THESIS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

SME contractors on the stage for energy renovations?

A dramaturgical perspective on SME contractors' roles and interactions with house owners

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Cover:
The cover picture shows a typical Swedish single-family house built in 1975.

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Abstract

Energy renovations of single-family houses in Sweden are moving slowly, but if energy renovated, these houses hold great potential for decreased energy consumption. This could imply a new area of exploration regarding potential business opportunities for SME contractors. The slow movement of energy renovations creates a challenge however. Previous research has focused on SME contractors and their work or house owners and their behavior, but to understand the lack of energy renovations, it is not enough to examine only either/or. It is also necessary to study the interaction between these two actors in order to understand how the space is being used and how they negotiate what needs to be done. The aim of the thesis was thus to extend our understanding of SME contractors within the construction and energy sector in southwest Sweden and their interactions with single-family house owners as potential customers. The aim was also to explore further whether increased understanding of SME contractors developing their businesses towards energy renovations of single-family houses could bring more light to contractors' interactions with house owners as potential customers and the lack of energy renovations of single-family houses in Sweden.

An interpretivist understanding, using Goffman's dramaturgical theory (Goffman, 1959; 1961), was initiated to explore the interactions while Action research is the methodology and framework for this study. The method was used to work with the SME contractors in developing their businesses towards energy renovations. However, since action research focuses on social change, and Goffman's dramaturgical theory focuses of stabilized actions, it is necessary to discuss how the two perspectives are merged. In order to achieve the aim, a combination of methods was needed. Two main methods were used: 18 observations of interactions between SME contractors and house owners, when they were discussing possible improvement measures in the house owners' homes; and 16 workshops with three groups of SME contractors (a total of 26) collaborating to develop their businesses to find new ways to work with energy renovations of single-family houses. One of these groups developed a new concept regarding energy renovations of single-family houses, and in addition to the observations, this thesis is based on this group's collaboration.

This thesis demonstrates that SME contractors express some insecurity regarding their roles, their role performances, and also some of the materials and possible solutions they could use; and it shows how these insecurities shape and structure their interactions with house owners. Tensions were highlighted involving roles and performances, which together with insecurities create challenges for innovation and implementation of new practices. In addition, the study shows that interactions between SME contractors and house owners comprise a key aspect of the lack of energy renovations of single-family houses. The interaction with the established roles and performances locks the two actors into a routinized play that is difficult to change. This creates blocks for new input. Thus, to place SME contractors on the stage as responsible for the lack of energy renovations is to disregard the constraints of their professional role, which is created by the contractor's interaction with the house owner at the house owner's home.

Keywords: Action research; business development; dramaturgical theory; energy renovations; house owners; interactions; single-family houses; SME contractors.

Additional publications

Buser, M., Carlsson, V. (2017). What you see is not what you get: single-family house renovation and energy retrofit seen through the lens of sociomateriality, *Construction Management and Economics*, vol. 35, no. 5, pp. 276-287.

Buser, M. & Carlsson, V. (2015). Stepping out of the canvas: Small construction enterprises experimenting with business models, *The 23rd Nordic Academy of Management Conference* (NFF), August 2015, Copenhagen DK.

Buser, M. och Carlsson, V. (2015). Renewing renovation: Looking at renovation of owners occupied houses with socio-materiality lenses. *Proceedings of the 31th Annual Conference Association of Researchers in Construction Management (ARCOM).*

Buser, M. & Carlsson, V. (2014). Is anybody home? The role of company websites for small building contractors in Sweden. *Proceedings 30th Annual ARCOM Conference,* September 2014. Portsmouth.

Carlsson, V. (2015). Providing service in order to work: The importance of aligning expectation with performance. *Paper for the 31st EGOS colloquium*, June 2015, Athens GR.

Carlsson V. (2015). Renovera energismart ny affärsidé. *Byggaren: Tidningen för små- och medelstora byggföretag*. http://byggaren.se/nyhetsarkiv/item/393-renovera-energismart-ny-affarside

Carlsson V & Koch C (2014) Shall we dance? Encounters for energy renovation of single family houses. In A. Raiden and E. Aboagye-Nimo (eds): *Proceedings of the 30th Annual Conference Association of Researchers in Construction Management (ARCOM) Proceedings. Pp.1165-1174.*

Carlsson V. and Koch C (2014) What's so special about action research. *Paper for European Academy of Management conference (EURAM),* Research Method track. 2014. 39p.

Koch, C., Buser, M., & Carlsson, V. 2014. Convenience renovation and non transition-Contractor SMEs operating in the detached housing market. *Conference paper 5th International Conference on Sustainability Transitions*, August 2014, University of Utrecht, NL.

Acknowledgments

When I started this journey I quite naively thought that my main learning would be about energy renovations, SMEs, customer interactions, business development and the construction sector. And even though I have learned a lot about these areas in recent years, my major learning has been about myself. There have been countless times when I have realized how my actions have been shaped by my wrongly (and strongly) held assumptions and I have had to question my actions and thoughts, to reflect and rethink to be able to learn new and improve my understanding. It has sometimes been quite a rough process, but so needed!

Through this process many people have passed my path and offered everything from further challenges to great support. I am thankful to them all because they have all contributed in various ways with small pieces to my journey and my development.

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Finally, I want to thank Formas and Chalmers University for the opportunity to carry out this PhD project.

This thesis is dedicated in remembrance of Digger
Till we meet again…

Contents

1 Introduction

During the last decade, concerns about environment, sustainability and energy consumption have increased and there is a movement towards reduced energy consumption. Although Sweden is one of the front-runners among European countries when it comes to energy performance (OECD, 2014), there are sectors with high energy consumption in which implementation of energy-efficient solutions is moving slowly. One such sector is the housing sector, which is linked to approximately 30% of Sweden's energy consumption (Boverket, 2010). Single-family houses constitute a major segment of the housing sector. These houses require deep renovations to ensure their future lifespan; but they also hold a great potential for decreased energy consumption if they are energy renovated (LåganBygg, 2013; 2017). Energy renovations of these houses, however, are going slowly (Boverket, 2015; LåganBygg, 2013).

Earlier research focusing on single-family houses have listed various explanations for the slow takeoff of energy renovations and identified the roles of SMEs (Davies & Osmani, 2010; Killip, 2013; Mlecnik, Kondratenko & Haavik, 2012) and house owners (Abrahamse Steg, Vlek & Rothengatter, 2007; Gauthier & Shipworth, 2015; Hagbert, 2016) to be important. Particularly SME contractors, when negotiating with house owners about the scope of transformation of their houses, could play an important role as change agents and convince house owners to adopt and implement new energy-efficient solutions. However, previous research has so far disregarded interaction between contractors and house owners, even though face-to-face interaction between these two actors enables space for negotiations about such measures and a situation that re-occurs for each single-family house renovation conducted by a contractor.

This thesis shows how a deeper insight of SME contractors' actions and the way they interact with house owners when negotiating the scope of a renovation, can further our understanding of the lack of energy renovations for single-family houses.

Furthermore, since my PhD is being carried out within a construction management department, my focus is on the contractors and also on the business potential that these kinds of renovations represent.

1.1 Background

In relation to high energy consumption and ongoing climate change, EU has set out a directive (Directive 2012/27/EU) that is included in Swedish regulations, in Boverket (BFS, 2013:14), regulating for decreased emission levels for energy and carbon dioxide by year 2020 and year 2050, in Sweden as well as in all EU member countries. It also includes regulations about increased energy usage from renewable sources. These two regulations are supposed to lower the overall emissions within EU by at least 20% compared with 1990 levels by year 2020. In November 2016, the EU commission proposed an update to the directive that adds further legislation for a 27% target by 2030 (Directive 2016/0382/EU).

The directive (Directive 2012/27/EU) explicitly refers to buildings – existing as well as newly built. However, even though new construction is increasing in Sweden (Boverket, 2016), it is still too slow for newly built, zero-carbon buildings to have more than limited impact on the overall carbon emissions from buildings, and it will not be enough to enable Sweden to reach the directive's goals in time (Boverket, 2010). Therefore, the question of how to improve existing buildings' energy consumption is an important area for action on which to focus.

Single-family houses, especially those built between 1950 and 1975, have proved to be a source of high energy consumption (Boverket, 2010). This is a major segment of buildings in Sweden, consisting of 750,000 houses (Boverket, 2005; SCB, 2010), and represents 44% of Sweden's existing building stock (SCB, 2015). A large proportion of the houses were built within a short time-period of 25 years, and the expansion was to some extent due to a housing shortage and led to speedy urbanization (Boverket, 1999; 2007). During these years, energy prices were low, which is argued to be at least a partial explanation for their poor energy efficiency (Boverket, 2007). These houses were also built before the Swedish building code was introduced in 1977 (due to the oil crisis at that time), which regulated buildings' energy standard (Boverket, 2009; Tommerup et al., 2010).

Today, these houses are in need of deep renovations (at least 60% energy savings compared to pre-renovation levels (Ecofys, 2014)) to ensure their future lifespan, but they also hold a great potential for decreased energy consumption if energy renovations are carried out (LåganBygg, 2013; 2017).

Nevertheless, only few energy renovations are carried out today that manage to live up to the emission levels EU is asking for (Blomsterberg & Engvall, 2011; LåganBygg, 2013). Thus, the energy renovations necessary to meet the emission levels are lacking; energy renovations of existing houses are still moving slowly in Sweden (Boverket, 2009: 2015; LåganBygg, 2013).

A main actor with regard to energy renovations is claimed to be local SME contractors (Tommerup et al., 2010). What local means here can be questioned, but in Sweden 99.9% of all enterprises are small and medium-sized, which is also the case in the construction sector (SCB, 2016) where as much as 88% of the enterprises have four employees or less (SCB, 2015). In addition, Doona and Jarlbro (2009) show that the construction enterprises that Swedish single-family house owners prefer to hire to renovate their homes are SMEs (EU definition, 2005).

But, even though there is an obvious need for energy renovations, there is still a lack of implementations of energy-efficient measures in single-family houses in Sweden. Thus, energy renovations of single-family houses could be a new area to explore and invest in for SME contractors, as a potential business opportunity. Castellazzi, Zangheri and Paci (2016, p.36) argue for the importance of a "forward-looking perspective to guide investment decisions". One forward-looking perspective could thus be to create change, and develop SMEs, their businesses and practices towards energy renovations.

Although Björnfot and Torjussen (2011) have shown that change of social practices can occur when businesses can utilize the current context and situation to find new ways to make money, they also argue that to create change in the construction sector might not be a simple task, since it is a context-driven sector. This sector is perceived to be complex and highly fragmented (Orange, Onions, Burke & Colledge, 2005), and it is characterized as conservative, traditional, rigid and unwilling to change or develop new approaches to and within work (Holt, Love & Li, 2000). But to characterize a whole sector in a certain way does not give a very nuanced and reliable picture, especially since the construction sector is not a homogenous sector comprising organizations of one size or one type or even contractors with the same type of education or backgrounds. Thus, there should be some contractors who would want to explore and develop their businesses towards implementing energy renovations in single-family houses.

