competition process, innovation can mean new, creative solutions to the competition task produced by the design-teams.
- *Examination and assessment of competition proposals:* In the third stage of the competition process, innovation can involve new tools for the jury's evaluation of the competition proposals.
- *Implementation of competition proposals:* In the fourth stage, innovation can comprise of the implementation of the winning competition proposal and how its qualities are to be assured.

There is a temporal offset in the competition process which shift the responsibility for innovation between the organizer, the design-teams, and the jury. In the initial planning and programming, the organizing body lays the foundation for new thinking through the choice of the jury, the competition form, and the requirements in the brief. Innovation might mean that they break with established routines and try new suggestions (Forlati et al 2012). In this first stage, creativity is a question for the organizer. In the second stage, the responsibility for innovation transfers to the design teams. Their job is to find creative solutions. The responsibility is then transferred to the jury who are accountable for judging the competition proposals. The jury's task is to find new thinking, identify the existence of innovative solutions, and appoint the overall best design proposal. In the fourth stage, the responsibility returns to the leading part of the organizing body, which answers for the implementation of the winning design. In this final stage, the client can develop and test more productive tools for securing values and qualities in transferring the best proposals to a built environment. The accounts show that innovations in DD-competitions are a collective concern that shifts between the organizer, the design-teams, and the jury.

1.1 Theory and Method

The theoretical framework of the investigation is based on case-study methodology. The object of focus is a competition held in 2013-2014 in Stockholm. This DD-competition has been selected in an information-oriented way to maximize the utility for a single case. The intention is to examine the competition's capability to produce good solutions to the competition task. The case-study method is used in practice within architecture and building (Schön 1983; Groat and Wang 2002; Johansson 2007). Flyvberg stresses that the method is useful to confirm new knowledge – not only for theory development or presentation of informative case studies (2006).

1.1.1 Selection and research questions

There are two central motives behind the choice of cases. One is the competition's political housing-goals: area efficiency and cheap apartments for young citizens. The second is the organizer's wish to attract innovative solutions to the task. Both these motives make it so that the case can be assumed to be able to illustrate the competition as a professional laboratory and as a tool for politics, architecture, and building.

1.1.2 Data collection

Collected data consists of the competition documents, the competition proposals, and the

replies to a questionnaire answered by jury-members and design-teams. The research was coordinated with an education setting. In a course, a group of twenty-two students in year 4-5 at KTH in Stockholm, evaluated, and ranked the competition proposals according the same design criteria as the professional jury. There are two main reasons for involving students in the research project. First, competitions in architecture and urban design are a part of the professional practice that needs to be critical examined in the education. Secondly, the students represent a target group for the specific DD-competition. Their preferences on housing and judgments of the design proposals can for this reason be seen extra valuable, both for the organizer and the knowledge production in the Stockholm competition.

Data was collected and analyzed by use of the following methods:

- *Study of archives:* To get an overview of relevant documents, material from the organizers' archives at the development administration in Stockholm were collected. Additional information was collected from the municipalities' websites.
- *Competition documents:* Key documents are the briefs, the design proposals, the jury reports, the decision on implementations, and the land allocation agreements. The documents were analyzed by close reading. The design solutions were analyzed by use of architectural criticism.
- *Statements from key players:* There are three typical key actors in the competitions: 1) representatives for the organizer (jury-members); 2) developers (constructors and real estate managers); and 3) architectural firms. Thirty-two informants were identified among these key actors: four jury members appointed by the organizer, thirteen architects and consultants, and fifteen agents for developers. Eighteen out of thirty-two key players (56%) answered a questionnaire, giving individual statements about how they experienced the competition.
- *Student analysis:* The design proposals were analyzed by international twenty-two students in a course at the advanced level at the KTH/School of Architecture. They used the design criteria in the competition brief. First, the students had to select the five best proposals and then, from among them, appoint a winner. All selected proposals had to be commented on by the students in a jury report with regard to the criteria for assessment in the competition brief.

2.0 Case Description

In 2013, the Development Administration in Stockholm called for a DD-competition. The overall objective was to achieve *"cheap and area efficient housing that young people can afford to ask for,"* (Competition brief, 2). The site for the competition is located in Midsommarkransen, a district in southern Stockholm with access to a metro station. The metro station was built in 1964. The motive for the competition is described by the Development Administration as: *"By inviting to an open competition, the hope is to find new thinking, smart and innovative solutions,"* (ibid, 1).

