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Residential movements in connection to renovation of rented multi-residential housing: A pilot study

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Abstract. Residential movement and displacement as an effect of renovation has earned attention and also affected renovation practices in Sweden. While statistical studies have linked deep renovation to residential movement and displacement, there are no recent studies that investigate why people move or remain in housing areas that are renovated, and if and how the relocation is determined by the renovation. A pilot study was initiated as a means to develop a methodology to study residential movement in connection to renovation. In this paper, methodological considerations are discussed based on 31 interviews (face-to-face and telephone) with movers related to 34 municipally owned rented housing areas about to undergo renovation, as well results from a questionnaire sent to two finalised renovation projects (N=113). So far, the pilot study indicate that few relocations can be linked to the up-coming or finalised renovation in the studies cases. The questionnaire that was sent out to remaining tenants had a low response rate of 29%, and the efficiency of using questionnaires is discussed.

1. Introduction

The European Energy Efficiency Directive (EED) (2012/27/EU) has identified the existing building stock as the single biggest potential sector for energy savings and reductions of green-house emissions. As a result, European policy has encouraged member countries to promote and facilitate deep renovation [2]. Deep renovation has been defined as leading to up to 60% of energy savings through energy renovation [3]. Although a range of European policies has been set in place, the rate of deep energy renovation is far below expected [4]. Barriers for deep energy renovation has been found to be of technical, financial, and regulatory character but also linked to a lack of knowledge and awareness [4]. Even when technical solutions are found viable, the property owner still needs to make decisions on “*where to start, and what measure to implement in which order*” [5].

In parallel to the energy debate, the negative social consequences of deep (energy) renovation has been highlighted. Deep renovation is often combined with standard improvements, and costs to finance the investments are often pushed over to the residents [6]. Recent studies have highlighted the social worries among tenants when their home is to be renovated, and in special the risk for a forced relocation when rents are increased [7],[8]. Furthermore, statistical studies have shown that residential movements as a result of deep renovation of large stocks of housing could lead to a more segregated society at large [8] a phenomenon which would be reinforced by the fact that the socio-economic most vulnerable residents live in areas with the largest need for deep energy renovation [9]. While the argument can be made that actually few of the renovations that are carried out are of the magnitude of

deep renovation [4],[10], also more limited renovations and rent increases would be a problem to many households in rented apartments as they have limited incomes [12].

The mentioned studies have some limitations. The statistical study [9] does not provide any insights to why people move in relation to a renovation. The motive for the move could be raised rents, but it could also be other kinds of nuisance in relation to a renovation. It could also be that the tenants have thought of moving earlier and get a push when the renovation is happening. Furthermore, renovation is likely to affect residents in different ways, and elderly people might be especially vulnerable to cope with the nuisance and worries that a renovation brings on to them [13].

Several of the referred studies are also projections of what could happen in the case of deep renovation, but do not provide any evidence of what actually happens [8],[10],[12]. Furthermore, several studies are limited to a few case studies owned by a limited number of property owners and it is not certain that the reported incidents [7],[8] are representative for all rented housing. Renovation strategies also change over time due to changing financial and policy structures [11], and it is not sure that the findings would be the same if the studies were carried out today. Finally, while Swedish studies state a tendency of people moving to more deprived areas after a relocation in relation to a renovation [9],[14], Dutch studies show that forced relocation can lead to housing improvements. A longitudinal study showed that forced relocation or displacement, in the long-term, can lead to improvements for individuals in relation to their housing situation [15]. A more recent study, using individual-level population registry data, showed that forced relocations from the demolition of three housing areas, live in less deprived neighbourhoods after the move [16]. However, the results were not conclusive in that this upgrade in housing leads to more socio-economic opportunities for these people in other areas.

1.1. Aim and scope

The main aim of this study is to investigate why tenants in rented housing move in relation to a renovation. A longer study, that will run for at least three years, is planned together with the Mother Company of three municipally owned Housing Companies in Gothenburg, the second largest city in Sweden. The local authorities in the city, has decided that no tenants should be forced to relocate as a result of rent increases. While the main aim is to investigate the reasons behind a move and the eventual connection to the renovation, the study also has a broader aim of investigating nuisances of renovation among tenants. The question of relocation and other kinds of disturbances among residents during and after a renovation needs further research in order to design feasible and sustainable renovation strategies.