In order to implement energy renovations in single-family houses, it is necessary to know how sales processes between SME contractors and house owners develop. How do the two actors interact and negotiate which improvements should be made in the house owner's house.

There is already an established space where the two actors meet – that is, at the house owner's home. When a house owner contacts a SME contractor for help, his or her request should be followed up by a tender from the contractor contacted. To be able to submit a reasonable and relevant tender, the contractor needs to inspect the condition of the house. Thus, the two actors meet in the house owner's home to look at and interact with regard to its conditions and potential for improvement measures to be conducted.

During similar encounters when house owners and contractors interact to discuss improvement measures in a house, the potential also exists to discuss implementation of energy-efficient measures. Implementations of energy-efficient measures are still lacking however. Thus, the potential that exists in the initial encounters between house owners and contractors to agree on and implement additional energy-saving measures does not seem to be realized as often as it probably could be. Why is this so?

1.2 Theoretical problem

Why is it important to study interactions between SME contractors and house owners, when wanting to learn more about SME contractors, their practices and work for social change regarding the lack of implementations of energy renovations? I have already noted how the interactions between the two actors could create space for exploring the possibilities, but what actually happens in the interactions between these actors is not known. The important aspect of the two actors' interaction, that they are interacting to decide the scope of the transformation about to be made, has been neglected in previous research. Instead, researchers have explored the two actors, house owners and SMEs, separately. Researchers like Greenwood and Levin (2007) and Stringer (2014) indicate that it is through interactions that individuals share information and move our thoughts into new areas that might create new actions. Therefore, to understand the lack of energy renovations, it is not enough only to study house owners and their behavior or contractors and their work; it is also necessary to know about the interaction between them to understand how the space is used and how the two actors negotiate what needs to be done. Therefore, the interactions between the two actors need to be studied.

The interest in investigating contractors and their interactions with customers has repeatedly been highlighted in previous research. Already in 2002, Nicolini (p.167) argued that 'interpersonal relationships' comprise an important and recurring theme in construction management, and there is a need to better understand these interactional aspects. But nine years later, in 2011, not much seems to have happened, since Brown and Phua (2011) can highlight in their review there is a scarcity of research within construction management with focus on interactions, inter-personal dynamics, working relationships between professionals and their customers, how they are managed, how construction managers' roles are performed in interactions with others, and how interaction processes take place. They further pose questions regarding the role of the professionals and how their roles can influence their performances with their customers and project outcomes. These are interesting and important theoretical as well as practical questions that are presented and discussed in 2011. In 2014, Janda, Killip and Fawcett argued for the need to investigate home renovation projects and seek a greater understanding of contractors, because they are the middle actors between house owners and their actions, their homes and the physical measures the houses require. Thus, 15 years after Nicolini asked for more research regarding interpersonal relationships and interactions, research regarding contractors and their customer interactions is, as yet, an underexplored area.

Through this thesis, I want to address this gap of understanding of the interactions and also contribute to explaining why there is a lack of energy renovations of single-family houses in Sweden. I will do this by showing how the practical problem, concerning lack of implemented energy-efficient measures relates to the theoretical problem of not having enough understanding of SME contractors and their interactions with house owners when they meet to discuss improvement measures needed in the house owners' homes.

1.2.1 Aim and research questions

The aim of this thesis is thus to deepen our understanding of SME contractors within the construction and energy sector in southwest Sweden, and their interactions with single-family house owners as potential customers. The thesis also aims to explore further whether increased understanding of SME contractors developing their businesses towards energy renovations of single-family houses could bring more light to contractors' interactions with house owners and the lack of energy renovations of single-family houses in Sweden.

To reach the aim, I need an interpretivist understanding of interactions between the two actors, but since business development calls for another method, I need to use a combination of methods. In addition, four research questions are used, each developed to help me focus and investigate various aspects of the aim. Since I explore the interactions between SME contractors and house owners when they negotiate upcoming renovations of house owners' homes, the first research question is:

1. How do SME contractors and house owners interact in order to define what improvement measures should be carried out in a house owner's home?
    a. How do SME contractors relate to house owners during these interactions?
    b. Which theory can support increased understanding of the interactions between SME contractors and house owners?

I also explore when various SME contractors collaborate to develop their businesses in order to increase energy renovations, and what challenges these collaborations might pose. But also the contractors' expressions about house-owner interactions, in order to further connect their house-owner interactions with energy-efficient solutions. Thus, the following research questions are used:

2. What challenges are posed by a process that works for social change by collaboratively developing SME contractors' businesses towards energy renovations?
    a. What can such a process further show regarding the SME contractors' roles and their social interactions with house owners, relative new materials and solutions to create energy efficiency in single family houses?

In order to more fully fulfill the aim, one additional research question was developed. Investigation of both interactions and collaborations is needed to bring further insight into SME contractors and their interactions with house owners, as well as the lack of energy renovations of single-family houses in Sweden:

3. Is implementation of energy-efficient solutions discussed during contractor and house-owner interactions? If not, how come the contractors do not use the space an interaction offers to argue for implementation of energy-efficient solutions?

A fourth and final research question regarding the methodology and the theoretical perspective is formulated, since use of the two perspectives in the same thesis could pose a challenge:

4. Since action research was used as the project's methodology, can a social theory focusing on interactions be used together with action research with its focus on processes and the work for social change, and if so, how?

The aim and the research questions are derived from a research project, and in order to understand this thesis, a brief explanation of the project can help clarify my underlying intentions and the actions taken.

1.3 The project behind this thesis

This thesis is based on a research project carried out 2013-2016, which aimed to explore the potential business opportunities relative to energy renovations for contractor SMEs working with existing single-family houses built between 1950 and 1975. The project's focus was mainly on SME contractors working with single-family houses and their potential and/or existing single-family house customers, who are later referred to as house owners. While the empirical material from the project also constitutes the empirical material for this thesis, the focus of the thesis is slightly different. The thesis' focus is on the SME contractors and the interactions between contractors and house owners when they discuss possible improvements in the house owners' homes.

To clarify the research, a description of the project and its parallel processes is relevant. In order to explore potential business opportunities, it was necessary to find and communicate with contractor SMEs working with single-family houses. However, the outcome of communicating with one contractor at a time to ask why energy renovations are not carried out more often and what could be done to increase energy renovations would probably only be their assumptions and preconceptions. This would not result in any significant changes. Thus, another approach was required in order to increase communication and the sharing of information and experiences. Collaboration and workshops with contractor SMEs were perceived to be a suitable choice of method. Thus, action research was chosen as a methodological approach where interested contractor SMEs could explore present practices together with the researcher and develop something new.

But to collaborate and enable change involved not getting stuck in arguments, assumptions and thoughts that might already be established among the contractors. They needed to be challenged as well as supported. By gathering several contractor SMEs together in the same space to communicate about potential business opportunities, it could be possible to support their thinking while challenging their potentially shared assumptions and preconceptions by encouraging reflection about their current way of working. In order to challenge their statements and support development, it was necessary for me to increase my own understanding of what happens when a contractor and a house owner meet to decide about an upcoming job in the house owner's home. And since literature within this area was scarce, it was necessary to explore the interactions between the contractors and the house owners, and increase understanding of what happens and why.

To even further challenge the contractors' routinized actions and at the same time support their work to uncover possible business opportunities, a tool for business model development (Osterwalder & Pigneur, 2010) was used. The tool was used in collaborations during workshops, but also in one-on-one meetings with single SMEs, due to some competitiveness and/or absence from workshops.

The project could of course be described as one major process where various things were carried out chronologically, but to explain it in that way would be quite extensive and probably not very efficient. To actualize and perform the project's major process, multiple subordinate processes were carried out in parallel, where the result of one action fed the performance of another. Thus, in order to understand the research project's major process, its subordinate parallel processes must be clarified one by one. Four subordinate processes could be seen to be ongoing in parallel within the major project process. These four processes were:

1. *Workshops:* Collaboration and workshops with contractor SMEs to support communication, development and change, but also research and reflection about own and joint processes that challenge preconceptions and assumptions;

2. *Observations:* Observations of interactions between contractor SMEs and house owners, where house owners seek to have improvement measures made in their homes, and interviews with the two actors regarding these interactions;

3. *Interviews:* Interviews with SME contractors and house owners;

4. *Business development:* Search for business opportunities and development of businesses with SME contractors.

Each of the four processes has been important on its own to increase the researcher's understanding of the SME contractors' roles, performances and practices. Each process has also been an important support for the other parallel processes, but mainly for the development of the major process. The methods have also been important for this thesis, as it is based on the project research and its main focus on SME contractors and their interactions with house owners.

Chapter 4 presents further details on the methods used.

1.4 Delimitations

With regard to the research's focus, one could question the lack of in-depth discussions of other topics than the chosen one – for example, the importance of materiality, business development, service. These topics have already been developed and argued for in other papers (see for example Buser & Carlsson, 2015b; Buser & Carlsson, 2017; Carlsson, 2015).

In accordance with the research's aim, I focus only on SMEs and SME contractors and not bigger construction enterprises where plenty of research is already conducted. Also, it is more interesting to explore SMEs regarding the topic of renovations of single-family houses, as they are claimed to be the major actor turned to by house owners when they want construction work to be done at their homes (Doona & Jarlbro, 2009). However, due to the study's limitations, it should be mentioned that even if house owners were observed and interviewed, the main contribution to this thesis is derived from the SME contractors, their performances and expressions. And even if the focus partly concerns renovations and improvement measures, I have not followed any case from start to finish but instead followed initiations and start-up phases. I have only followed four cases into the middle of renovation processes.

The SME contractors' websites could be included in these interactions regarding improvement measures, as the first attempt on a contractor's behalf to make contact with house owners; however, an earlier study has shown Swedish construction SMEs performances on internet to be rather rudimentary and underdeveloped, and their websites are not the place where the main interaction occurs (Buser & Carlsson, 2014). The SMEs websites are therefore not included, but although the main focus is on face-to-face encounters between SME contractors and house owners at the house owner's homes, the observed interactions also include phone calls, emails and text messages.

In addition, throughout the thesis I only examine the topic from an interpretivist perspective, with action research as a frame for the process. However, even if other perspectives would enable other aspects to be highlighted, the two perspectives (an interpretive theory and action research) are chosen due to their focus and the way in which they can support the researcher to explore the topic and fulfill the aim of the research.

One limitation of action research, however, which is also its strength, is that the process invites the participants to discussions. Through discussions, other questions or topics than those intended in the process can be highlighted; but the process allows only limited space for other topics to be covered fully, even though they might be needed – e.g. questions regarding Eastern European labor in the Swedish construction market and how it affects the sector.

Further limitations are discussed in the method chapter (chapter 4).

With regard to delimitations, I want to clarify briefly what energy renovations are and how they are defined in this thesis. The definition is brief, since energy renovations are not the main focus for this thesis; however, they do constitute the foundation that the research builds on and therefore need to be explained.

A definition of energy renovations

Research indicates that there are four categories of house renovations (Koch et al., 2014; Risholt, Waernes, Time, & Hestnes, 2013):

1. As built (no renovations or maintenance have been conducted);

2. Aesthetic (priority for renovating aesthetic features);
3. Well-kept (the maintenance and renovations needed have been taken cared of);
4. Do-it-yourself (priority for renovations the house owner can do).

