

Architecture as a Means of Developing Social Exchange: Learning from a Danish Case Study of Refurbishment and Urban Transformation in a Disadvantaged Housing Area

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Abstract: Disadvantaged housing areas from the postwar period typically consist of relatively monotonous and monofunctional multi-storey blocks and have a separate traffic system rendering the areas isolated enclaves in the urban fabric. It is argued that this spatial isolation contributes to social isolation, and current refurbishments are therefore aimed at linking the housing areas with the surrounding neighbourhoods to enable social exchange between the residents and people from the surrounding areas. Based on a case study in a Danish social housing area, this paper discusses to what extent architectural development and urban strategic transformations can contribute to enabling social exchange in disadvantaged housing areas. Do neighbours enter the disadvantaged housing area as intended? If so, how does this influence their perception of the housing area? The analysis shows that architectural development and urban transformations are interdependent in establishing a social mix in disadvantaged housing areas. It is argued that refurbishments can reduce the stigma surrounding the housing area and its residents. However, the applicability of such strategies is highly dependent on the local context of the housing area.

Key words: Disadvantaged housing areas, social housing, postwar housing areas, transformation, refurbishment, urban renewal.

1. Introduction

In recent years, the establishment of a social mix has become an important issue in the refurbishments and transformations of disadvantaged housing areas in Denmark. This is in reference to the so-called *neighbourhood effect* [1-3] which is the premise that social problems are exacerbated by being concentrated in certain areas, and that social mix can contribute to breaking self-reinforcing, negative dynamics in these areas. With this in mind, architectural changes are created to increase the area's attractiveness, and urban strategic changes (e.g., new infrastructure and new functions) are added to invite and attract residents from other neighbourhoods into the disadvantaged housing areas. The idea is that the architectural improvements

can help to attract new groups of residents and that breaking down the areas' physical isolation can help the vulnerable residents out of their social isolation.

This paper focuses on the refurbishment and regeneration of Gyldenrisparken, a typical Danish disadvantaged housing area on the outskirts of Copenhagen. A majority of the disadvantaged housing areas were—like Gyldenrisparken—built in the 1960s and 1970s, consisting of relatively monotonous and monofunctional multi-storey residential blocks, with a separate traffic system, rendering the areas enclaves in the urban fabric [4]. Currently, major physical changes are being implemented in these housing areas. The objective of the architectural and the urban strategic development is to link the social housing area with the surrounding neighbourhoods, thereby reducing the

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spatial and social isolation while establishing social exchange between people from different cultural and social backgrounds. In this paper, we discuss to what extent architectural development and urban strategic transformations can contribute to establishing social exchange between residents in disadvantaged housing areas and people from other neighbourhoods. Do neighbours enter the disadvantaged housing area as intended? If so, how does this influence their perception of the housing area?

First, we introduce crucial aspects to the understanding of social housing and to the possibilities to refurbish and transform these areas in Denmark. Second, we describe some of the factors that play a key role in the development of disadvantaged housing areas. Subsequently, we identify different strategies that have been followed in Danish refurbishments and regenerations of social housing for the last 35 years. Finally, we describe our case study and research method, and with this background, we present our analysis and the results of our research. We discuss whether it is possible for physical refurbishments to attract people from surrounding neighbourhoods into the disadvantaged housing areas and, as a result, affect their perception of the area. In the long term, this is pivotal in the effort to address the stigma of disadvantaged housing areas. In contrast with other studies, it is the neighbours, and not the residents, that are the primary focal point of the current study. The experiences of the residents when the residential area is opened up and neighbours and other outsiders start using the area is a secondary focus.

2. Contextual Insight—Social Housing in Denmark

When studying refurbishments and transformations of disadvantaged social housing areas, it is crucial to understand the importance of the local context [5]. The national context is also fundamental as social housing is organised and conceptualised differently; the architectural layout varies; and the social structures,

social life and culture vary between different countries. The financial possibilities to refurbish and transform social housing areas are also highly different in each country [6].

In this paper, we focus on refurbishment and transformation in Danish social housing. In contrast to many other European countries¹ [6, 7], the social housing sector in Denmark remains relatively strong, and 17% of all Danes live in social housing [8]. In these housing areas, local democracy is well developed as it is authorised by law; residents have decisive power over their housing area, and the authorities cannot initiate any refurbishment or do any major transformation in a social housing development without obtaining permission from the residents [9]. Therefore, the tradition for participation and involvement is rather solid in Danish social housing, and a variety of tools to aid in residents' involvement in planning processes have been developed. These tools and involvement processes have been evaluated in extensive research [10]. This is not the objective in the current research. We are aware, however, that the successful involvement of the residents largely determines the residents' experiences of the final results.