The competition brief is eight pages long and contains a description of the competition task, the planning conditions, submission demands, judging criteria, and a list of the jury members. The dwellings are to be rented and the land is to be leased to the winner. The rent given in the proposal is to be established in a contract with the city. Even if there is a general consensus of affordability in Stockholm, the concept has to be understood in its context. The competition brief, however, lacks detailed information about affordability in Stockholm when it comes to rent level in relation to income for young citizens.

2.1 Jury Members and Design Criteria

The Jury in the DD-competition consists of four officials from the Development Administration and the City Planning Office. The composition of the jury thus represents an export model. The members are exclusively officials with professional competency in the areas of architecture, planning, and construction. According to the competition brief, the design proposals are to be judged on a basis of the design criteria and qualification requirements. There are four design criteria in the brief presented as:

- Architecture and design.
- Innovation and new thinking for area efficiency.
- Adaptation to given preconditions.
- Average rent in SEK per sq. m/year.

The jury is to make a cohesive judgment of the competition proposal based on the design criteria. One of the criteria is measurable – rent as SEK per sq. m/year. The other three criteria are investigated by judging competitors' design solutions: what is good or

bad design, better or worse, from the chosen perspectives. The appointed jury members have to identify values, innovation, and qualities with support of presented criteria in the brief as well as to inform competitors about key issues. Crucial for success is how well the criteria are understood by key actors and how well adjusted they are to the task.

2.2 Qualification Requirements

The brief includes qualification requirements competitors have to fulfill. Design proposals that do not meet the demands will be rejected. The qualification requirements are a combination of regulations in the law of public procurement, professional references, and the city's experience with developers. The requirements are as follows:

- Leading officials may not be guilty of economic crimes/tax evasion.
- The developer (builder) is to be able to show that the company alone or through a parent company has the financial stability and sustainability to see the project through.
- The developer (builder) is to be able to present completed and well executed projects of equal scope to that of the competition as reference.
- The city's previous experience with the company can come to affect the judging.

Proposals from competitors that are considered to not fulfill the qualification demands and the conditions for planning will be discarded. The organizer emphasizes that they have "*free discretionary power*" at the review of the competition proposals (Ibid, 8).

2.3 The Jury Assessment

Architectural design, innovation, and affordable housing for tenants are key issues for the organizer in the competition. The jury describes the fundamental idea of the competition and its political housing ambitions in its jury report as follows:

The task is to create cheap and area efficient dwellings that young people can afford to ask for through new thinking, smart and effective solutions. The competition concerns rental apartments on land that is long leased. The exploitation office assigns the land … to the winner of the competition, (Jury report 2014, 3).

The organizer received fifteen proposals for new housing, mainly by design-teams in Stockholm. Additionally, in this competition, the competitors are multidisciplinary design-teams including architect firms, construction firms, and real estate companies with a few exceptions. The teambuilding in the competition reflects the complex challenge in the brief.

The proposals have great differences in rent level. The average rent varies from 1,490 SEK per sq. m/year to 2,550 SEK per sq. m/year. Corresponding rent level for newly constructed housing in 2015 in Stockholm was 1,704 SEK per sq. m/year according to Statistics Sweden (SCB).

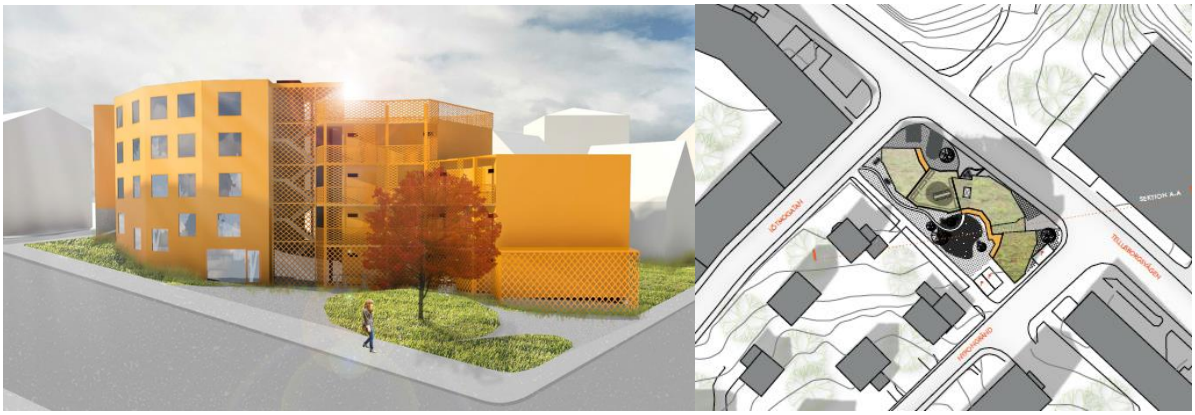
According to the jury, a few of the design teams solved the task innovatively and present projects that can inspire continued development of low-income housing, but they do not given any clear information about what examples of innovation they have observed in the competition proposals. The winning design proposal is, however, accredited with a number of general qualities that make the jury lift the solution as innovative and exemplary.