The four categories can be seen to be overlapping in some respects, but the main point is that there are houses that have not been renovated at all or only barely maintained during their lifetime. And a house that has not been renovated holds great potential to become more energy efficient if energy renovated.

Lechtenböhmer and Schüring (2011) claim there is a potential to reduce energy consumption through renovation of existing residential buildings in Europe by 80%. Energy renovations have been shown to be one of the most significant contributions to decrease energy usage within buildings (Abrahamse et al., 2005; Power, 2008; Risholt, Time & Hestnes, 2013; Tommerup & Svendsen, 2006; Weiss, Dunkelberg & Vogelpohl, 2012). However, there are various elements that affect a building's energy consumption: building envelope; construction; age; weather conditions; size; building type; efficiency with equipment; heating system; use of warm water etc. (Balaras et al., 2007; Liu & Thoresson, 2013; Risholt & Berker, 2013). Thus, when energy efficiency in buildings regards the overall energy consumption of the building and its owners/residents, I have distinguished four different options highlighted in previous research:

1. Changes regarding the resident's behavior and way of living, which does not involve any changes to the building itself (e.g. lower indoor temperature in the winter) (Ma, Cooper, Daly & Ledo, 2012);

2. Replacement of old energy-consuming technology with new energy-efficient technology (television, refrigerator, washing machine, electric oven) (Steg, 2008);

3. Install new technology relative to the building's energy-related systems (e.g. heating and ventilation) (Roberts, 2008);

4. Make changes and improvements to the building envelop in an energy-saving manner (e.g. roof, exterior walls, floors and windows) (Ma et al. 2012; Xing, Hewitt & Griffiths, 2011).

In addition to these four options, there are two that can be seen to be additional as they might not lower energy consumption or be possible for all houses:

5. Install micro-generation technology (technology to produce your own electricity) (Roberts, 2008; Roberts & Sims, 2008; Xing et al., 2011);

6. Install district heating.

Mixes of these six options have shown to be common (Roberts, 2008; Roberts & Sims, 2008; Xing et al., 2011). However, the focus of this thesis is on the third and fourth options (new technology and changes to building envelop), and they are referred to hereafter as energy renovations.

1.5 Thesis structure

The thesis is structured as follows: The first chapter provides a brief introduction and background to the current lack of energy renovations. Also the theoretical problem is presented of not having enough understanding of SME contractors' roles and of how interactions between SME contractors and house owners are carried out. The current lack of energy renovations and need for increased implementations of energy-efficient solutions, and mainly the lack of understanding of SME contractors and their interactions gives the thesis its frame and focus through its aim and research questions. The second chapter provides a contextual framework of the problem area (energy renovations) and its actors (house owners and SME contractors) in order to clarify concepts and conditions in the field and to highlight current situations, actions and trends. Chapter 3 describes the interpretive theory chosen, the dramaturgical theory, with its concepts drawn from the theater, which is used to understand the interactions between SME contractors and house owners, their roles and performances. Chapter 4 is the method chapter. It starts with an explanation of how action research is used as the thesis' methodology and moves on to the methods, giving details of the participants, the SMEs and how the methods, mainly observations and workshops but also interviews and business development, have been used to explore and conduct the empirical fieldwork. The method chapter further explains how the analyses have been conducted, and in line with action research, it gives insights into the researcher's role during the major process. Chapter 5 presents both the empirical parts and the analyses: The empirical part is divided into two parts; the first presents three interactions between contractor SMEs and house owners, with a brief analysis after each interaction and a cross analysis of the three cases. The second part of the empirical material presents the SME contractors collaborations when they discuss house owner interactions while exploring new business opportunities regarding energy renovations. An analysis of the empirical material with regard to the dramaturgical theory is found after each of the two empirical parts, with an additional cross-analysis at the end. The thesis thus contains three analysis sections. Chapter 6 is the discussion where the analyzed results about roles and performances are discussed in the light of the thesis' contextual framework. In chapter 7, I reflect on roles and performances (the contractors and my own) during the AR-process. The whole thesis ends with chapter 8, the conclusion, where also practical implementations and the research's contributions are found.

2 Contextual framework

The contextual framework is divided into two parts and starts with an overview of what research indicates so far regarding SME contractors, their roles and performances and further interactions with house owners. The second part presents the challenges and opportunities for SME contractors to develop their businesses towards energy renovations. Thereafter, a brief overview is presented of house owners who could be interested in investing in energy renovations, where I argue for the importance of further exploration of SME contractors and their interactions with house owners.

First, it should be noted that the production of research regarding energy renovations, house owners' behaviors with regard to energy renovations, and energy renovations and business development have rapidly increased the last years. Since these aspects are not my main focus, but more a contextual frame for the interactions between the actors in focus, I choose not to put too much emphasis on them here. As there are only a few studies regarding SME contractors and their interactions with private customers such as house owners within the field of construction management (the field to which I want to contribute) I have included research from other fields as well. Hopefully, this thesis can inspire other researchers to follow the interesting paths that relate to SME contractors within construction, to extend their field of activity and their social interactions with house owners.

In my search for previous research on SME contractors for my thesis, regarding their interactions with house owners and energy renovations, I stumbled on many generalizations about SMEs (as if SMEs are entities that are not constituted of individuals), SME contractors (as if all contractors are alike and want the same things) and house owners (as if when a person buys a house, s/he immediately acts in accordance with all other house owners even though age, interests, sex, housing areas etc. may be completely different). Although these generalizations are also repeated in this contextual framework, my aim is not generalizations. I am interested in the specific individuals in this study and their interactions with each other.

2.1 SME contractors' roles and interactions with house owners

As previously stated, little research about SME contractor and house owner interactions within the field of construction management has been performed. But even though the interactions are not well explored, a few researchers have published work that can be connected with the actors' roles, performances and relations.

One example is Nair et al. (2010), who claim that SME contractors within the construction sector have great influence on house owners' decisions when it comes to choosing services and/or products. But while they claim that SME contractors have powerful influence, Parnell and Popovic Larsen (2005) found that UK contractors and house owners have different perspectives on energy, energy use, and energy efficiency, which create difficulties for possible influence.

Instead of discussing influence, Killip (2013), with his research based in the UK, indicates that contractors tend to select jobs they find to be fun, while house owners tend to select contractors due to costs. On the other hand, Straub and Mlecnik (2014) argue that to choose a contractor only on the basis of cost might be due to a lack of knowledge about the contractor's qualities, which can lead to uncertainties about which contractor to choose for their project.

The contractors in Killip's (2013) study divided their house owners into segments, where "good house owners" and "demanding house owners" were two segments that stood out. A demanding and unreasonable house owner is one who asks for unusual or unfamiliar work or someone who is awkward, but the bottom line is that a demanding customer is concerned with money issues. A good customer makes the overall decisions straight away, but leaves the details to the contractor. A good customer also shows respect for the contractor and his skills and expertise. Also my own previous results (Carlsson, 2015) showed that the studied craftsmen had ideal conceptions about their customers. Furthermore, I claimed that these ideal conceptions, mixed with a craftsman's own understanding and preferences, could create barriers for service.

Janda et al. published an article in 2014 from a three-year study of building expertise and innovation based on four case studies of energy renovations in the UK and France. They used semi-structured interviews to show that contractors: 1. innovate in response to specific needs on the job, policies and the need to improve efficiency; and 2. through their roles, create integration among innovation of practices, products and processes. Killip (2013) argues that contractors' openness to innovative practices is due to risk assessment in relation to time, efficiency, cost, installer confidence, and customer demands regarding potential results. The contractors in Killip's (2013) study found that where extra resources in time and money were available, using new innovations was perceived to be a positive experience. Killip's results can further be connected to Barrett and Sexton's (2006) study, where they show that SME contractors focus on their every-day actions and businesses. Their focus was not on becoming an expert, but on learning and/or implementing new practices when the job demanded it. The aim of this focus is to have satisfied customers and work that gives some profit over the break-even point. But then these studies also show some tension, because while SME contractors might not argue that they are experts, or even focus on becoming experts, they would nevertheless like to be seen as experts. This tension can be linked further to Chan (2016), who argues that expertise should be seen as in-the-making instead of a-role-to-become; expertise develops in every-day practices, situations and interactions.

Contractors' interactions and relations have also been discussed with the focus on partnering (e.g. Pryke, 2004); or the relationship between the self, the work and the organization (e.g. Brown & Phua, 2011); or looked into with through use of questionnaires and statistics (e.g. Memon, Hadikusumo & Sunindijo, 2015).

Cherns and Bryant, already in 1984, studied the role of the customer; but the customer they studied were multi-organizations and thus their results are not really applicable to customers who are house owners, even if they, like multi-organizations, are viewed as complex rather than unitary. Egemen and Mohamed (2006) did study private customers and their needs and wants and the expectations of contractors. But they used surveys and concluded that one of their most striking findings was that customers were willing to hire the same contractor again, if they were satisfied with the previous work and the contractor's role.

Contractors' roles in larger projects in construction have also been researched. Freytag and Storvang (2013) show for example that a contractor's role as a facilitator for larger projects in construction shifts during different stages in the project. In 2009, Gluch investigated environmental professionals' roles in 12 construction enterprises that varied in size, and she shows the tensions between different practices, which create barriers for professionals to fulfill their professional roles. Professionals are then seen to develop alternative identities to deal with these tensions, which seem to create fragmentation between various practices and roles.

Thiel (2012) investigated the organizational features at a London construction site. He explored contractors' roles and found that they were sweaty and performed with humanity and the intention to conduct what they think is right, regardless of what managers say. He also gained insights into contractors' inter-relationships, cultural activities and norms, creating a picture of a contractor as a strong, skilled and competent man. Other studies also indicate that men in construction try to create an impression of the secure and physically strong man. Datta (2009), for example, who focuses on gender performances, describes the common perception of builders in UK as "homogenous white masculinity" (p. 24). Others (e.g. Agapiou, 2002 and Watts, 2009) have also studied the male-dominated field, focusing on gender and gender roles, and further strengthened the picture of contractors as physically strong men who are sure of their roles and performances. Thus, a contractor's professional role as a strong man who is confident in his actions and performances seems to be quite established.

Brown and Phua (2011) argue that the topic of identities is under-explored in construction management but not neglected. They claim that researchers have touched upon the topic while examining other aspects. Brown and Phua's (2011) review is a bit problematic however, since they do not define the actors, the construction managers, whose identities are being explored; nor do they diversify between various roles (SME manager, large enterprise manager, project manager, constructors, general contractors etc.). In addition, the review is not limited to research on construction management, but mixes this with research from other areas (e.g front-line workers at an industrial plant, bankers). Nevertheless, Brown and Phua (2011) conclude that contractors are a heterogeneous group of individuals with various practices, and their actions are based on how they see themselves – thus making identity a performance issue.