To understand the refurbishment of social housing in Denmark, two other factors are crucial. First, a strong financial system to support refurbishment and transformation in Danish social housing has been developed since 1967 [11]. Since then, all social housing estates in Denmark have been linked to a fund called *Landsbyggefonden* (The National Building Fund). It works as follows: When a social housing estate is more than 30 years old, the loan has typically been paid. This means that the rent in these estates could be reduced, but instead, the tenants continue paying the same rent, only now they are paying into the *Landsbyggefonden* rather than paying the bank. Consequently, all housing estates in Denmark that are over 30 years old pay into this fund. This accumulates billions and billions of euros, and this money is then

¹ e.g. on the development in UK.

spent on the refurbishment and transformation of Danish social housing based on solidarity. When a social housing estate somewhere in Denmark needs to be refurbished, it will be paid for by the fund. Danish social housing is therefore relatively well maintained compared with other countries, and substantial valuable experience has been acquired over the last 30 years of refurbishments [12].

Second, it is important to understand the overall concept of social housing in Denmark (called “almene boliger”). In contrast to many other countries where social housing is only aimed at low-income groups and vulnerable citizens [6], Danish social housing is available for everyone. All Danes can apply for social housing, and in the most disadvantaged areas, people with a steady income are actually given priority on waiting lists to create a socially balanced group of residents. However, for various reasons that will be described in the following pages, a number of social housing estates in Denmark have primarily become housing for low-income groups and vulnerable citizens, and they are defined by the Danish Government as disadvantaged housing areas or even “ghettos”. An annual *list of ghettos* are thus published by the Danish Government every year. A social housing area is defined a ghetto, if it has at least 1,000 residents, and if it meets three of five criteria on (1) ethnic background, (2) employment, (3) crime, (4) education, and (5) income. Gyldenrisparken was never listed as a ghetto, as it has 880 residents, and we will therefore not touch further on the Danish ghetto program in this paper.

3. Disadvantaged Housing Areas—A Complexity of Problems

In the mid-19th century, pandemics led to a focus on the unhealthy housing conditions in most Western cities [13], and the effort to improve housing conditions was subsequently a crucial focal point in the

development of the modernistic architecture and planning concept in the early 20th century [14, 15]. The suburbs were associated with the utopia of a better future with proper housing for all, and in the postwar period the city centers further dilapidated and became associated with outdated and disadvantaged housing [16]. Until the early 1980s, most disadvantaged housing areas were thus found in old urban areas in the inner cities [17]. but since then, at least in western parts of Europe, they have more often been found in post-World War II housing estates in the suburbs [17]. In Denmark, the first problems had emerged by the mid-1970s in these areas, and most contemporary disadvantaged housing areas are large-scale ones built during the building boom of 1960-1975. The housing areas from this period are the focus of this paper.

The first problems to emerge were economic. By the early 1970s, there was an oversupply of large-scale family housing in the rental sector in several Danish municipalities. The government encouraged the construction of large family apartments, and the size of social housing units was raised to 130 m² in the late 1960s². However, these large apartments were expensive, and they became difficult to let; thus, many housing departments experienced financial difficulties³ [18]. In Denmark, the problem of empty flats was solved by assigning them to socially vulnerable citizens and guest workers. In 1976, a housing policy report showed that a number of large-scale social housing areas predominantly contained residents at the lowest level of the social hierarchy⁴ [11]. The issue was self-reinforcing, as the housing areas increasingly became home to low-income groups, immigrants, refugees, and other vulnerable citizens.

In the early 1980s, the first technical issues were reported [19]. The industrialisation of construction in the 1960s and 1970s was realised using building materials, types of construction, and ways of

² In Denmark, the interior and exterior walls of the home are included in the calculated living area. Staircase and landing are also included as this area is distributed between the apartments in the stairwell.

³ A good introduction to Danish housing is available in Hans Kristensen (2007).