2.3.1 In first place

The winning design chosen by the jury is a proposal from Origo Arkitekter and Familjebostäder (a publicly owned housing-company). It was the shape of the building and the color of facades that caught the jury's attention when judging this project. The design proposal contains 30 apartments with an average rent of 1,659 SEK per sq. m/year. The choice of winner is motivated in the jury report as follows:

A proposal which both in analysis and execution is innovative and exemplary. It radiates of a strong identity which can carry the project through the implementation process and contribute to the development of the city district. By trying new forms for modules, conditions for surprisingly good living qualities were created in a small space.

The proposal shows that the requested qualities can be achieved at one of the lowest rents that have been offered in the competition. A cheap dwelling does not need to sacrifice quality in different regards. The proposal corresponds to Midsommarkransen through its scale and relation between building and nature. Also, the, at a first glance, flagrant color scheme corresponds to the surroundings. The meandering shape gives room formations towards both the street and the courtyard. The surroundings are invited into the block through passageways though the building



Figures 1 & 2: Perspective of building and site plan. Source: Familjebostäder and Origo Arkitekter.

and the courtyard. Towards the street, business locals are suggested, which can add to the collective and to city life. There are several places for being outside in the courtyard and on the roof terrace.

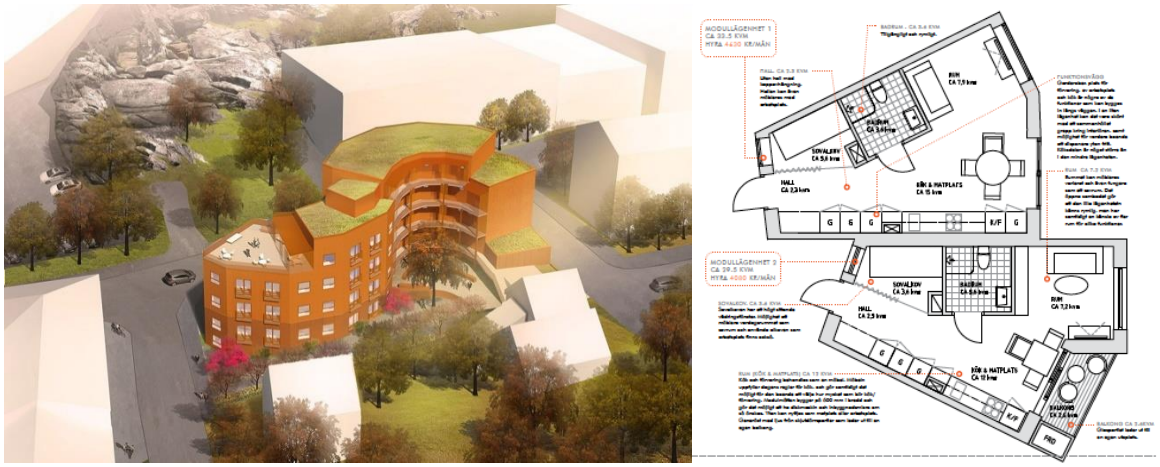
The module system's perky shape provides conditions for creating qualities both exteriorly and interiorly. The angled apartments give volume and avoid the sense of hallways that distinguishes many small apartments. The apartments offer flexibility in furnishing and experience of different rooms despite the small format. With a stairwell in the middle and the angled shape, short and attractive exterior corridors are created. Balconies to the smaller apartments give qualities that compensate for the smaller area, (Jury report 2014, 8-9).