Through these rather few findings, we can conclude even further that there is a gap of knowledge about SME contractors, their roles and their interactions with customers (house owners). As the theoretical problem indicates, there is an argued need for research regarding these interactions, but also indications and suggestions about how to do this and what lenses to use. One example is Lowe, Purchase and Ellis (2012), who argue for the need for new methods to gain new insights into and further understanding of the social interactions. Previous studies seldom draw on social theory to explore processes where actors work for social change. As a result, we need to borrow the skill of building on social theory from other academic streams, to analyze these changes.

Brown and Phua (2011) also argue for researchers not to be exclusive in their choices of methods and theories when exploring contractors, but to recognize the need for using multiple perspectives to gain rich insights. They prefer one perspective over others, and this is Goffman's dramaturgical theory. This theory is relevant when exploring interactions and roles. Earlier research in construction management using Goffman's dramaturgical theory is scant. Green (2006) used dramaturgical theory, when he focused on construction project management, describing project management in the construction industry as consultancy service, where the consultants perform in front of a customer. His work could be very promising as a point of departure for this thesis, but his focus on large construction projects is not in this thesis' focus however.

Researchers who have recently used Goffman within the area of construction management are Rasmussen, Jensen and Gottlieb (2017); however, they use Goffman's frame analysis and make a macro-oriented analysis of institutional change, which is not useful for this thesis.

In parallel with the focus on SME contractors and their interactions with house owners, this thesis also focuses on the process of SME contractors' business development of their SMEs.

2.2 Opportunities and challenges for SME contractors to develop their businesses towards energy renovations

SME contractors trying to develop new businesses have been seen to lack resources and also knowledge (Rezgui & Miles, 2010; Ribeiro & Fernandes, 2010). However, through collaboration, knowledge and resources can be increased (Rezgui & Miles, 2010). Collaborations are also argued to support innovation and development (Herazo & Lizarralde, 2015; Schönström, 2005). If knowledge and competences are lacking in-house, they can perhaps be found among competitors or partners, or in networks, and also suppliers and customers (Lindgren, Taran & Boer, 2010). Collaboration with other businesses and building relationships can also make it possible to gain competitive advantage (Buser & Carlsson, 2015).

To develop a business is however difficult and complex, especially in SMEs, where the everyday management of the enterprise is also necessary (Lindgren, 2012) and developing something in collaboration can add other difficulties. Mlecnik et al. (2012) experienced some challenges in their study of enterprises collaborating to implement One Stop Shops for energy renovations. These challenges included: dividing responsibility if a house owner wanted to complain; planning and communication among the businesses; lack of cooperation between contractors, because new holistic thinking was required; house owners might not be ready to gamble with something as important as their homes. They conclude that it should not be expected that many enterprises would want to engage in One Stop Shop or similar concepts; there will be frontrunners.

Roome and Louche (2016) argue that the reason to develop a business is often due to a problem; an event; a change in norms; or a combination of circumstances. Mokhlesian and Holmén (2010) mean there are at least four important reasons for contractors in construction SMEs to engage in innovative practices like energy renovations: 1. Resource scarcity may affect resource prices; 2. Environmental issues and house owners' awareness might create a push; 3. Government rules and regulations may enforce changes in methods and materials; 4. Green reputation – if being green becomes prestigious, house owners might be willing to pay for it.

2.3 House owners and the importance of their interactions with SME contractors for energy renovations

In line with many international studies, Risholt and Berker (2013) argue that most house owners have multiple reasons for an energy renovation (Diakaki, Grigoroudis & Kolokotsa, 2008; Stieß & Dunkelberg, 2012; Straub, Mlecnik, Jansen & Nieboer, 2014) and the reasons will change over time (Organ, Proverbs & Squires, 2013). A few of these reasons are: *Reduce energy consumption* (Amstalden, Kost, Nathani & Imboden, 2007; Organ et al., 2013; Straub & Mlecnik, 2014); *improve comfort and/or health conditions (to reduce draft)* (Organ et al., 2013; Risholt, Time et al., 2013; Straub & Mlecnik, 2014; Straub et al., 2014); *increase property value* (Straub & Mlecnik, 2014); *cost savings and/or* r*easonable payback time for investments* (Amstalden et al., 2007; Nair, Mahapatra & Gustavsson, 2010; Organ et al., 2013; Risholt, Time et al., 2013; Straub et al., 2014; Straub & Mlecnik, 2014; Stieß & Dunkelberg, 2012).

Risholt, Time et al. (2013) mean that renovation measures need to be tailored to the building, and also to the house owner and his or her personal taste, because the house is not "just" a building; it is also a home. Aune (2007) highlights how the concept of "home" can be linked with the concept of "self". Studies from UK and USA (e.g. Organ et al., 2013; Sirgy, Grzeskowiak & Su, 2005) show that house owners want their homes to reflect and be consistent with their values, attitudes, beliefs, ideals and social self-image. If their ideal self wants to live in a green house, but they do not, then they are more motivated to make changes to make it happen; however, if the risk of making changes or acting to make a green home is perceived to be high, the motivation to engage in such actions will be less (Organ et al., 2013). To connect the home with the self can also be related to Goffman (1959) and how actors create stages for their performances. The home is a place to feel safe and secure, but it also provides a stage for social interaction and activities and for public image (Aune, 2007). Thus, the house can be seen to have symbolic values as a prolongation of the owner and showing uniqueness, but it also has an important function for social and cultural actions (Risholt & Berker, 2013).

When it comes to energy renovations, however, the focus on creating a safe and secure home that is a prolongation of the self seems to get lost. Instead, the main focus is on benefits and costs. This is because house owners, as a group, are perceived to want to save energy but not at the expense of their quality of life (Parnell & Popovic Larsen, 2005; Risholt & Berker, 2013; Steg, 2008). Quality of life thus seems not related to energy renovations as strongly as it could be. This is not a new finding however, already in 1985 Wilk and Wilhite (1985) showed that house owners have other goals than energy efficiency to modify of their homes. They also concluded that measures offered should appeal to house owners to be perceived interesting to invest in. Also, Gram-Hanssen (2014a; 2014b) concludes that deep renovations should be promoted by other arguments than economic savings. She highlights that: aesthetics and function are perceived more interesting by house owners to invest in than energy renovations; and the importance of visible renovation measures to enable house owners show others.

There are thus motivational aspects for creating interest in energy renovations, but there are also aspects that might hinder interest and investments.

A house owner is most likely to invest in energy-saving measures after the immediate purchase of a house (Stieß & Dunkelberg, 2012; Straub & Mlecnik, 2014). In Sweden however, most new house buyers are under 39 years of age (SCB, 2014), and this group has been found to be least likely to invest in energy-efficient measures. Nair et al. (2010) mean that this is due to lack of finances and knowledge. Researchers have identified multiple other challenges that might create hindrances for house owners to invest in energy renovations – e.g. priority to doing their own work instead of hiring a contractor (Risholt & Berker, 2013); lack of knowledge of the specific problem (Risholt & Berker, 2013; Weiss et al., 2012); perceive renovation as a burden (Mlecnik, Kondratenko & Haavik, 2012); more interested in other investments, such as renovating kitchens and bathrooms (Gram-Hanssen, 2011); lack of regulatory requirements regarding energy standard and of incentives if the regulations are not followed (Mahapatra et al., 2013); insufficient financial assets and resistance to loans (Straub & Mlecnik, 2014; Weiss et al., 2012).

Two additional aspects for not investing in energy renovations can be that house owners are perceived to not have sufficient information about energy efficiency for houses (Banfi, Farsi, Filippini & Jakob, 2008; Mahapatra et al. 2013); and that house owners might not be aware of the possibilities there are for advice (Stieß & Dunkelberg, 2012). I find it quite difficult to accept these two aspects, when considering that house owners also live and act in what is argued to be the information age. Risholt and Berker (2013) for example point to the Internet, with its richness of information, as an important source where house owners can find information during a renovation process. Lack of information does not seem credible, but what might be more likely is that some house owners do not know what information to trust and/or how to sift through and find the relevant information for him/her and the specific house in question. Abrahamse et al. (2005) mean that general information about energy savings is not a very effective strategy to increase change; even if the information tends to result in more knowledge, it does not necessarily result in changed behavior or energy-saving measures. Instead, tailored measures and actions have been shown to be more effective, since house owners have been shown to prefer to contact and hire SME contractors when wanting to make improvement measures in their homes (Doona & Jarlbro 2009). The interaction between the two actors, their roles and performances, is important to explore, since the encounter between them can create space for information about implementations of energy-efficient solutions.

Five studies derived from the same project as this thesis should also be mentioned before moving on to the next chapter. These studies show, for example, that SME contractors tend to focus on everything, so as not to exclude any potential customers. They also show that the contractors seem to be inclined to reduce their customer relationships to very personal, face-to-face interactions (Buser & Carlsson, 2015). A second study shows that possibilities for energy renovations were not taken advantage of during SME contractors and house owners' interactions, that focused instead on 'convenience renovations', i.e. renovations of selected elements of the house and in support of aesthetic and/or functional needs of the house owner (Koch, Buser & Carlsson, 2014). A third study shows that encounters between SME contractors and house owners enable the two actors to decide whether they want to do business together or not (Carlsson, 2015). A fourth study indicates that costs, financial options, general insecurity and unstable and/or ineffective technologies can create barriers for implementations of energy renovations. Furthermore, the results showed that the actors performed a complex interactive pattern, like a dance, that influenced their performances and the interaction (Carlsson & Koch, 2014a). Finaly, a fifth study argues that materiality, i.e. the houses themselves with their specific conditions, plays an important role when a contractor and a house owner interact about improvement measures (Buser & Carlsson, 2017).

Summary of Contextual framework

The contextual framework for this thesis builds on three aspects: 1. What is known so far about SME contractors, their roles and performances and further interactions with house owners, in order to know the field and the gaps that need to be filled to develop this understanding further;

2. Opportunities and challenges for SME contractors if and when they develop their businesses towards energy renovations, in order to try to find previous research related to change and SMEs, in order to learn about potential barriers and advantages when interacting and working with SME contractors; 3. What is known about which house owners could be interested in energy renovations, and what might create hindrances for house owners to invest in energy renovations, in order to learn about the individuals that own these houses that need renovation and about previous research focused on developing these ideas further.

3 Dramaturgical theory as theoretical framework

The thesis' theoretical framework is presented in chapter three. The framework builds on Goffman's dramaturgical theory. Dramaturgical concepts, e.g. roles; performances; and scripts as well as front and back stage are introduced and discussed. The concepts are later used in to analyze the SME contractors' actions, performances and interactions with house owners.

To explore SME contractors and their interactions with house owners, and also the interactions between SME contractors when they discuss house owner interactions to develop their businesses (i.e. change of practices). Goffman's (1959) dramaturgical theory was chosen as the theoretical lens. His dramaturgical theory focuses on micro-sociology, interactions and routinized behaviors, aspects that could help me understand these interactions. For example, how interactions between actors, structures and artifacts enable actors to form and perform roles in specific settings. The dramaturgical approach is also argued to work particularly well on sales interactions, where the actors have well defined social roles to perform (Darr & Pinch, 2013; Grove & Fisk, 1992). Brissett and Edgley (2009) mean that the metaphorical aspect to perceive behaviors as drama is a distinct model of human interactions; it provides insight into face-to-face interactions between actors.