⁴ This is described in Claus Bech-Danielsen and Gunvor Christensen (2017).

production that had never been used before. Thus, the housing developments of these two decades may be considered the largest full-scale experiment ever conducted [11]. Unsurprisingly, these housing blocks have been plagued with enormous problems ever since. The flat roofs started leaking shortly after construction, and concrete damage was another common problem [18]. The considerable building damage had an unfortunate effect on the housing area's reputation.

As is well known, the architectural design of post-war housing areas has been criticised, and although modernistic architecture and the Le Corbusier-inspired housing areas were developed as a utopian dream of a better future with proper housing for all, many areas have developed into nightmares [20]. The parallel rows of housing blocks have been denounced for being boring [21] and inhumane [22], and already in the early 1960s Jane Jacobs [23] criticised modernistic planning for the segregation of the city's different functions into separate zones. Contrary to Le Corbusier's rational view on cities, in which urban streets were seen as crowded, noisy, and unpleasant [14, 15], Jacobs experienced the streets as vivid environments with a "sidewalk ballet" of social life [23]. She argued that the mixture of shops and housing made cities exciting and liveable, and together with other urban researchers [24], she highlighted the importance of urban space as the place where people meet across social divides. Furthermore, the modernistic architecture was accused of leading to higher rates of crime and insecurity [25], and in urban regeneration, Oscar Newman's concept of "defensible space" and Jane Jacobs' concept of "eyes on the street" have subsequently been used as guidelines to increase citizens' responsibility, ownership and social control in an urban space.

It has been pointed out that the large-scale social housing from the post-war period is typically planned as self-contained units that are both spatially and infrastructurally detached from the surrounding city [26]. Originally, this was considered an ideal way to create safe, calm, and child-friendly neighbourhoods with a

strong architectural identity. However, the areas ended up being perceived as "isolated islands" in the urban environment, as there was no outside traffic entering the large-scale housing areas that consisted of monofunctional blocks with a homogeneous architectural identity. The physical structures thus contributed to the development of urban segregation. In Hajer and Reijndorp's words, "Society has become an archipelago of enclaves, and people from different backgrounds have developed ever more effective spatial strategies to meet the people they want to meet, and to avoid the people they want to avoid [27]. This is a very topical challenge in disadvantaged residential areas, as their physical isolation from the surrounding areas means that they create a boundary around their internal problems. This leads to social isolation of the vulnerable residents in a disadvantaged area. In the neighbouring areas and the public in general, it contributes to a perception of the disadvantaged areas as secluded "parallel societies" where deviant behaviour is widespread. Therefore, a key challenge for contemporary urban policy and design is to connect various enclaves and create spaces of exchange between different social groups. Urban strategic plans are developed to link residential areas with surrounding neighbourhoods as an important means of creating social mix.

Finally, disadvantaged housing areas typically have a negative reputation. However, it is not necessarily the reputation of the area that is most crucial to the residents [28], and a negative reputation does not always mean that the residents are not content to live in that area. The residents in disadvantaged housing areas typically rank their area higher than neighbours and other outsiders do [29], yet it is often a primary worry for residents that neighbours and other outsiders have a negative perception of the area in which they live [30]. This is one of the reasons why residents of neighbouring urban areas should be seen as an important target group when trying to develop a better reputation for disadvantaged housing areas [31]. Several researchers [29, 32] stress that if regeneration projects are to succeed, they should not only alter the housing



Fig. 1 Originally, post-war housing areas were typically planned on the concept of traffic separation; cars and roads were not allowed in the areas. In contemporary transformations, the separate traffic systems are being phased out. New infrastructure now allows traffic to pass through the areas. Paradoxically, the objectives of both concepts were safety. New infrastructure in Gellerupparken, Denmark. Architect original: Poul Blach Petersen and Mogens Harbo (1968-1972). Architect refurbishment: JWH Arkitekter and others (2018-2030).

area, but the external perception of the area should also be altered, and refurbishments and transformations, therefore, need to ensure that the housing area is also seen as attractive to those living outside of them [32]. This negative reputation is an enduring problem to deal with as it often remains long after the housing area has improved. It may be easier to alter the whole housing area than to change its reputation [33]. Different strategies are developed to improve neighbourhood reputation, several of them suggesting creating changes in the built environment that can attract neighbours and gain external attention. This is the focal point of this paper.

4. Three Generations of Refurbishment

In Denmark, refurbishment and regeneration of

social housing originating in the 1960s and 1970s have been carried out for the past 35 years. We have seen shifting strategies in what could be called three generations of refurbishment.