The aim of the study is to understand why people move and how they experience a renovation, consequently, statistical studies were ruled out in favour for interviews and questionnaires. The interviews and questionnaires should answer the following questions: How many tenants move in relation to a renovation? What are their main causes for moving? To what extent is the renovation the cause for relocation? Where do they move after the renovation? What are the reasons to stay or move in after a renovation? How did the residents experience nuisance in relation to the renovation? Is there a relation between the renovation strategies, the disturbances during the renovation, and the tenants' decisions to relocate? Can we see some differences in the demographics of the 'movers' vs the 'stayers'? Is there a relation between the quality, standard and rent of the housing before and after the renovation and the decision to stay/relocate?

In order to develop and test a methodology, a one-year pilot project was initiated. In this paper, early results from the pilot project, 31 interviews with movers and the results from one questionnaire among stayers sent out to two completed renovation projects (N=113) are used for a methodological discussion. We compare our experiences to earlier studies of residential movement patterns.

2. Earlier studies

A short overview is here provided of the methodology and data collection used in a few earlier qualitative studies of residential movements in connection to urban regeneration and renovation.

The social effects of regeneration and renovation in connection to investments in the housing stock in 1960s to the 1980s have been the subject for a larger number of studies in Sweden [17]. While many of these studies were limited to unique case studies, some were thoroughly made. In a famous sociological study by Laval et al. [18], interviews were made with a larger population in an area that

was to be demolished, before, during and after the intervention, in order to capture the residents experiences. The results that were brought forward showed that the residence appreciated their run-down housing and neighborhood came as a surprise to those working with urban clearance at the time.

Recent Swedish studies have highlighted negative social effects of residential movement in connection to renovation. Baeten et al., [7] draw conclusions from an non-specified number of interviews with residents, housing company representatives (not indicated if private or public), representatives of the Rent Tribunal and representatives of the Swedish Tenants' Association. The authors declare that the interviews were semi-structured, recorded and transcribed. Residents and housing companies were from three different housing areas in one city and the representative from the Rent Tribunal from another. The recruitment of interviewees is not précised. The residents were interviewed at two occasions before and after the renovation in order to "*capture the experience of displacement and displacement pressure at different points in time*" [7] (p. 633).

Polanska and Richard [8] studied how tenants experience fear of forced displacement prior to a renovation of their housing area which is owned by a property owner that has become known for making standard improvement with larger rent increases. The authors refer to an ethnographic study spanning from 2011 to 2018 based on 32 semi-structured interviews with tenants and observation studies (not specified). The interviews encircled "*collective representations of the Swedish society, the tenants' own analysis of the situation and how they have decided to act and make resistance against the up-coming renovation*" [Authors translation from Swedish] [8] p 417. When the study was made, the rents in the area were to be increases by 43%, but they finally settled upon 18-34% [8] , p 432.

Some studies from other countries present results from longitudinal studies on the effect of regeneration and renovation. Egan et al., [19] followed 12 households during the regeneration of a neighbourhood that involved clearance and relocation. The households were recruited through local housing associations, community groups, the church and snowballing through these first contacts. In the Netherlands, residential movements have been studied using focus groups and interviews with 65 movers [15], but also longitudinal studies using a combination of face-to-face interviews and telephone interviews [20] . In the latter study, the previous and the current addresses of movers where found in a data base of a social housing and a random sample were interviewed in 2001 (N=243) and 2004 (N=225) using a structured interview guide and at times other languages than Dutch. Later on, a third round of interviews were made adding to the long-term perspective [21]. Finally, 144 in-depth interviews was used in a study with displaced tenants surveys [22] which were recruited from the previous studies [20],[21].

3. Methodology

The study was initiated by researchers with special expertise in architecture, renovation and housing at Chalmers University of Technology. In order to bring in a broader spectrum of expertise in order to develop an appropriate methodology, an inter-disciplinary group was formed that includes expertise from the fields of ethnography, psychology, sociology, and criminology.

The study targets tenants living in municipally owned housing in the city of Gothenburg. The project is planned together with three independent municipally owned Housing Companies that together owns, manages and let out almost 70.000 apartments. For the study, 34, on-going, planned or recently completed renovation projects were identified by these Municipal Housing Companies, and for which there is a planned rent increase of at least € 10 per month, or other potential disturbances for the tenants during the renovation.