It was also interesting to explore Goffman's (1959) dramaturgical theory, with its focus on individuals' routinized and stabilized actions in interactions with others, in the context of development and change. The theory could maybe bring light to: if these routinized actions would hinder a development and limit the space for change, or; if these stabilized actions would support and even enable a development.

To use dramaturgical theory in a change setting is not as strange as it might sound, it has been used in change settings before: for example, Mirvis (2005) used dramaturgical analysis to look at a large-scale organizational change process, where the change process could be seen as a drama where all actors were involved in a play with a start, middle, and an end. My process has similarities to such a change process. In Mirvis study however, the change and outcome were planned and set. The process was driven top-down in a big organization (a ware house) and the manager was the director of the play. In the AR process for this thesis, the actors were participants directing their drama. The end was not given from the start. Instead, as the play developed, it was up to the actors to decide how the drama would end. This process could be said to be an improvisational drama; the plot evolves dependent on the actors' interest, engagement and interactions and also in regard to the context and the projects framing.

The dramaturgical theory has been used in a variety of contexts through the years, for example within leadership studies (Gardner & Avolio, 1998); intra-organizational relationships (Murphy, 2009); marketing and advertising (Stern, 1996) marketing and service (Clark & Salaman, 1998; Grove & Fisk, 1983); shopping behavior (Moisio & Arnould, 2005); hospital ward (Lewin & Reeves, 2011); change process (Mirvis, 2005); organizational control (Dale, 2005); accounting (Solomon et al., 2013). Nevertheless, there is a lack of studies within face-to-face sales (Darr & Pinch, 2013). Lowe, Purchase and Ellis (2012) argue there is still a need to investigate interaction processes and also important to use new methods to get new insights in and understand social interactions. In addition, given the importance of technologies in society, it is surprising that there seems to be a dearth of research using dramaturgical analysis to explore sales interactions of technologies and/or different solutions. Goffman's (1959) dramaturgical theory was therefore chosen as a lens to increase understanding of face-to-face interactions and social behaviors at the two different stages for interactions: 1. Interactions between SME contractors and house owners when they meet to discuss improvement measures of a house owner's home; 2. SME contractors' collaborations when they discuss house owner interactions to develop their businesses to increase energy renovations of single family houses in Sweden.

Goffman's (1959) dramaturgical theory builds on micro sociology and social interactions in everyday life. The theory has its heritage in one of the strands of symbolic interactionism, argued to be of particular importance in micro sociology (Herman & Reynolds, 1994). A very brief explanation of symbolic interactionism can thus be important to clarify dramaturgical theory.

The symbolic interactionism that Goffman draws his dramaturgical theory from has its roots in the American pragmatism. It approaches the understanding and interpretations of interactions, and interactions as mediated through social symbols where symbols help to define the meaning of actions (Blumer, 1986). Wallace and Van Fleet (2012, p.29) describe symbolic interactionism, and the role of symbols in interaction, to be based on that societies are symbolic in nature and symbols are its primary basis for communication.

The dramaturgical theory builds on the symbolic interactionism, it addresses interactions and the performances people exhibit when they want to create an impression of themselves in order to define a situation. Lowe et al. (2012) argue that dramaturgical theory consists of three perspectives: 1. *Actors* and their roles; 2. *Resources* as props, spaces and settings; 3. *Activities*, how the actors interact to develop a drama. Brissett and Edgley (2009) and Smith (2013) mean there is especially one name that is connected to dramaturgical theory and its recognition, namely Goffman with his most famous book "Presentation of self in everyday life" published in 1959. It is also this book, supported by recent research, which builds this chapter's main arguments.

Goffman (1959) uses the theatre and dramaturgy as metaphors to explain social life, interactions and situations. He argues that social life, just like a theater, consists of persons performing roles on stage in front of an audience and that people exist through meeting, interacting and by being seen by others. Lowe et al, (2012) argue that the dramaturgical approach emphasis how interactions are given meaning through interpretation of resources and artifacts, and become "converted from artifacts to symbols" (Lowe et al., 2012, p. 421). Since Goffman's dramaturgical theory is based on symbolic interactionism, there are more symbols to acknowledge when people interact than "just" the verbal language. Goffman (1959) even discusses two versions of communication: "the expression he *gives*, and the expression he *gives off*." The expression a person gives involves communication in words. The expression a person gives off involves non-verbal performances, actions given to support (or not support) the given information. To explain these two versions of expressions further: When an individual appears before an audience there is most often a reason why he wants to perform an impression to the audience, his actions will help to define the situation. However, the one he interacts with is usually aware that the performer is likely to present himself in a positive light, he will therefore divide the other's performance in two parts: the verbal aspect, the expression he gives, which the performer can control quite easily; the non-verbal communication, the expression he gives off, over which the performer might have less control (Goffman, 1959, p.14).

As research show, social actions and symbols are influential for other actor's actions (Fisk & Grove, 1996; Leathers & Eaves, 2016). My focus for this thesis will thus be on SME contractors and house owners' actions, for example attitudes, roles, body language and also social symbols and symbolic artifacts (tools, clothes, vans, houses etcetera).

Goffman (1959, p.200) argues that informal interactions, away from hierarchical formations, are seen to be one of the most fruitful situations to study actions and reactions. His theory can thus bring light to the interactions and support our understanding of e.g.: How do the actors define the situations?; What performances are made and how?; What impressions (and directions?) are given during the interactions?; Who directs and controls the scene; and what roles are taken and how? Hopefully, the answers to these underlying questions will further help clarify the research questions and answer the thesis' aim.

3.1 Performances and impression management

Through interactions, individuals will partake in each other's performances and guide the performer's actions and the creation of his and their roles by their emotional expressions and actions (Koslowsi & Pindeck, 2011). The performer is argued to present himself to the audience in a certain way, also according to the sociocultural and contextual rules and routines that are applicable for the specific situation, to make a specific impression (Goffman, 1959; Schwalbe, 2013).

Impression management is an activity that takes place in interactions between actors, either directly involved with one another (e.g. a business meetings) or when the interaction is indirect (e.g. a buss full of strangers) (Koslowski & Pindeck, 2011). The observations for this thesis refer to actors directly involved with one another: In workshops, when contractors interact directly with each other to create new business opportunities; In the encounters, when contractors interact directly with house owners regarding possible improvement measures of the house. However, my own presence as a researcher (observing the encounters) created sometimes an indirect involvement which may have had implications for the other actors' impression management, their expressions given and expressions given off. One might however wonder, if the contractors are aware and consciously adjust their impressions in order to get a certain response, or if their impression management techniques are less "manipulative", performed in accordance with the sociocultural and contextual rules.

Panteli and Duncan (2004) claim performers want the audience's impressions of them to be positive. However, all performers might not want to be perceived in a positive light in all situations. Some roles are created to be frightening (individuals in violent gangs) or threatening (robbers). Even so, most performers in most situations will probably want their audience's impression of them to be positive, especially if their own impression of the audience is positive. To create a positive impression with their audience a performer will use available scenery to their advantage. Scenery can be props, settings (physical and social), clothing and other artifacts as well as their own bodies in the form of bodily movements (Van Praet, 2009).

Actors are argued to adjust their roles and performances to different situations, to convey the impression they want to express (Goffman, 1959). For example, this can be perceived when a service provider meets a customer outside of the ordinary service setting and adjusts his performance to create and maintain a desirable positive impression for the customer. Performances differ due to situations and context and also when individuals move into new positions in the society, for example change of jobs and the new job require a new part to perform. Goffman (1959, p. 79) argues however, that the new part and how it is supposed to be performed will not be covered in detail. Instead only hints and cues will be given for stage directions and it will be assumed that the individual's former experiences have enabled a repertoire of bits and pieces of performances that might be useful in the new setting.

Van Iddekinge et al (2007) discuss impression management and situations; how an impact regards to if a situation is considered "weak" or "strong". Strong situations, where behavioral demands and outcomes are clearly understood, shared and unambiguous (e.g. grief after loss of a loved one), are less susceptible to impression management performances. Weak situations are for example where expectations are less clear and where individuals have to decide on their own how to behave. Weak situations are more possible to influence by impression management techniques. At first sight, encounters between a SME contractor and a house owner can be considered weak situations, where impression management performances can influence the outcome. However, contractors are quite used to doing these interactions with house owners; they should thus have a repertoire of common behaviors to use in these situations. In addition, most house owners might have previous experience and expectations of what to expect, and what behaviors that are reasonable to use during the encounter. Thus, situation of the encounter between a contractor and house owner can be considered not to be completely weak, instead the situation is more towards the middle of the two expressed variations of situations (weak or strong).

An interaction occurs always in a setting. The setting of a service interaction describes the setting of the scene for the customers (Grove & Fisk, 1992). A setting involves the actor's physical environment; part of a setting can consist of props that are part of the actor's everyday life. For this process, where a contractor goes out to a house owner and his or her home, the setting of the encounter would be set by the house owner. But, a contractor does also bring props and add to the setting (e.g. van, clothes, tools).

Props and settings involve social symbolic meanings for actors to interpret and make use of. Grove and Fisk (1992, p. 455): "Underlying Goffman and other observations is the tacit understanding that people are symbol users who interact with each other based upon the meanings they assign to the sundry elements present at any behavioral setting." Dale (2005) further argues that resources (e.g. materials) are suffused with power and prestige through their symbolism, which various actors then interpret differently. Thus, resources are understood as "combined material and social interaction" (Dale, 2005, p.651) where the interpreted social meaning of the symbols are stronger in influencing actors' performances and interaction processes. Lowe et al. (2012) takes the example of a business meeting and how it is not the number or seats that is important, it is how the seats are arranged that will determine how the meeting will unfold. If the actors freely can sit wherever they chose, the signal is friendliness, but if the table divides the actors in two parties (each having one side) it signals tension between the parties.

Lowe et al. (2012) show how actors move in and out of settings and stages while changing roles and scripts. A setting thus impacts on an actor and an interaction and enables a certain range of activities and roles for the actors to engage in (Darr & Pinch, 2013). Van Praet (2009) mean that even the actor's body can be seen to be the anchor of the performer's communicative skills, to maintain a given definition of the situation. Thus, the performer shows through used scenery, his body and performances who he feels to be and what he wants to express.

Goffman (1959, p.80) argues "performances of everyday life are not 'acted' or 'put on' in the sense that the performer knows in advance just what he is going to do, and does this solely because of the effect it is likely to have". Reality is rather concealed behind performances and people must thus rely on performances instead. The more an individual try to understand the reality, the more s/he must focus on and understand the performances (Goffman, 1959). Kivisto and Pittman (2007) used Goffman's dramaturgical theory to explain that car sales people; flight attendances; insurance agents; and employees at Walt Disney create something that they call 'alternative realities'. Further, Kivisto and Pittman (2007) argue it takes collaborative effort to stage a convincing performance for the customer, and the actors "must adopt the role of the dedicated and knowledgeable professional" (p.274) in order to get the customers interested to buy. Goffman (1959, p. 83) means that, "it often happens that the performance serves mainly to express the social characteristics of the task that is performed and not the characteristics of the performer". This makes it easy for the customers, in the sense that they can prepare for what to accept. It also saves them time and energy if they can stereotype a performer and pretend he is only what his clothing and props claim him to be (Branaman, 2003). This implies however, there is a two-sided moral character to performers who explicitly or implicitly claims to have specific social characteristics: On the one hand, it is expected that s/he needs to be what s/he claims to be; on the other hand, s/he has a moral right to be treated in an appropriate way (Goffman, 1959). Thus, if the performer later does something that does not match the defined situation, the performer might be perceived as unpleasant and the situation as uncomfortable (Branaman, 2003).