The first generation was developed from 1985-1999. The main focus was structural problems, but, as opinions about the industrialised architecture at that time were strongly critical, the refurbishments were often associated with a desire to change the architectural expression of the buildings. Postmodernism and its celebration of colours and ornaments were considered a very welcome response to what was described as a “grey and monotonous expression”, and a strategy was developed to conceal the grey concrete behind colourful façade covering [34].



Fig. 2 The first generation of refurbishments in post-war housing areas was developed from 1985-1999. Postmodern colours and ornaments were considered welcome responses to the grey concrete. Roennebaerparken in Roskilde, Denmark. Architect original: Unknown (1968-1970). Architect refurbishment: Mangor & Nagel (1994).

The intention was that new architectural expressions on the façades would help the housing areas appear more attractive, and it was expected that this would make it possible to attract middle-class residents. According to subsequent evaluations, however, this ambition failed, with the plausible explanation that the physical transformations were superficial [34]. Furthermore, the first generation of refurbishments was not long-lasting; neither the materials nor the postmodern expression lasted more than a decade, and the buildings soon had to be renovated again.

Consequently, in the early 2000s, a second generation (2000-2009) of refurbishments was initiated, in which the façades were covered by more traditional and long-lasting materials, such as brick and slate. The materials and architectural solutions were very different from the postmodern ones; however, the basic point of departure (the critical attitude towards the

original architecture) remained the same. With facing brick walls, the original concrete of the buildings was hidden away behind traditional materials, and ornamentation on façades further helped to blur the original architecture. For example, artists created organic patterns on the new brick walls, and elsewhere bricks were used to create classic-style decoration. Traditional brickwork, ornamentation, organic shapes and classic style—all elements that were banned from post-war architecture—were brought into play. The original architectural expression was erased. This second generation of physical transformations also failed in changing the social balance among the residents in the neighbourhoods. However, evaluations concluded that the negative social spiral had been stopped because, among other things, the physical transformations were supplemented with comprehensive social efforts [35].



Fig. 3 In the second generation of refurbishment (2000-2009), façades were covered by more traditional materials. Here the original concrete of the façades was hidden away, and artists created organic patterns on the new brick walls. The original architectural expression was erased. Vejleaparken south of Copenhagen, Denmark. Architect original: Tormod Olesen (1970-1974). Architect refurbishment: Domus Architects (2004-2008).

In recent years (2010 onwards), a third generation of refurbishments in Denmark has developed following a new strategy. This strategy does not intend to reject the post-war architecture. Instead, the transformations are a departure from the original architecture. It was argued that the original architecture does contain quality, and some of the housing areas are even considered an important part of the cultural heritage of the Danish welfare society. However, this third

strategy also considers that times have changed and that new demands on housing have developed; therefore, housing areas and housing standards must develop. Post-war architectural footprints are not erased, but rather preserved and adjusted, and new functions and basic architectural qualities (new spatial relationships, improved daylight, attractive views, improved housing standards, and so on) are added.

The third generation of refurbishments also differs from the first two in another way. Contemporary refurbishments are often added on an urban scale⁵ [36], and they are not developed solely within the boundaries of the housing area itself. Urban strategic plans are developed to link the housing areas with surrounding neighbourhoods with the overall goal of reducing the spatial concentration of residents with social problems. The challenge to reduce the spatial concentration is most

urgent in disadvantaged areas, and recent studies suggest that the enclave-like, monotonous, and monofunctional environments reinforce vicious cycles, where more of the socioeconomically advantaged inhabitants move away and social problems are concentrated in an increasingly deprived area with a gradually worse reputation [17]. Therefore, a pivotal question is whether social transformation and social exchange can be initiated by refurbishing the built environment.



Fig. 4 The third generation of refurbishments in Danish post-war housing areas (2010-2020) has been developed. Now, the original architecture is considered to contain architectural quality, and this building was even listed as cultural heritage. This picture was taken after refurbishment in 2018. Sorgernfrivang, north of Copenhagen, Denmark. Architect original: Knud Thorball & Magnus Stephensen and Johannes & Aage Paludan (1957-1959). Architect refurbishment: Domus Architects (2015-2018).

⁵ This is described more carefully in the book by Claus Bech-Danielsen and Marie Stender (2017).