Firstly, the study addresses all tenants that decide to move before, during and up to two years after the completed renovation in the selected housing areas. All these movers are to be interviewed about their decision to move and the eventual connection to the renovation. Second, the remaining tenants and the newcomers that move into the studied housing areas are asked why they decided to remain in the area, or move there, and how they were affected by the renovation before, during and after a renovation. The stayers and the newcomers are addressed through a questionnaire which is sent out six months after the completion of the renovation.

3.1. The interviews

During the first weeks of the pilot study, four interviews (three face-to-face and one over the telephone) were carried out as a means to get a better idea of how to approach the interviewees and to

get a hold on what kind of subjects and experiences that the interviewees would bring forward. Based on these first interviews, an interview guide and a questionnaire were designed.

Information about tenants, in hold of the lease contract, and who have decided to move (here called movers) are transferred to the project leader at Chalmers, and in accordance with GDPR regulation. The project leader or an assistant then contact the movers to ask for a personal interview. These interviews are preferably held in the mover's home, but on their request, they can be held in a public place or at their work place. If the mover does not wish to meet for an interview they are asked if they can accept a short telephone interview.

The face-to-face interviews are focused around a few questions in an open interview guide: Why have you decided to terminate the lease of the apartment? Why do you decide to move now? Is there any relation between your move and the renovation? Where do you move? Furthermore, questions are posed about the move, preferences in the old/new home, costs for the old/new home and experiences from the renovation (disturbances, information provided, possibilities to influence the renovation).

During the interview the interviewee is also approached with a short paper-based questionnaire that include questions on personal demographic: their gender, age, and primary occupation, the size of the household, and the households' collective income. These same demographic questions are included in the questionnaire (section C) which is sent out to those who remain after the renovation (see 3.2.).

Regarding the telephone interviews, the same open questions as in the face-to-face interviews are posed. In the first telephone interviews the short questionnaire with the demographics was also filled in over the phone, but this was later abandoned, for reasons of personal integrity.

The interviews have been carried out either by the project leader and an assistant or the assistant alone. At this stage, the project leader has been present at 12 out of 31 interviews. So far, all interviewees for the face-to-face interviews have accepted to be recorded. The interviews are then transcribed. For the telephone interviews, these are not recorded. Notes are taken during the interview and documented in a short report directly after the interview.

Two kinds of analysis are planned regarding the interviews. First, addressing the main questions for the study, why the tenant has decided to move and the eventual relation to the renovation, is analysed using results from both face-to-face interviews and the telephone interviews. Secondly, an in-depth analysis is made on only on the results from the face-to-face interviews in order to get a more holistic understanding of the circumstances around the decision to move.

3.2. The questionnaire

The questionnaire was designed so that it could be used for all different renovation project in the study. This demanded some effort in order to guide the respondent through all questions non-respect to whether they had been evacuated or remained in the apartment during the renovation or moved in after the renovation. The respondents that moved in after the renovation were not supposed to answer questions about the renovation process.

The questionnaire was divided in three separate sections: Section A with 28 questions about the satisfaction with the apartment, the area and the services of both these, including question of why the tenants choose to move here or stay after the renovation; Section B, with 18 question about the renovation process, the satisfaction with the process in itself, their possibilities to influence the plan of the renovation and their satisfaction with the final results; and finally, Section C with 15 questions about demographics (the same as the interviews, see section 3.1.). In connections to some, but not all questions there were possibilities to add free comments.

The questionnaire was prepared in paper format and digitally. The paper version included a link to the on-line version. No reward was provided for filling in the questionnaire. The anonymity of the respondents was guaranteed by coding the answers only to staircases not to single apartments.

Results from the questionnaire has been analysed both using descriptive statistics and multivariate statistical analysis to find correlations. Free text comments have also been coded and analysed.

4. Results

At this stage, only preliminary results are presented. The material is rich and more in-depth analysis are on-going.

4.1. Preliminary results from the interviews

So far, 63 tenants that have decided to move, have been contacted for an interview. Table 1, shows the number of movers that have accepted to meet for a personal interview, those who have accepted a telephone interview and those who have declined to be part of the study.

Table 1. Number of interviews, telephone interviews and rejected interviews.