Performances to define a role and a situation can thus be perceived to have quite varied characteristics due to sought after impression. Koslowski and Pindeck (2011) have divided performances into defensive or assertive. Jones and Pittman (1982) identified five assertive performances. These performances were later developed by Crane and Crane (2002) with four defensive performances (see table 4.1).

Table 3.1 *Verbal impression management performances* (Crane & Crane, 2002; Jones & Pittman, 1982)

Strategies (Assertive –A, Defensive – D)	**Actions**
Ingratiation (A)	Gratify, perform favors, flatter
Self-promotion (A)	Boast, express successful performance
Exemplification (A)	Appear busy, perform more than required
Supplication (A)	Act innocent, plead for help
Intimidation (A)	Make threats, bully, express anger
Innocence (D)	Denial of involvement
Excuses (D)	Denial of responsibility
Justifications (D)	Deny difficulties of outcome, the end justifies the needs
Apologies (D)	Take responsibility

Jones and Pittman (1982) and Crane and Crane (2002) also highlight that defensive performances are performed to save one's face. Usage of defensive performances might however create an appearance of incompetence or deceitfulness. Even though all performances aim to create a certain desired impression with the audience, the use of defensive performances can instead create an undesired impression. For example: to use *Ingratiation* when a person desire to be perceived as likeable increase the risk to instead appear as a conformist or fawner; or to use *Supplication* when aiming to appear innocent and humble a person can instead be perceived as incompetent or non-independent.

It is not only the performer who can be seen in a different way than intended. Since Goffman (1959) published his book, the concept of impression management has received some negative attention during the years, especially found in psychology. For example, that individuals always automatically try to present themselves in a positive way (Panteli & Duncan, 2004; Paulhus, Graf & Van Selst, 1989); tries to manipulate or stretch the truth (Martin & Nagao, 1989). Trough Schlenker and Weigold's (1992) review, they discovered that an individual's attempts to control information about himself and manage the impression he makes on others, he also makes impression on himself. Schlenker and Weigold (1992) also found that people try to regulate information for their audiences to facilitate goal-achievement. However, previous research has shown that the same performance can be categorized in several ways (Schlenker, 1980). For example, when a person makes an action it might be seen to be kind and thoughtful, or goal achieving. Even though negative aspects have been highlighted and discussed regarding impression management, research has also shown impression management to involve some positive aspects, for example self-regulatory functions (Vohs, Baumeister & Ciarocco, 2005). Even more important is Kivisto and Pittman's (2007) research showing that most persons are uncomfortable if they have to manipulate others, they want to perceive themselves as decent persons.

Koslowski and Pindeck (2011) argue that the usage of impression management techniques can produce long term as well as short term benefits, but if the techniques to create a certain impression are used carelessly, they can create undesired impressions. Koslowski and Pindeck (2011) conclude that it is honest actors with honest performances who are perceived as their desired impressions.

Performances are thus techniques to avoid making a scene and to avoid making the other actor (or oneself) lose face. The performer holds a desire to refrain from creating a scene with others. He thus uses various techniques to avoid a scene or loss of face (-es): not to introduce too many contradictions in his performance; to have control of himself, his face and voice and not to show too much private emotions; to listen to and give a proper amount of attention; not to interrupt. While he avoids a scene, he is also open to hints from the audience that might warn him for unacceptable performances that are not in line with his own performance (Goffman, 1959). If these techniques are not used properly or if a disruption occurs, there can be feelings of shame, worry, ambivalence and concern about oneself as well as the audience.

Even though the actor performing is in main focus in an interaction with two individuals, the actor is at the same time the audience to the other actor, who is also performing for the first actor. In the theater the audience is distanced to the performers and the situation. In real life however, the three parties are compressed into two. For example, in an interaction with two individuals: one individual performs for the other who constitutes the audience, and at the same time he is the other performer. An individual can be both actor and audience at the same time; perform actions for the other to respond to (actor) while searching for information from the other's actions. Even though actor and audience can be, and often are, performed at the same time, one aspect will be discussed at a time, to clarify the situations and the actors' actions. Also Goffman (1959) discussed the two aspects separately. He specifically highlighted how an interaction does not start with the performer as such but with the audience, searching for information and signs about the performer when he comes into their presence. The information the audience search for is anything that can help to define the situation and enable understanding of what he will expect of the other and what the other might expect of him (Koslowsky & Pindeck, 2011). Since the performer also is audience to the other, the same is applicable the other way around.

Various audiences might imply various performances of the performer (Edgley, 2013; Messinger, Sampson & Towne, 1962). Performers are however often using standard-maintaining routines, routines performed without awareness of them being performed (Schwalbe, 2013). Thus, performers tend to be unaware of how routinized their performances are and claim their current performance to their current audience is unique (Goffman, 1959). Schwalbe (2013) mean, when an individual performs a particular performance well, the audience will accept the performance of the routine as an indication of his capacity to perform any routine. But, if an audience is skeptical to the reality performed and impressed upon them, they have a tendency to act as if everything about the performer is false (Goffman, 1959). However, the issue of if a performance is true or false is not really interesting. What is interesting is whether "the performer is authorized to give the performance in question" (Goffman, 1959, p. 66). The more an individual's performance appears to be the real thing, when it is not, the more threatened people become. For example, if someone performs as knowledgeable contractor, building extensions to houses and/or performing renovations etc. And it later turns out s/he was not authorized to give the performance as contractor, the house owners who have hired this "contractor" can feel threatened and question the conducted work.

If the audience is skeptical to the performance, s/he will try to find clues if the performance is authentic (Williams, 2013). The individual can intentionally convey information, either through deceit or feigning. Clues can be found in the expressions he gives and the expressions he gives off. The expressions given off are perceived less controllable and more reliable (Goffman, 1959). Goffman (1959, p.20) argues that the ability to see if a performer is authentic seems to be better developed than our capacity to perform. The audience is thus likely to have the advantage over the performer.

If an audience is to be impressed upon a performance, they must be able to believe that the performers are sincere (Goffman, 1959, p.77). However, it is not only the audience who are taken in by a performance or not. Also the performer can be cynical about his performance or sincerely convinced that the reality he is staging and the impression he is fostering is the real reality and impression (Williams, 2013). In other words, either an individual does not believe in his own act or he is taken in by it. Kivisto and Pittman (2007) mean that "in most cases it will be much easier to present a convincing performance if one is relatively sincere about one's performance" (p. 283). Even though there typically is an apparent movement between cynicism and sincerity, Goffman (1959) argued practitioners in for example service occupations sometimes may be forced to mislead their customers because the customers show a deep need for it.

3.2 To use roles

Lowe et al. (2012) mean that actors act differently in different settings and contexts depending on how they interpret the situation. Actions do not exist in a vacuum, they always have to be seen and understood in the light of its history, its presence and future. The occurring actions are the link that connects the former experiences and the future whishes (Goffman, 1961).

Persons are also seen to improvise in their roles in relation to other people, to find out what works and what does not work in the current context (Goffman, 1959). In a way, the performers help and support each other to play their roles and make a good performance in the social play. Social roles are performed in regard to the "rules" the situation and the interaction demand (Preves & Stephenson, 2009). This means, social status, roles and the interaction structures are created and developed through and during interaction (Schwalbe, 2013). However, actors do not just use the role they have for a certain setting. Sometimes an actor distance himself from his current role, to find another role or to show another actor that he is aware of his roleplaying (Pinch, 2010; Smith, 2013). Individual's roles can thus change and vary, depending on context and other individual's roles.

Pinch (2010) has highlighted another aspect regarding roles. He argues that there is mundane technology in Goffman's work that has not been highlighted enough and thus, its actual impact on performances played has been made "invisible". Pinch discusses Goffman's (1959) example of a merry-go-round and how different persons play out different roles depending on the person's age and who is watching. Pinch (2010, p.414) claims that the staging of roles follows not only on age and audience, but is crucially dependent on the detailed physical layout and what the technology permits. He discusses further that people interact with mundane technology in everyday lives and: "technology is so all-pervasive in our everyday world that we scarcely notice that the objects we interact with are technological at all" (Pinch, 2010, p. 410). Pinch shows through his research that: "performances are embedded in the mundane materiality of social life" (p. 419). And that materiality and technologies matter for social interactions, various technologies and materials will influence on what performances and roles are chosen and also how interactions evolve. Pinch (2010) mean that the best way to observe the link between materiality and performance is when the materiality changes. He builds his argument on the different role distances that are used among older children riding real ponies, compared to older children riding mechanical horses at a merry-go-round. Materiality therefore becomes important for the staging of the role. He follows up his materiality argument in other of Goffman's stories. For example, the kitchen at the Shetland Island Hotel, and that the door between the kitchen and the dining room plays an essential role for the employees and their role performances. Depending on which side of the door the employees are, have implications for their performances. Pinch highlight that the materiality the door represents impacts on what role the actors take on. However, I find Pinch's argument that the doors impact the employees' roles and performances a bit too simplistic. The materiality will certainly have an impact on the actors' roles and performances, however, so will the audience, earlier experience, awareness of culturally accepted (or not accepted) behaviors and the purposes of the materiality in different situations.

Goffman (1959) argued that an actor's tone, accent and laughter are part of the role played as well as what is over- respectively under communicated between the actors. The interactions and the results of the interactions become a combination of the materials, the social actors and their actions at stage. In accordance with Lowe et al. (2012) this implies that actors can have multiple roles at the same time. This is however not a new finding. Already 1890 William James argued that an individual has multiple selves, showing different sides in different situations. His finding was later followed up by others (e.g. Schlenker, 1980), i.e. a person has many social selves, a different social self for different audiences. Even though performers are more than the role or roles that are performed, the audience demands realization of roles through performances and not to show too much of private selves. When a SME contractor performs, he performs a role and his role is part of a ceremony with rituals. Included in this ceremony is to persuade his audience that he is not anything else than a SME contractor, "Society demands that he limits himself to his function" (Goffman, 1959, p. 82).

When discussing roles, it is important to highlight personal fronts. Clothes and bodily movements change the social rules and conditions for the performances (Van Praet, 2009). Each individual has a personal "front" consisting of social attributes (e.g. clothes, hair, gestures, body language, facial expressions, age, sex), with the help of these personal artifacts, s/he will try to improve the impression given off (Goffman, 1959). One example can be taken from Gardner (1992). Gardner writes about recruitment, selection and promotion and discusses that the applicant prepares beforehand and put extra effort and thought into what to wear at the specific situation due to what impression the applicant wishes to make.