The construction has 3 to 5 levels and consists of wedge-shaped modules placed in a concrete frame. The roof is covered in sedum which will even up the strain on the sewage system during rainfall. The design team promises that the energy consumption will meet the demands of a low-energy building.

There are two types of housing in the building: nine apartments of 29 sq. m with a monthly rent of 4,080 SEK and twenty-one apartments of 33, 5 sq. m with a monthly rent of 4,630 SEK. The average rent is 1.659 SEK per sq. m/year. The dwellings have an open floor plan without room-separating walls to allow for efficient area usage. Alcoves are portioned off with a drape in front of the single person's bed. Eighteen of thirty apartments have balconies and the apartments on the ground floor have access to patios.

2.3.2 In second place

In second place in the competition, the jury places the best proposal with collective living by Utopia Arkitekter and Järntorget (a private company with construction and management). Their solution has fourteen "friend-sharing-apartments" with fifty-four



Figures 3 & 4. Bird's eye perspective and apartment plan: Source: Familjebostäder and Origo Arkitekter.

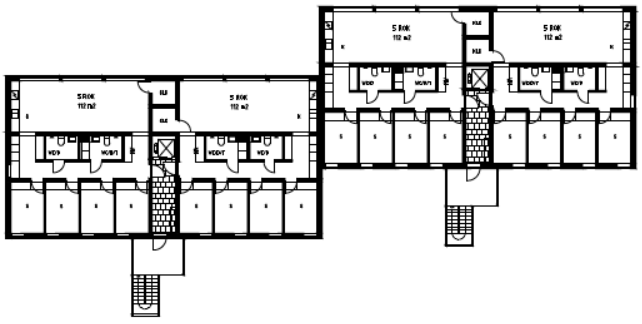
Figures 5 & 6. Presentation of building volumes. Source: Järntorget and Utopia Arkitekter.

residential rooms. The average rent for the dwellings is 1,599 SEK per sq m/year. These apartments provide 28 sq. per tenants as living area (private room and common space). The rent in this case is 3,728 SEK per month. The jury's evaluation of this solution of the task is stated as follows:

The proposal has an architecture which is innovative and which in scale and shape relates well to the city districts and the vicinity. The street space is significantly enhanced by the new buildings. The premises in the corners are, however, weakly integrated with the streets and are reached by ramps. The proposal consists of 14 friend-sharing-apartments. It is the most well studied proposal in this category. The apartments have nice floor plans, well solved functions, and beautiful room connections. The personal room is, however, judged to be too small to function in a permanent residence. Stairwell and elevator also have narrow measurements with doubtful disability access.

The proposal can be viewed as an inspiring prompter for further development of shared living and then, among other things, consider the need for different collective areas between the small, fully private space, and the large, fully collective space. Further, it can inspire legal solutions for long term functioning friend-share-living where questions about influence from the residents are considered. The jury has that judged proposals for shared living with collective kitchen and hygiene rooms give marginally lower rents for the tenants compared to the winning proposal where all residents have their own kitchen and hygiene functions, (Jury report 2014, 11).

The competition proposal is presented in thirteen pages. The design team describes the proposal as an innovative solution to the housing shortage in Stockholm which combines collective spaces and private rooms to gives a lower rent cost. The body of the building is divided into two interconnected houses, each with four floors. The design language is traditional with span roof and facades covered in corrugated galvanized iron. The courtyard can be used for cultivation and social cohabitation.



Figures 7 & 8. Floor plan and interior rendering. Source: Järntorget and Utopia Arkitekter.

The project contains fourteen apartments with room for fifty-four tenants. There are twelve apartments of 112 sq. m that have five rooms and a kitchen as well as two apartments of 99 sq. m with four rooms and a kitchen. The average rent is 1,599 SEK per sq. m/year. The collective rooms face the street. The personal residential rooms face the courtyard. The apartments' individual storage spaces are increased by storage space in the attic. The illustration, with a set table and wine accompanying the food, conveys the image of social cohabitation in a youthful context.

2.4 Implementation

The execution of the winning design is regulated in a land allocation agreement between the Development Administration in Stockholm and Familjebostäder. The architects in the design-team do not enter into the agreement. The average rent in the agreement is 1,659 SEK per sq. m/year, the same as in the proposal. Familjebostäder will participate in the development of the zoning and assure that the dwellings are made in accordance with the competition proposal (Land allocation agreement 2015).