5. Case: Gyldenrisparken in Copenhagen

In our research, we have examined six Danish housing areas where thorough refurbishments have been conducted. Here, we present one of the cases, Gyldenrisparken, located 5 km southeast of central Copenhagen. Gyldenrisparken has been chosen as a very clear example of the third generation of Danish refurbishment of disadvantaged housing areas—the refurbishment involved architectural development of buildings and outdoor spaces as well as urban strategic transformations. Moreover, Gyldenrisparken is a typical Danish social housing area from the post-war period, having been constructed as mass-produced industrial housing in

1964, containing 477 flats, and originally consisting of 10 four-storey blocks and 1 high-rise building. Over the years, the buildings had become worn down, and there were cracks in the concrete on façades and the balconies, and the windows and doors were leaking. Since the mid-1990s, the area has also been notorious for its social problems; outdoor spaces were perceived as unsafe and façades were covered with graffiti. Gyldenrisparken was known for housing quite a number of criminals and drug addicts, and 44% of the residents had a non-Western background, while 45% of the adult residents were unemployed. In 2011, the residents approved a plan of thorough refurbishment, and in 2015, the refurbishment was completed.



Fig. 5 Gyldenrisparken is a social housing area in the southeast part of Copenhagen. North and east of the settlement are housing areas with detached houses and villas (private owners). West of the settlement (Oxford Have) consisting of relatively expensive row houses (private owners). The main street just east of Gyldenrisparken leads to the centre of Copenhagen.

The buildings had to be renovated, but despite new fibre-concrete elements and re-insulation of all outer walls, the façades preserved the original character. The architects responsible for the refurbishment kept the original structure and architectural expression of the buildings as they added new qualities on top of the existing ones. Thus, the refurbishment was not about erasing the original architectural appearance, but rather introducing new architectural styles to the façades so that the functional ability of the buildings was improved and new basic architectural qualities like better daylight were developed. For instance, the balcony façades were extended so that the balconies could become more functional and user-friendly. Moreover, the parapets of the balconies were designed in opal glass, and the glass panels of the façade were extended to improve daylight in the dwellings. However, the basic structure and original rhythm of the balcony façades were kept, and the contrasts between light and shadow as well as the contrasts between heavy

and light building components can still be experienced (see Fig. 9).

Apart from upgrading the housing blocks, the most remarkable part of the renewal was a new two-storey nursing home winding through Gyldenrisparken's green area. In addition, a new day-care centre (constructed to Passivhaus standards) was built in the green area. The objective was to attract more people from neighbouring areas into Gyldenrisparken. To aid in this, the remaining green areas were improved with new lighting, playgrounds, and sports facilities, and new paths led through the housing area and connected it to the neighbouring areas. Furthermore, all one-room flats were merged to establish larger homes, and other flats were converted into youth housing to attract new residents. To some extent, this might have led to "social cleansing" [7], where vulnerable residents have been rehoused in other social housing areas. The extent of this has not been possible to establish in the current research.



Fig. 6 Gyldenrisparken before refurbishment.



Fig. 7 Gyldenrisparken after refurbishment. The black building to the right is the new nursing home. To the left is the balcony façade of a refurbished housing block. Architects refurbishment: Vandkunsten and Witraz (2010-2015).

6. Research Methods: Combining Approaches from Architecture and Social Science

Our studies of the complex interrelationship between social and spatial dynamics at play in Gyldenrisparken (and in the five other Danish cases) have been multidisciplinary. Competencies and methodological approaches from architecture, anthropology, sociology, and geography have been involved [37]. We have conducted desk research on plans, written sources, webpages, demographic and socio-economic data, and press coverage; an initial field visit and tour of the area; five interviews with key actors; and ten qualitative interviews with residents and other users in the housing area. Furthermore, over three days in each case, we conducted a survey among 210 residents and “outsiders” (123 residents, 87 outsiders) as well as registrations documenting urban life and patterns of use. Our intention has not been to measure the architectural qualities of the renovation, but rather to examine how the architectural designs were experienced by residents, neighbors and other visitors.

The survey in Gyldenrisparken was conducted by three research assistants who stayed in the outdoor spaces for three days, two weekdays and one Saturday. The three assistants divided the area between them and each covered one-third of the area, addressing all passers-by with a brief questionnaire. The questions were about the perception of the housing area, attitudes to the completed refurbishment and the new functions, how they use the area, how residents experience that outsiders use the area, how residents and outsiders perceive the reputation of the area and how they perceive each other. It was subsequently checked that the distribution of gender, age and ethnicity among the resident informants corresponded with the distribution in the residential area; this was largely the case.