Category of interview	Number	Comment
Face to face	13	10 held in the home, 3 at café/work place
Telephone	18	
<i>Subtotal</i>	31	
Rejected interview	32	23 did not answer or had already moved ^a , 5 declined the interview, 2 did not show up for a booked interview, and in 2 cases the telephone number was incorrect.
Total	63	

^a Form two of the Housing Companies we got the information too late after some tenants had already moved

The face-to-face interviews hold qualitative information about the move, the reasons behind moving, and qualities that they appreciate in their home and its' environment. Regarding demographics of the interviewees, data from all of the interviews have not been collected. In the face-to-face interviews, the short questionnaire was left for the interviewee to fill in after the interview and sent by post. Unfortunately, not all of them have done so. In addition, as already said, these demographics questionnaires were not filled in during all telephone interviews. The data we have, show that the interviewees are either in age group 25-34 or 55-64, of these 19 were women and 13 men, and all were employed. More demographics data could probably be retrieved from an analysis of the transcribed record which has not been done so far.

Table 2. Main reason to relocate according to interviewees (face-to-face and telephone).

Main reason to relocate	Number	Comment	Connection to renovation
Family reasons	7	Move in with partner, want to move closer to family and friends or closer to the job or the childrens' schools, in two cases up-sizing is mentioned.	No
Wanted to move/live elsewhere	6	Two tenants want to live in countryside, one wants to up-size, one has got a push to move in relation to the renovation	No (one partly)
Have bought a new home	5	Enter a housing career, want new production, live on the country side or up-size	No
Does not live in the apartment	4	The apartment has been rented out second hand, one of the tenants was evicted due to illegal sub-letting	No (except eviction case)
Raised rent after renovation	4	One directly due to this, two have decided to downsize in the area, one got a push to relocate	Yes
Lack of quality in old apartment	3	One tenant experience high levels of noise in the area, two refer to badly maintained apartments	No
Lack of accessibility	1	No elevator	No
Want to downsize	1	The rent increase is limited but they want to live cheaper	No
Nuisance caused by the up-coming renovation	1	Work night time, cannot plan up-coming travel plans due to lack of precision in renovation plan	Yes
Total	31		

In Table 2, a first categorisation of the main reasons behind their relocation is presented. Five of the thirty-one relocations have been judged as caused by the renovation. Four of these five tenants

mentioned the rent increase as the reason behind moving and one tenants' relocation is motivated by the expected nuisance of the up-coming renovation. In the category that mention that they want to live somewhere else, as a main reason for relocating, we also find one relocation that is partly due to the renovation. In the category of tenants that sub-let their apartment, one tenant was evicted due to illegal sub-letting which could also be judged as being provoked by the renovation. A majority (14) of the movers, move to another rented public apartment which they either have searched for through housing ques or been proposed by the property owner in connection to the renovation. Five movers have exchanged their publicly-owned rental apartment for a privately-owned rental apartment. Four of the movers have bought a new home (condominium or villa). For the four movers which did not live in the apartment that was to be renovated, now either live abroad or has moved in with family for which the tenure of the home is not known.

4.2. Preliminary results from the questionnaire

For the pilot study, the questionnaire was sent out to the completed phases of two separate renovation projects. Case A is a housing area from the 1950s with more than 500 apartments in lamella and tower blocks. The buildings undergo a medium intense renovation including new facades, the installation of double flux ventilation, and complete renovation of bathrooms. The tenants stayed in the apartment during the renovation. The tenants were not able to use parts of their apartment between two to six weeks, and the water was cut off for a few weeks. The property owner provided evacuation apartments for those with special needs (e.g. working shift, disabilities). The rent increase after the renovation is about 23% compared to the earlier rent level.

Case B are four higher slab blocks with about 400 apartments constructed in the late 1960s. The questionnaire was sent out to phase two in the renovation project. The buildings underwent a façade renovation some years ago. In this new intense renovation, the buildings are equipped with double flux ventilation and the apartments are completely refurbished with new bathrooms and kitchens. Two floors with additional apartments are added on the top of the buildings. All tenants were evacuated for at least 7 months. In the first phase, the rent increase was up to 45% but the standard of the internal renovation and consequently the rent raise will be lower in the next three phases.

Table 3. Respondents of the questionnaire for the two case studies.