There is no regulation in the agreement for keeping the team of the winning proposal together after the implementation. The reason for this is according to an informant that "*the city cannot demand what architect a builder is to use*," (personal communication). According to the land allocation agreement, Familjebostäder is to consult the city planning office before a choice of architect but there is no demand for discussion with Utopia Arkitekter in the agreement. The organizer transmits the task of regulating the work in the competition and potential commissions to the companies in the design team who have won. The organizer transmits the task of regulating the work in the competition and potential commissions to only the construction management companies in the winning design team. The constructor/builder is regarded as the author to the design solution by the city.

3.0 CONCLUSIONS AND DISCUSSION

The jury members in the Stockholm competition assume that the design teams' visualizations convey a reliable image of the proposed dwellings (Arnheim 1969). The visual communication is, however, determined by two different interests (Lehtonen 1991). Partly a *presentation interest* comes forth which is about the design teams wanting to present the proposals to the jury as appealingly as possible. Partly there is an *audience interest* which is about the jury wanting to be able to see, identify, and understand the qualities of the projects. In both these perspectives, visual thinking has a huge impact on the competition, its performance, and how the design proposals are presented to the jury.

The presentation interest includes that the design teams want to (a) showcase their professional competence to the jury and convey knowledge about their own solution and (b) capture and keep the audience's interest, as well as (c) make the jury experience the visualization as reliable representations of architectural qualities. That is the foundation by which professional jury members consider themselves able to give reliable design judgments in competitions. The proposals are treated as models for future buildings. The difficulty lies in that the visualized proposals are presented with a photographic accuracy which conveys a seductive illusion of reality.

The viewpoint plays a decisive role in the imparting of knowledge in competitions. The visual communication brings forth the image of a future vision defined by timelessness (Lehtonen 1999). It is architecture as a frozen moment in time. A trained eye is needed to evaluate merits and flaws in proposals that communicate architectural qualities in the form of blueprints and illustrations. The competition projects are not "true" or "false"; the proposals are simply "good" or "bad" in relation to a purpose (Wallén 1989). According to Scruton (2007, 128) "*values are objective and permanent; what changes is our ability to believe in them and to make sacrifices required to live by them. Styles may change, details may come and go, but the broad demands of aesthetic judgment are permanent.*"

Through the competition, the organizer in Stockholm has gained access to an information rich decision support in the form of fifteen configured proposals for new dwellings. All the proposals met the submission demands. None were rejected. The projects can, therefore, be assumed to have been well reported enough for the jury to select a first prize winner and motivate their decision. One solution has to be appointed as the winner, even when it is difficult to identify qualities and legitimize statements about architectural values. The arbitrariness can be minimized when the jury describes how the proposals have been valued, presents clarifying motivations for

the choice of winner, and specifies qualities in the winning proposal.

3.1 Findings

This investigation of the Stockholm competition can be concluded in ten general conclusions. Collected competition documents and statements from jury members are used for conclusions regarding the competition as procedure, evaluation and result (proposals). Data from competing design teams are used for conclusions regarding their experiences of develop and design solutions to the task. Reports from students have been used to illustrate the selection of a winner and to understand innovation in the competition.

3.1.1. Judging Criteria and Ranking

The competition brief contains four judging criteria which can be divided into two groups: *hard criteria* and *soft criteria*. In hard criteria, the demand for presentation of average rent stands out. The soft criteria are (a) innovation and new thinking regarding area efficiency, (b) architecture and design, and (c) adaptation to given preconditions. The softness lies in the fact that the criteria have to be interpreted in their context which demands a careful examination of the proposals and good judgment from the members of the jury.

Values are imbedded in the soft criteria as well as in architecture. The problem is that the jury, in this case, has hidden their evaluations in the jury report. There is no systematic comparison of the projects that show how the criteria were applied – only general references. The foundation for the ranking by the jury, therefore, appears unclear and unnecessarily subjective in the jury report.

A closer look at the jury report reveals that the jury has not judged and ranked the proposals by their individual qualities but seen them as representatives for principle solutions. How the evaluation is organized has, in this case, significance for what merits and flaws are noticed. The jury's sorting of the proposals into categories necessarily leads to one representative of that category is appointed as the winner. The categorization has, therefore, gained a ruling influence in the final evaluation. Categorization is a strategy normally used in open architectural competition when the jury has to judge and rank a large number of proposals.