The personal front is argued by Goffman (1959) to be employed for two reasons: first to enable the performer to present himself as he likes to appear; and secondly because his appearance can improve his performance and make it more comprehensive. However, Argyris and Schön (1974) have shown that some actions (e.g. how we speak, stand, behave) become automatized and subconscious which allows us to free energy for other things. To have automatized and subconscious behaviors imply that some actions are performed without self-awareness. Performance and impression management are usually referred to as conscious manners, but just like Argyris and Schön (1974), Koslowski and Pindek (2011) argue that:

> "some of the time we act without consciously attending to ourselves as social objects, and can later assert that when acting we were not thinking about how we looked. At other times we are aware of the way we look in front of our audience, and this awareness may change our actions"
>
> (Koslowski & Pindek, p. 282).

Thus, some actions regarding fronts might not be as consciously performed as others, which can also be a reason why actions (expressions given off) are perceived to be more reliable than words (expressions given).

Fronts can also be connected to specific occupations and certain social actions which will give the audience a feeling about the character of the task (Goffman, 1959). Thus, it is not enough to possess the required attributes but also to perform the "right" appearance and rituals for the social group the person is part of. Signs and ceremonial rituals are also attributes which can be used to distance oneself from others (e.g. a person can choose not to eat together with someone; or wear specific clothes etc.). Thus, the rituals and symbolic actions a contractor performs preserve the common front of the professions.

The information conveyed by front is abstract and general and a front in one service occupation can be seen in others as well (Goffman, 1959). If a special dramatic effect is wanted for a role (e.g. competence and cleanliness) a front created for a specific role can be "borrowed" and applied to fit the first role. Goffman uses the example of the white coat, borrowed from the doctor and applied to make-up artists. The audience is then encouraged to understand the similarities and form expectations to the performer relative the props.

There are typically specific tasks to a social front, and also meaning and stability. Goffman (1959, p.37) argues: "When an actor takes on an established social role, usually he finds that a particular front has already been established for it. Whether his acquisition of the role was primarily motivated by a desire to perform the given task or by a desire to maintain the corresponding front, the actor will find that he must do both." When there are several fronts to choose between it might implicate difficulties when the task to be performed is in-between two well defined fronts (Goffman, 1959). Goffman uses the military and its rank insignias as well as nurses and doctors as examples, to show that tasks can be perceived to be too much responsibility for one front but too insignificant task to perform for the other front. Goffman, very briefly, further highlight that a person's front also can be connected to objects. He gives an example of how a pharmacist is part of his store while the "store is, in a sense, part of the pharmacist" (Goffman, 1959, p. 99), implying that the front of the store and the front of the pharmacist are interlinked.

3.3 Frontstage and back stage

In the dramaturgical theory there is a dualism between two types of stages for performances. To perform roles in front of others is what Goffman refers to as "front stage". Just as in the theater, there is also a "back stage" in role performances (Goffman, 1959). Back stage is explained by Goffman (1959) and McCormick (2007) as when actors are among friends that are trustworthy, they can feel relaxed and be themselves, they do not have to assume a role and put on a performance. Backstage is also the place where the frontstage presentation is prepared and where persons practice how to be social. Back stage areas also fill a function for the performers to discuss what can be changed in a performance (Kivisto & Pittman, 2007), and it is commonly located close to the place where the performance is given (Turner & Edgley, 2009). MacCannell (1973) also argues for front and back stage. He uses tourist establishments to show there are social structures in the society, for example the division between front and back which keeps every individual in its place. There is however also the individual’s agency (freedom of choice) within these structural frames.

Goffman (1959, p.123) means that it is in the intersection between front- and backstage, when the performer leaves or enters one of the areas, that can be a very interesting area to explore to detect when performers get in or go out of character.

There is a social as well as a material logic behind how individuals choose to perform front stage and/or back stage. Front stage or back stage may be defined as places bounded to some degree by barriers to perception, and also often to boundaries in time (Goffman, 1959, p. 109). Pinch (2010) uses Goffman’s example of the Shetland Island hotel to discuss the importance of space for front stage and back stage to be possible to perform. The two spaces, the kitchen and the dining room, need to be close enough for the employees to observe the guests, but not too close or open so the guests can see in to the kitchen and the employees’ behaviors. By the help of the kitchen door, Pinch argues that materiality matters for front stage and back stage to come about. Goffman (1959) mean that control must be exercised over who can enter a back stage area, however, Lowe et al. (2012) concludes “no single actor fully controls the front stage processes” (p. 427).

Front stage can also be perceived in regard to objects. For example a house, where the front yard (frontstage) is maintained and typically kept clean, while commonly less effort is put down to keep things presentable to others in the back yard (backstage). Also the inside of houses can be front as well as back stage, depending on area. Kivisto and Pittman (2007) conclude from their research that houses are divided along with the “rules” of the front stage and back stage, where guests are welcomed in dining rooms and/or living rooms while bedrooms are not put on display as frequently.

Many places can be identified as front or backstage, but there are also places that will function as front stage at one time and as backstage another time (Turner & Edgley, 2009). Places are typically divided into front- or backstage depending on the given performance that occurs at the place. This can for example be seen on today’s workplaces which tend to be more and more “fluent”, without a fixed location, this is also the case for the SME contractors in some respects. This fluent aspect implies that back stage and front stage may be difficult to define. Lowe et al. (2012) argues however, that front stage and back stage can be divided depending on how the actors interpret and make assumptions about *we* (symbolizing back stage) and *them* (symbolizing front stage) in their interactions. Thus, some kind of separators between the two stages seem to occur; physical as in materials and abstract as in how actors are referred to and performed with.

Even though earlier research has discussed front- and back stage, the discussions and argumentations are a bit simplified for front- and backstage and how to define each area. For example, Lowe et al. (2012) refer to front stage as playing a role which is played in accordance with formal societal rules. Back stage is then when a person interacts with friends and peers and it is also back stage that relationships are developed. Back stage is also argued to be less formal than frontstage; where it is less pressure to conform to the role. However, I find Lowe et al.'s argument of front and back stage a bit too simplistic. If an actor performs his professional role (e.g. as contractor) he plays his role in accordance with formal societal rules (e.g. when interacting with a house owner). But, through their argument they implicitly claim there are no professional relationships: If the development of relationships only can occur in backstage regions, and the professional role belongs to frontstage regions, development of a professional relationship seems to be a challenge. I find it difficult to think of the two areas as well defined, as research has made them. If a place is front stage or back stage should have to do with more than just the location and its space.

It is not only I who has issues with this definition and division between front- and backstage. Lewin and Reeves (2011) made a study about health professionals within acute hospital care. They draw on Sinclair's (1997) development of Goffman's work, with official and unofficial, front- and back stage areas and also an offstage area (see figure 4.1). Even though I agree that there are not only frontstage and back stage, I think it is more complex than Sinclair's model.

<table>
<tr><td></td><td>Official</td><td>Unofficial</td><td rowspan="3">Offstage</td></tr>
<tr><td>Frontstage</td><td></td><td></td></tr>
<tr><td>Backstage</td><td></td><td></td></tr>
</table>

Figure 4.1: *Sinclair's (1997) modified front- and backstage model.*

Through the model Sinclair argues that front stage and back stage can occur at the same physical place and with the same actors, they can also change due to topic and present actors' use of roles and scripts (scripts will be explained further on). Lewin and Reeves (2011) use Sinclair's (1997) model, but instead of using *official* and *unofficial* they use *planned* and *ad hoc* performances (e.g. planned frontstage performances were ward rounds and ad hoc back stage was corridor interactions). Offstage was however argued to resemble informal back stage interactions. Lewin and Reeves (2011) discuss ownership of space (access to and ownership of space in ward settings), and relating this ownership to hierarchy and power relations between various professional groups. They conclude that space can be seen to structure action. Also, that fluid, backstage space can be created in frontstage regions and that the actors who perform backstage with each other expect the boundaries of these backstage spaces to be respected by others (staff, patients, patients' families etc.)

Front stage and back stage can thus be seen to be fluent depending on how an actor feels about another; how far they feel they can allow the other to come and still be in control over own performance and appearance. It can also depend on how far a person's frontstage performances are compared to backstage performances. Persons, whose performances are similar in frontstage as in backstage, have fewer aspects to conceal in backstage behaviors and thus fewer aspects to lose control of. However, to claim too much when it comes to backstage processes are not possible, it is not a well-researched area. Lowe et al. (2012) emphasizes the need to clarify and understand the concept of back stage, as it is often neglected in research. To research backstage is nevertheless a challenge, MacCannell (1973) concludes: “What is taken to be real might, in fact, be a show that is based on the structure of reality” (p. 593).

Backstage can thus be connected to concealment, a back region allows concealment of activities and props that may (if not concealed) allow another actor to question a performance and/or staged setting (MacCannell, 1973). When an individual conceals something, it is commonly not only economic issues or inappropriate pleasures, it can also be the performer’s own aspirations concealed behinds statements (Goffman, 1959, p.52-53). Concealment involves accentuating certain matters to conceal others. When accentuating something specific the performer steers the audience’s attention towards the specific thing in focus while other things get less attention and implicitly gets concealed from the audience’s attention. Concealment involves thus e.g. how performers tend to conceal those actions that might not comply with the impression they want to make. There are intentional concealments, for example where persons try to conceal mistakes or correct errors before the performance, to show a polished version of what is made. An example of this could be when a writer only shows the finished article, concealing the many attempts and errors that preceded the final text. Just like the performer (which he also is) he wants to show the end-product (the article) and not the many drafts with mistakes, errors and the learning he went through to get there.

Concealment may take several shapes during a performance. If a good performance involves several ideal standards of actions, it is likely that one or a few of these standards will be neglected in favor of the others. Goffman (1959, p.53) argues e.g. that if service is assessed in relation to speed and quality, it is first and foremost quality that will be neglected. This is because it is possible to conceal the quality of service while speed is not as easy to manipulate in front of an audience (Goffman, 1959; Darr & Pinch, 2013).

When Goffman (and others) discuss performances, concealment and other concepts it is mostly referred to individuals and their performances, but performances can also be seen in groups. For example, colleague groupings of a corporate character closely identified depend on the others for their reputation and audience’s trust. If someone is caught pretending or causing a scandal it will transfer to the whole group (Goffman, 1959: 1967). Just like the individual wants to sustain a definition of the situation the performance fosters, so does the group, this involves over-communication of some aspects and under-communication of others (Goffman, 1959, p. 141). If some aspects get known by the audience, they may discredit or disrupt the impression performed. Thus, it is important for the group to control the information and conceal it from the audience.

Concealment can also be seen in tension with visibility. Goffman (1961, p.176) explains visibility as “part of the individual’s obligation is to be visibly engaged at appropriate times in the activity of the organization, which entails a mobilization of attention and muscular effort, a bending of oneself to the activity at hand.” This obligatory visibility is then seen as the person’s commitment to the activities and acceptance of one’s role in the current situation. Goffman (1959, p. 41) discusses Edith Lentz (1954) work that the lack of visibility creates problems in the medical area. For example, when nurses do something that the patients can understand to be relevant (e.g. read patient records) the nurses are perceived to be doing something. But, if a nurse “just talks” to a patient, even though s/he listens to the patient’s breath and looks at his physical appearance, s/he is perceived not to really do anything. This can have implications for how patients and families perceive the nurse and the work performed and also how they chose to act in interaction with the nurse.