Case	Number of apartments	Number of respondents	Percentage
Case A	270	65	24%
Case B	122 (100 originally and 22 new apartments on top)	42	34%
Total	392	113	29%

The questionnaire was sent on twice and the total number of respondents for each case, combined paper and digital answers, is shown in Table 3. The choice of coding the answers per staircase meant that we had to distribute the reminder to all tenants, also those who had already answered, to the irritation of some that contacted us.

The respondents are about 52% women and 48% men in both case areas. About 50% are employed and about 20% are retired. In Case A, for more than 30% of the responding households, the yearly income is approx. 3000 to 4000 €. For Case B, for more than 30% of the responding household, the yearly income is approx. between 3500 and 4500 €.

In Case A, the property owner had already sent out a questionnaire prior to the start of this research project which could explain the low response rate in that case. In Case B, actually very few of the original tenants moved back after the evacuation according to data provided by the property owner. Originally, 75 tenants had permanent lease contracts and were evacuated prior to the renovation. Of these 33 chose not to move back but relocated to an apartment in the neighbourhood provided by the property owner. Another 31 tenants chose to move directly to the building in the property that was already renovated (phase one), eight of those chose a smaller apartment in the move and seven a larger apartment. In total, seven, of the original tenants moved back to the same building (phase 2), four to an

apartment of the same size, two to a smaller size, and one to an apartment on a lower level. Two tenants moved permanently and are no longer renting a home from this property owner.

Without this valuable information about the movement patterns, the results from the questionnaire would have been difficult to understand. Only one out of the 42 respondents answered that they had lived in the building more than one year, and at first, we thought that all respondents in Case B had misunderstood the thoroughly prepared question on when they moved in.

Regarding the evacuation, the questionnaire also provided ambiguous answers. In Case B, where all tenants were evacuated according to the property owner, 50%, or 21, of the tenants answered that they belonged to this group something which does not correspond to the information given, that only seven tenants were evacuated and moved back. It might be that some of these tenants were temporarily evacuated from another phase (phase 3) prior to moving into phase two.

In Case A, where there was no common evacuation of tenants, only for those with special needs. Still as many as 75% answered that they were evacuated. Of these, 22% answered that they had lived with family temporarily with a comment that they found it difficult to stay in the apartment when the kitchen or bathroom were disabled for a couple of weeks and workmen present during daytime. In the commentary field, some tenants claim that they were able to get an evacuation apartment through repeated complains.

5. Discussion and conclusions

Recent studies of residential movement in Sweden in relation to renovation of rented housing are based on the tenants experiences prior a renovation [8], and in relation to a few areas [23]. The aim of this study is thus to complement these earlier studies with insights from actual movers and stayers and in relation to a larger number of renovations and including limited renovations and deep renovation. A limitation of the presented study is that only municipally owned housing companies are studied and in one city. If possible, future studies could include other types of property owners and locations.

So far, 31 movers have been interviewed, and of these, six could be linked to the renovation. In several cases, the interviewee did not recognise that their house should be renovated, this was for example the case for those who rented out their apartment but also true for others. Of these six movers that could be linked to the renovation, five mentioned the rent increase as a result of the planned renovation as one main motivation. In one case, the nuisance before and during the renovation was the reason to move. A majority of the movers seemed to be content with the prospect of their new home which they in most cases had found on their own, and in a few cases, with the help of their housing company.

Earlier studies have indicated that income levels is determining whether tenants are forced to relocate in connection to a renovation [9],[12]. Further analysis of the transcriptions of the interviews in our study must be done before the movers can be established as having a more or less advantageous economic situation than the stayers. That few movers indicate that the rent increase, as a result of the renovation, is the primarily cause for their relocation, the question can be raised if the stayers are more negatively affected then the movers. Unfortunately, the questionnaire had a low response rate which probably can be linked to several factors such as the length of the questionnaire, its design or formulation of questions [24; 25]. For example, the information provided on the income levels might not be accurate, but the property owners have purchased economic information for their housing areas which can be used for verification.

For the continuation, the questionnaire as a method has to be reconsidered. Besides reformulating some questions, a reward for answering the questionnaire could be installed. The many comments left by the respondents, even though the answer they gave in the comments was actually defined as an answer, could be an indication that the respondents wish to give more qualitative answers. Focus groups as a replacement or complement to a questionnaire will be considered.

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