3.1.2. Focus and Categorizing

The jury has focused on the apartments in the evaluation of the proposals and divided them into two categories: separate apartments and collective dwellings with private rooms and collective spaces. Through this categorization of the proposals, qualities such as furnishability, spatiality, flexibility, and daylight have played a large role in the evaluation. It is an additional criteria added after the issuing of the brief that the jury develops to more easily distinguish the differences between the proposals. The smallest apartments are not considered by the jury to be fully fledged dwellings but compareable to student rooms and hotels with time limited living capacity.

In the final evaluation, two proposals from each category were compared to each other. Both proposals carry a tension between tradition and renewal which in one of the cases refers to the architectural design and in the other case is about living conditions. The students who studied the competition used a different evaluation of the proposals than the jury. In their ranking, the collective solution to the need for more housing is a superior first prize taker. As sign and symbols, the two design proposals express very different ways of living (Arnheim 1969). In the winning design, drawings and illustrations symbolize a contemporary lifestyle presented as a small area effective unit with a new design. The proposal in second place is a sign of a collective lifestyle for young citizens, symbolized in a traditionally architectural design, including separate rooms combined with common space for kitchen and socializing.

3.1.3. Rent Level and Affordability

That the rent level affected the evaluation is natural with consideration to that the average rent is one of the evaluation criteria in the competition brief, but there is no set rent level as a starting point for the evaluation. Rather, the projects are compared to each other. It is therefore difficult to tell if the competition resulted in *"cheap and area efficient housing that young people can afford to ask for,"* (Competition brief, 2). Affordability seems, in this case, to be connected to both the cost (rent level) and the outcome of design (area effective and small apartments) in the brief.

The jury notes that the rent level varies from 1,490 SEK to 2,550 SEK per sq. m/year. Corresponding rent level for new developments in Stockholm is 1,704 SEK

per sq. m/year according to Statistics Sweden (SCB). Only four of fifteen design teams present proposals with a lower rent level. Two of these proposals advance to the final evaluation. One representative for the traditional apartment category and one representative of the collective living form.

The proposal from Botryg and Sonark Arkitektkontor presents the lowest average rent. Botrygg is a private company for construction and property management supporting affordable housing on their homepage. The jury, however, considers the proposal to be difficult to assess because of lack of information in the presentation of apartments and planned built environment. Nevertheless, the project did fulfill the requirements of the competition brief and was not excluded from the evaluation. In this design solution, the jury does not judge affordability because of alleged unclear presentation. Otherwise, the project would have been included in the final evaluation because of its low rent. The jury prevented this outcome when they categorized proposals in two different types of fundamental solutions.

3.1.4. Marketing and Information Search

The Stockholm competition was marketed in an asymmetrical way. Apart from informing on the city's webpage, the Development Administration has actively searched out the constructors and real estate companies in the administration's market register. The active marketing through the newsletter is targeted at the real estate companies – not the architect offices. The information spreading through newsletter to building and real estate companies can be criticized as unbalanced. Architect offices and agents for developers that are not registered in the city's market register have to conduct their own search activities to receive information regarding land allocation competitions.

3.1.5. Development Costs and Architectural Work

The competition brief does not contain any information about economic compensation for the development of an approved competition project. The Stockholm competition lacks a prize sum. The organizer leaves it to the consult, building, and real estate companies to regulate the development costs themselves. The architectural offices contribute to the financing though low fees and unpaid work. "Free work" in competitions can be seen as an investment in future commissions, be treated as further education within the companies, or be seen as self-financed R&D investments.

The lack of a prize sum makes it so that the design teams tend to be divided into roles such as client and consultant. It becomes more difficult to perform as a team. The asymmetrical competition conditions return at the end of the completion when the winning proposal is to be implemented through a land allocation agreement. Only the real estate company in the winning design team is an agreement partner to the city. Continued project commissions for the architects in DD-competitions are based on an oral promise form the real estate companies. The partners trust each other. It is an ethical principal that comes into power when winning which is typically found in DD-competitions in Sweden (Rönn 2016).