At the end of the survey, the informants were asked

if they would participate in a qualitative interview, and a sample was subsequently contacted and interviewed—either in their home or in Gyldenrisparken’s common house. By selecting the informants this way, the intention was to get in touch with people other than those who are most likely to line up for interviews in research studies such as this. In previous research projects, we have experienced a bias, as a large proportion of the informants have been more active and engaged in the development of the residential area than the average person. In the current research project, this has been deliberately avoided, and we have strived to get informants of different ages, genders and ethnicities to participate in the qualitative interviews.

The geographical position of respondents at the time of participating in the survey was registered. Through GIS (geographic information system) software, the geographical positions were linked with the answers of the respondents and subsequently processed into maps that illustrate how both residents and outsiders use the area—these visual representations of the survey are included in the following analysis (see Fig. 8). Unfortunately, time did not permit baseline registrations to be conducted before the transformation in Gyldenrisparken was initiated. However, in combination with the survey and results from the qualitative interviews, the mapping points to patterns of use in the housing area among the residents and various groups of outsiders. Nevertheless, one must take into account that not everybody agreed to participate in the survey and that it was conducted over only three days. The survey and maps visualising the survey can thus give an indication, but not a thorough and fully representative account, of the general use of the area. Also the method did not allow us to get to talk to the residents that moved out as a result of one-room flats being merged to establish larger homes. Our research is thus unable to discuss the important issue of so called “state-led gentrification” [7].



(a)



Why are you in the area right now? (Outsiders)

- Passing through
- Leisure
- Practical chores
- Work

(b)

Fig. 8 The geographical position of each respondent is registered on a map. The left side of the map shows where the respondents live (a) and the right side of the map shows the respondents' purpose in being in the housing area (b).

7. Research Results and Analysis: New Infrastructure and New Functions

Our studies have shown that a relatively large number of outsiders are present in Gyldenrisparken’s outdoor spaces during the week (Fig. 8a). During the three days, 41% of the people we met live outside Gyldenrisparken, and the majority of the outsiders (59%) are in the area due to practical activities (Fig. 8b). They were primarily buying groceries in the supermarket and other shops located in the eastern part of the housing area (bottom left corner of the map), but also picking up kids from the day-care centre located in the middle of Gyldenrisparken. Additionally, there was a relatively large number (7%) of outsiders using the area for leisure (e.g. taking the dog for a walk) and quite a few people (12%) working in the area, especially in the nursing home and day-care centre.

Therefore, residents and outsiders are rather mixed, not only around the shops towards the east but also within Gyldenrisparken (Fig. 8a). Gyldenrisparken seems to be successful in terms of integrating the area with its surroundings and creating a vivid and mixed social life in the green areas between the blocks. This is partly due to the new functions in the area (the nursing home and day-care centre) but also due to Gyldenrisparken’s location between a main street and several residential neighbourhoods. Many of the neighbours from the owner-occupied housing areas often take a walk on the new path through Gyldenrisparken, and several of them have children enrolled in the day-care centre inside Gyldenrisparken.

One woman who has owned a house next to Gyldenrisparken for two-and-a-half years explains that she was at first reluctant to buy a house next to the social housing area: “It seemed a bit ghetto-like. I don’t know if there were many parabolic antennas, but there were many immigrants. I actually checked out the nameplates to see the distribution of Danish and non-Danish names.” Today, her child is attending day-care in the centre, and she and her child often use the playground and like spending time in Gyldenrisparken’s green area. Her impression is that the various groups of users get along well, and she stresses that all her neighbours from the privately-owned housing area walk through Gyldenrisparken when going to the supermarket. She says that they have come to like Gyldenrisparken.

The strategy of densifying the area with new functions to attract outsiders has proved to work well in Gyldenrisparken. The nursing home and day-care centre have added more life to the green areas between the blocks, and even though the remaining green areas are smaller than before (some of the younger residents who grew up in Gyldenrisparken think this is a pity), most of the residents perceive them to be safer and more comfortable than they used to be, as do neighbours and other users who pass through Gyldenrisparken. They mention the nursing home as something that creates security in the area because the elderly can be seen looking out the windows, and thus establish “eyes on the street”. Moreover, the playground next to the day-care centre signals that the area’s facilities are not solely for people living in Gyldenrisparken—and

Table 1 Question in the survey asking outsiders why they are in Gyldenrisparken?

	Number	Percent
Passing through	5	6%
Leisure/recreation (e.g. walking the dog, sports)	6	7%
Visiting friends/family in Gyldenrisparken	15	17%
Practical chores in the area (shopping, laundry, institutions, etc.)	51	59%
Works in the area	10	12%
Total	87	100%



Fig. 9 Gyldenrisparken and the new pathways through the housing area.

the interviewed residents do not mind their area being used by outsiders as long as the dog owners clean up after their dogs!

Alongside the refurbishment, a new residential area, Oxford Have, with owner-occupied row houses was built adjacent to Gyldenrisparken. Many families from Oxford Have use the day-care centre in Gyldenrisparken for their children, and they often stop on the way home to try the ropeway. Though they still have limited social interaction with Gyldenrisparken residents, they describe how they have become increasingly familiar with both the area and people living there. As a man from the privately-owned row houses explains: “I think it is a very open and pleasurable area. It is not that I start chatting with people. Those groups of mothers wearing scarves, they don’t exactly indicate that they want to chat with you. But still, we can come along well, and we can think that each other’s kids are cute.”

Similar statements in the qualitative interviews indicate that the daily presence of neighbours in the stigmatised residential area can help to change their view of the social housing area. In Gyldenrisparken, visitors from the neighbouring housing areas develop a change in perspective of the social housing area and the people living there. They gain a little insight into the lives of “others” and vice versa. Thus, our research confirms the theories of Hajer and Reijndorp, who conceptualise the meaning of such relatively brief meetings in public spaces⁶ [27]. These two Dutch researchers have developed the notions of “public domain” and “exchange” as a way to describe this. They define public domains as “those places where an exchange between different social groups is possible and also actually occurs”. They argue that the main achievement of the social exchange in such domains is the confrontation between people with different backgrounds and lifestyles. This provides insight into the reality of “others”, thereby offering a shift in

perspective. Thus, such exchanges may help to counteract stigmatisation. According to our study, Gyldenrisparken has been developed into such a public domain, and an exchange is going on between the residents and outsiders. Therefore, the refurbishment of Gyldenrisparken seems to have counteracted the stigmatisation of the disadvantaged housing area.

8. Research Results and Analysis: Architectural Design

Though the above findings support the current focus on strategic transformation on an urban scale, it is essential to stress that the urban strategic transformations in Gyldenrisparken (e.g. new infrastructure/pathways and new functions) go hand-in-hand with the architectural efforts at the building level. The aforementioned initiatives contributed to attracting neighbours from the surrounding city to the disadvantaged social housing area, but once this has been achieved, the neighbours must have a positive impression of the area. Our study in Gyldenrisparken shows that the experience of architecture is crucial to that process.

Our survey has documented that the new architectural design of buildings is one of the improvements that the residents as well as the outsiders appreciate the most. Refurbishments of the buildings are thus seen as the most important change to 57% of the informants (see Table 2), and when asking in the survey (open question) “What has affected the reputation of Gyldenrisparken the most?”, residents and outsiders pointed to the architectural appearance of the settlement, saying that it has become “more beautiful”, “looks nicer” and “looks more inviting”.

The fact that the area looks not “ghetto-like”, as many of the interviewees express it—is both important for the residents’ perception of the area and for the outsiders. It is important for the residents’ own perception of the housing area, as they become more satisfied with their homes and more proudly identify

⁶ The following description of the theories and studies of Hajer and Reijndorp refers to Maarten Hajer and Arnold Reijndorp (2001).

Table 2 Question in the survey asking to the most important changes in the refurbishment of Gyldenrisparken.

Important changes (210 residents and outsiders)		
	Number	Percent
New institutions	44	21%
Thinning and pruning of trees and shrubs	31	15%
Refurbishments of buildings/facades	119	57%
Other	37	18%
Nothing	2	1%
Don't know	26	12%

themselves with the housing area. The added architectural qualities also affect the perception of outsiders, including residents from the neighbouring areas with owner-occupied homes. As a man from Oxford Have said when asked what can be learned from this refurbishment project:

“I think here it has ended up with a really nice architectural style. It just looks good, and actually, that means a lot to me. That the buildings look nice and you can tell that people are happy with it.”