3.1.6. Team Formation and Competency

The team formation in the Stockholm competition was based on experiences of previous cooperation in

Figures 9 & 10. Proposal by Botrygg and Sonark Arkitektkontor. Perspective and site plan. 30 apartments at 1, 490 SEK per sq. m/year. Source: Botrygg and Sonark Arkitektkontor.

projects. The initiative to create teams comes both from developers and the architectural offices. The members at the real estate companies perceive themselves as initiators in a slightly higher degree than the architect offices. In this case, the design teams consist of people who know each other well. That is the fact for thirteen of the fifteen teams in the Stockholm competition. Competency and good experiences come forth as crucial for the team formation. As an underlying driving force for the decision to form a team, there is the chance for buildable land for dwellings in an interesting location, the will to develop a competitive housing project, and the opportunity for continued commissions.

3.1.7. Learning and Uncertainty

Both architect offices and developers find the requirements in competition brief to be normal. The demands include a number of interpretation issues, typical for competitions, such as the importance jury members may give to low rent, how they will judge the quality of indoor design and assess architecture in relation the site and its urban context. Kreiner (2013) describes the problem of not knowing under these circumstances as "shadow dancing" with an absent partner. Another uncertainty in competitions is that the briefs can be read in different ways by the competitors and are expected to generate several separate "good" solutions to the same task. The design teams can only guess how many competitors there are who will participate in the Stockholm competition and at their solutions to the task. Only in hindsight, when the proposals have been made public and the design teams have partaken in the jury evaluation, is it possible to form a clear image of the competition process. The winner rejoices at the result. The losers can to a varying degree perceive the jury's evaluation of the competition proposals as arbitrary or systematic, correct or subjective, transparent or ruled by hidden values held by the jury members. The official presentation of the competition documents (brief, proposals and jury report) makes it possible to criticize the process and minimizes the risk for arbitrariness.

3.1.8. Innovation and New Thinking

An internationally recognized definition of innovation includes new products, services, and processes (Oslo Manual 2005). This can be found in the DD-competition. However, there is a careful attitude to the concepts of innovation and new thinking in the competition held by both jury and design teams. The caution manifests as few references to the concepts in the jury evaluation as in the design teams' presentations of their housing projects. The jury states that the evaluation searched for new thinking which *"can inspire to the continued development of cheap dwellings,"* (Jury evaluation 2014, 6). Seen as a tool for political housing and a professional laboratory the competition offers an opportunity for new thinking, which has not been used to its fully potential in the case. Only the regulation of the rent level in the land allocation agreement stands out as an innovation that has not been used before by the organizer. The Development Administration is negative to this steering of costs because of resistance from developers. The market becomes challenged. Officials at the administration will not use this tool for controlling the rent level in the future unless they get clear demands from politicians (Personal communication, 2017-03-05).

Two design teams dared to stand out and claim that they had produced innovative solutions to the competition task. Järntorget and Utopia Arkitekter state that their proposal for collective living is an innovative solution to the housing needs. Wästbygg and Arkitektstudie Witte present their solution as innovative: partly because of the suspension a bike by the apartment door which fees space in the courtyard and provides security for the tenant, and partly because of the development of a functional wall with kitchen and storage space which provides more efficient use of the apartment space. These references to innovation and new thinking in the design team's presentation are an exception. A majority of the design teams want drawings and illustrations to speak for themselves. The communication has, in this case, the image as a medium and vehicle for transmitting information about innovation.

3.1.9. Competition Experiences and Competition Perception

There is a surprisingly positive view of the Stockholm competition among the design teams despite how their investments in time and creativity take place in a process that is characterized by uncertainty. Clearer criticism could have been expected from companies who have to pay for the development without economic compensation. Half of the agents for developers, however, see benefits with the competition as a tool for housing politics. Design, building, and land allocation becomes transparent in

publicly organized competitions. The competition briefs, competition proposals, and jury reports give the possibility of insight into the choice of winner. Construction and real estate managers have been stimulated through the competition to develop proposals that aim to lower living costs although only four of the housing projects present a lower rent than corresponding new developments in the Greater Stockholm. The other half of the agents for developers expresses critique towards the completion because of high development costs and uncertain chances of winning. Despite the high competition costs, the developers still chose to participate in the Stockholm competition to gain access to buildable land.

The architectural offices see the competition culture as something that is mainly good and perceive that it promotes quality in architecture and urban design. A part of the explanation can be that the architect offices – in contrast to agents for developers in the design teams – are compensated for their work time. Their contributions to the financing of the competition proposals are to work at a low fee combined with unpaid work. Another explanation for the architects' positive attitude lies in the view of the competition as a professional challenge which puts demands on creativity. An additional explanation can be searched for in their professional traditions. The architectural competition is a celebrated event within the professional culture and is, in Sweden, marketed by Swedish Architects. At the organization's website, ongoing and completed competitions are presented both to students and practicing architects. There is a much clearer and stronger introduction into the competition culture among architects compared to professions working at agents for developers.

3.1.10. Student judgments, winner and innovative solutions.

The evaluation by the twenty-two students ended with another winner. The second price holder became a clear winner, being selected as first place by thirteen students. The collative lifestyle in a traditional architecture was more attractive for them than "cheap" apartments. The proposal the jury viewed as the best–expressing "strong identity" in a new form–only gained two first position placements. One explanation for the differences in results is that the students' task was to appoint the five best dwelling projects and to identify a winner from them. The criteria in the competition brief had a clear role in the students' evaluation. The students made individual judgments of the proposals and didn't see the different housing architecture as representations for categories or fundamental design principles.

The students point out several innovative solutions in the top five proposals in contrast to both jury and how design-teams describe their proposals. Various examples of new thinking are highlighted. The students see access to private rooms in a collective living form in a new location in Stockholm as a design-based innovation in the proposal from Järntorget and Utopia Arkitekter. In their jury report, the following innovations are specified:

New innovative way of living and sharing space: collective-living. Good with the different zones of privacy, gradients, and the flexible plan for future changes. (Student)

The proposal provides little innovation in space efficiency except for is its low prices and collective layout. Collective living is nothing new in suburban Stockholm, but it is not representative of this area. This project may very well be the first collective housing in Midsommarkransen. (Student)

The proposal rethinks collective living in an innovative manner through increased comfort factor that helps to minimize the practical and social challenges traditionally associated with public housing. (Student)

This proposal is based on a model of a modern collective accommodation that provides housing that is low in cost by being high in terms of size design and quality. It provides privacy where it is needed and togetherness where it is essential: cooking, eating, spending free time. In my opinion, it can eliminate the feeling of loneliness, and this kind of living conditions can be very attractive not only for students. (Student)

Every apartment houses four people, which creates a very effective space. Two shared bathrooms with showers feels like an essential condition as does a kitchen. A very rational floor plan with elevators and stairs on the outside that make possible for every square meter on the inside is to be used for living. (Student)

It is innovative in its flexibility and the fact that they have taken shared living in consideration on such small surface. The idea of collective living is interesting, and, if successful, could be a good solution to the shortage of housing. It also, in contrast to most

of the other suggestions, offers the possibility of living in a big apartment if you are willing to share common space. (Student)

Two of the student who placed the proposal from Familjebostäder and Origo Arkitekter in first place highlights the following design based and functional innovations in their evaluation:

Thanks to the new thinking module, several smart storage solutions are created. A whole storage wall becomes possible although it is a one room apartment, and in one of the modules there is even storage on the balcony which is very advantageous. Short exterior corridors become efficient because they, too, will function as balconies. Bicycle storage is located in the courtyard because they prioritize apartments and business locals on the ground floor – very good. (Student)

Two students have placed the proposal by Nyhem and Ikano + White arkitekter in the first place. One of them sees the following innovations in the solution:

Highly innovative in overall look, use, and environmental features of the design. Very innovative with the sheltered courtyard idea – which offers social interaction and a noiseless inside. Innovative in terms of material. The buildings have a steel frame and the facades are covered with sheet metal, a maintenance-free outward, and the inner volume is dressed in polished steel, and reflects light down to a farm setting, and allows the body of the building to blend/reflect their surroundings. (Student)

Also, the proposal from Wästbygg and Arkitektstudio Witte has been awarded first place by two students. One of them highlights the following technical and functional innovations in the proposal:

Innovation and new thinking as it applies to efficient use of space. The proposal gives the opportunity to use the same space in different ways and shows how the apartments can be used in more than one way too. A function wall gives clear room division and minimizes unused surfaces. A few apartments that are placed at the highest level are given extra qualities such as two separate sleeping areas as well as double ceiling height in a part of the apartment. The balcony doubles as an entrance. Here there is room for storing one's bicycle which is a good alternative as many want to have the bike close to the apartment because of thefts. The balcony also becomes an outward extension and creates a collective space with the neighbors where spontaneous socializing can occur. (Student)

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