The perception that the buildings contain architectural qualities appears to be a decisive factor among both residents and neighbours as to whether they would consider living in the area in the future. A woman living in private ownership in Oxford Have indicated that she was at first reluctant to buy a house adjacent to what she perceived as a “ghetto”, but today she likes the area and would even consider living there herself:

“I think Gyldenrisparken is a nice place—it seems rather attractive. I could live there if I should need rented accommodation some time in the future. It seems that they have pretty nice flats. And the fact that it is all new makes it very nice.”

In addition to the perceived improvement of architectural qualities, the fact that the new day-care centre was constructed according to Passivhaus standards has also generated positive attention from the public, which several residents mentioned with pride. In particular, the fact that Prince Charles visited Gyldenrisparken is considered proof of the quality of the place. One resident explained:

“There are many who come by to look at the area, and it is often mentioned in the newspaper. Prince Charles was here and during the COP15 summit in

Bella Center, many people came by to see it, as it is built in a climate-friendly way.”

Today, Gyldenrisparken is considered substantially more attractive than before. This is also evidenced by the housing association’s waitlist, which has become very long, and the residents are aware of this. A young woman says: “In the past, there was no good reputation. It’s better now. There is, after all, a 20-year waiting list to get a flat”. This is also emphasised by our survey, where we have asked whether the respondents can see themselves living in Gyldenrisparken in the future. Not surprisingly, this applies especially to the existing residents; 85% of the residents would like to stay in Gyldenrisparken in the years to come. Furthermore, 28% of the external respondents would consider it. Since many of these live in relatively expensive private homes, this is a large proportion and shows that Gyldenrisparken’s reputation is undergoing a positive change. The physical changes have led to a better reputation and a changed view of the settlement. This is worth noting because, as mentioned earlier, in the stigmatised housing areas it may be easier to transform the whole housing area than to change its reputation.

The refurbishment of Gyldenrisparken shows that departing from the original architecture and adding basic architectural qualities can be an advantageous strategy, as the architectural design is perceived positive to both residents and outsiders. The architectural results have also been highlighted among professionals, and the refurbishment of Gyldenrisparken was nominated for the Mies van der Rohe Prize in 2013. This nomination alone has created so much positive attention in the media that it too has helped improve the reputation of Gyldenrisparken.



Fig. 10 Buildings and outdoor spaces in Gyldenrisparken after refurbishment.

9. Conclusion

The causes of the problems in disadvantaged housing areas are multi-faceted and interlinked. They are of economic, social, technical, structural, and architectural character. This means that architectural development cannot solve the problems on its own, but it also means that architectural development is part of the solution. The disadvantaged housing must increase value and climb up the hierarchy of the local housing market to develop a more socially-balanced group of residents. The housing areas thus must be perceived as more attractive, and the experiences of the architecture in these areas are crucial to this process.

In contemporary transformations of Danish disadvantaged housing areas from the post-war period, urban strategic efforts are introduced. Urban planning is developed to link the housing areas with surrounding neighbourhoods and reduce the spatial concentration of

residents with social problems. The strategic goal is to reduce social isolation. Physical boundaries around the disadvantaged housing areas are opened up, and new infrastructure, pathways, and functions are implemented to invite neighbouring residents from the middle class into the disadvantaged housing areas. The vision is to create social meetings between people from different social and cultural backgrounds. It is important to have realistic expectations of the outcome of these strategies. In our studies, we have found no indication that the residents and outsiders have become friends or started spending time together. However, the study suggests that the strategy can influence the stigmatised view of the housing area and its residents in a positive way.

In this context, architectural development in the disadvantaged housing area has proved to play an important role. In Gyldenrisparken, the architectural improvement is one of the issues that the residents

appreciate the most, and to external visitors, the architectural improvements are crucial to the development of a positive view of the residential area. The reputation of the housing area has been improved considerably, and today, the housing association has a long waiting list of people applying for a home in Gyldenrisparken. In the stigmatised housing areas like Gyldenrisparken, such a physical change can thus facilitate changes in a neighbourhood's reputation. This might be considered the main objective.

It is important to stress that the success of the refurbishment in Gyldenrisparken is partly due to its urban location and the fact that it was not yet as severely stigmatised as some other areas. In this paper, we have only presented our study of one out of six Danish cases. Not all cases demonstrate the same positive results, and the context of each individual housing area is, therefore, crucial to consider before planning a refurbishment.

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