3.4 Interactions for improvement measures

The first encounter, where a house owner and a SME contractor meet to interact face-to-face, aims for the contractor to inspect the part/-s of the house in need of work and to observe its structure, materials and conditions. The encounter also allows contractor and house owner to decide if they want to choose each other as customer and service provider regarding the required improvements. The first encounter between a contractor and a house owner can be perceived to be a service interaction with service practices.

Performances in service interactions is something Goffman (1961) discusses in a specific chapter in one of his later books “Asylums: Essays on the social situation of mental patients and other inmates”. Grove and Fisk (1992) investigated service encounters and concluded that services are dramas which can be understood as theatrical performances. The major purpose of performances in service practices is to establish and define a definition of the service or product (Koslowsky & Pindeck, 2011). McCarthy, Pitt and Berthon (2010) writes in their theoretical paper that: *how* service is performed is just as important as *what* service is performed. Nevertheless, McCarthy et al.’s (2010) take on dramaturgy and service settings can be a bit problematic. For example, they argue that service employees are actors and customers are audience, and that adaptive performances are seen to be acted out by service employees for customers. This implies that the customers are not really taking part in the interaction but only observe (as an audience), it is the service persons that are acting. But if the customers are not acting, then how are the service persons able to adapt their performances to the customers? I claim that a service interaction is a joint performance, where both “parts” are actors and where they perform together; both actors adapt and adjust performances regarding each other. Also Goffman’s (1961) argues that customers are audience. For example, Goffman (1961) distinguishes between two kinds of services: one where the audience is a sequence of individuals, and another where it is a sequence of gathered individuals. A hairdresser performs the first kind service, a stand-up comedian on a stage the second (Goffman, 1961, p.324). Goffman’s statement can also be seen to be contradictory to his earlier argument where he sees the three parties which constitute the theater (the audience, performers and situation) compressed into two in real life (Goffman, 1959). For this thesis, I will follow Goffman’s (1959) initial statement, that actors can simultaneously be performer and audience.

Regarding Goffman’s (1961) two types of services, the service between SME contractor and house owner belongs to the first kind. The audience (or the other performers, the customers) is a sequence of individuals, as contractors most commonly perform the role of a service provider to one house owner at a time. Service providers have been shown to prefer to sell to one customer at a time, it is perceived more difficult to sell when the audience consists of two persons or more (Kivisto & Pittman, 2007). However, when the service setting is a single-family house, one customer can include several individuals (e.g. a family), the concept of house owner which is used in this thesis shows the actor as a singular person.

A service interaction between a SME contractor and a house owner occurs in a setting. The setting in a situation is the physical layout and materials (e.g. furniture, carpets, lamps, greenery). The setting of a service encounter is argued to form customers' expectations of what to expect and what roles are appropriate in that specific setting (Goffman, 1959). Different settings, for example DIY (do-it-yourself) stores and building material trading companies elicit two different expectations of service and performances. A single-family house as a service setting is a quite different setting compared to the other two and the expectations and performances in a single-family house might thus differ completely.

Goffman (1959, p.152) argue that some service providers specialize in helping customers maintain their show before others. Some specialize at the setting (e.g. architects, construction workers) while other specialize at the personal front (e.g. hairdressers, tailors). Through the material, I will show that the division between the two may not be as clear as Goffman is stating. Both types of service providers have access to customer's backstage areas and may acquire information and learn secrets destructive for the customer's performance. The customer is however not able to learn secrets about the service provider to the same extent. A preferred skill with the service provider is thus discretion. Another skill is to have awareness of the importance of the customers with which he is expected to agree (Goffman, 1961). Also, Grove and Fisk (1992) show how impression management is used is service interactions and that service providers need to observe customer's behaviors and manage their impressions in accordance to gain a positive reaction from the customer.

Darr and Pinch (2013) conclude that a service interaction implies certain obligations both for seller and buyer. This can be connected to Miller (1964), that a service interaction can be seen to comprise three stages: At first there is the 'contact' between the customer and the service provider and/or sales person; which follows by the 'pitch' where the sales person tries to understand what the customer wants and how much money s/he is likely to pay for it; the final stage of the sales interaction is then the 'close', where the sales person tries to convince the customer to pay a certain amount for a product and where the two actors finally close the deal. The three stages of a sales interaction can be argued to look like three different scenes in a play. There is a development from the scenes and each scene has its own set of rules and social codes for the actors, creating social frames for how to perform and what actions to engage in. Also Darr and Pinch (2013) argue for how service interactions are performed in stages, where each stage leads to the next and where the social obligation to buy increases for each step taken. The materiality as in architectural and physical layout, together with the support from the sales person and his or her arguments, guides the customer further along in the sales process. Darr and Pinch further show that social obligation is achieved and constitutes a fundamental ingredient of service interactions. The social obligations concern how "social actors feel more or less compelled to carry out a social action because of an already established social relationship between them and/or some shared normative commitment" (Darr & Pinch, 2013, p. 1602). Darr and Pinch mean that the social obligation allows the actors to move from one stage to another where the interaction ends with an agreement with a closing of deals.

3.5 The usage of scripts and other performances in interactions

In addition to their work of social obligations in service interactions, Darr and Pinch (2013) (as well as several others before them, see for example Mangham, 1978; Miller, 1964) have developed Goffman's (1959) concept of "scripts". Scripts are considered to be situations in social life consisting of structured forms of actions which tend to repeat themselves in similar situations. Scripts can be found both front stage and back stage.

Goffman argued that: "performances of everyday life are not 'acted' or 'put on' in the sense that the performer knows in advance just what he is going to do, and does this solely because of the effect it is likely to have" (Goffman, 1959, p.80). This statement is however in tension with the concept of scripts, where actions are structured and routinized because of the whished results that they (probably) will enable for the actor, learned through previous experiences. The statement is also in a sense contradictory to the use of scenery and stage props, to create a certain role and impression with the audience.

Scripts can be linked to that similar situations will be managed in similar ways. Lowe et al. (2012) argue that scripts and activities are intertwined, critical for actors' performances and the impression they wish to convey. They ask for greater emphasis on scripts and performances in studies which have previously been overlooked (Lowe et al., 2012). However, a few studies have been carried out to explore the use of scripts in everyday life. For example, Darr and Pinch (2013) studied several types of face-to-face encounters between service provider and customer, to show how both service provider and customer use structured forms of actions. The actors thus produce and re-produce the social order or buying and selling. They argue that the actors in a service process often have distinct social roles, including well-defined scripts as customer/buyer and service provider/seller. Darr and Pinch (2013) show how a sales and service person tries to present him or herself as a technical expert and as a trustworthy person.

As for use of scripts in the project, the SME contractors (in this thesis the general term for all participating contractors is SME contractors) can be seen to use various scripts depending on situation and context. For example, when interacting with other SME owners they may adopt a script as 'owners'; representing their enterprises' interests, focusing on economic and technical issues according to their enterprises' future. On the other hand, when they interact with house owners they may adopt a script as professional contractor; focusing on a house owner's wants and needs and his or her house's potential as well as different solutions for the house. But they may also use a script as sales man; working to sell various solutions etcetera. The change of scripts will be clarified in the analyses of the empirical material.

Darr and Pinch (2013) found three scripts that were used in service interactions: identity script, morality script, and materiality script. The three scripts are argued to be different from each other but still entwined and "flexible and interactive, and leave actors ample of space to perform social agency" (p. 1606). Even though three scripts are presented, Darr and Pinch (2013) mainly focus on the script they refer to as 'materiality script'.

Materiality script is when a script is bounded up with a material object which they have observed through their study as a resource for creating a space where social obligations can be established (Darr & Pinch, 2013). Kivisto and Pittman (2007) found similar results, using

Miller's (1964) study of car sales people. They showed that a car sales person uses the demonstration ride to get to know the customer and get information about his or her preferences in a car. Information that the sales person later can use to convince the customer of the car's prominent features and that it will be most suitable to the customer's needs and wishes. Kivisto and Pittman (2007) argue that "scripts are used to control customers, to compel them to buy a given product." (p. 277).

Kivisto and Pittman (2007) mean that a person performing the role of a sales and/or service person is more aware of the script in play than the customer is which implies that the customer might not follow the script as it is intended. If the sales person cannot control the other person, s/he must focus attention towards other things that can be controlled. Implying that other tools play an important part to convey the impression sought after and the preferred results of the interaction. Since not all settings are guided by a service person, it is important that customers are able to understand and adhere to the intended courses of action the obligations involve. It is thus important to have "a commonly shared understanding of the use of the material object in a particular setting" (Darr & Pinch, 2013, p. 1612). Darr and Pinch use the supermarket as an example where materiality is bounded to a setting to create social obligations to buy. For example the carts, used to let customers put in the things they want to buy and to keep the products with them all the way to the checkout and cash register. The checkout is also designed to guide the customer forward with the help of a rubber conveyor belt, increasingly adding social obligations to follow through with the purchase and exchange money for goods.

The second script Darr and Pinch (2013) discuss is the *'identity script'*, where actors tell or give insight into personal and private things about themselves. The identity script is used in this thesis, but I refer to it as 'private script'. Darr and Pinch (2013) gives several examples of identity scripts: "When pitchers sell toys they will refer to their identities as parents, again building trust and rapport with their audience" (p. 1610); or "the pitcher presents himself as a father, to overcome the inherent suspicion and lack of trust by the potential buyers" (p.1610). The identity script is also linked to nationality, creating a national (identity) script (where a product in argued to be produced in the nation) enhances the customer's obligation to buy.

The third script Darr and Pinch (2013) discuss is the *'moral script'*. Moral scripts are used by a seller to imply if something is good or bad (e.g. by giving an example that another seller is selling shady products, the first seller implicitly says that s/he would not sell such products). Darr and Pinch (2013) argue that the sales and service persons they observed, clearly feel a tension between the sales work and appropriate moral conduct. However, I am not convinced that the moral script is as well defined as they might want it to be; instead the moral script seems to be actors' use of role distance and private script.

Pinch (2010) discuss Goffman's (1961) role distance (part of the book *Encounters*), and that actors not only embrace their roles. Sometimes they deliberately step out of character and chose another character for a moment; distancing to their other role, showing the other actors that they are aware of their role playing. For role distance to occur there need to be an audience. Role distance is thus part of interactions, to show that a person can be trusted and enable for relationship building. Role distance can be clearly connected to actors' use of scripts, especially private scripts.

In addition to scripts, Fisk and Grove (1996) show that there are two impression management techniques: creativity and persuasion, shown to be related to managing costumer impression.

These techniques can for example be found in corporate image, product position and marketing communication. Leathers (1990) found 6 other important aspects for service providers, regarding their impression management towards potential customers (Leathers, 1990; Leathers & Eaves, 2015): *Credibility and competence* - smiling sincerely in context, relaxed body movements that emphasize the words, substantial volume with fast rate and short paused vocal cues; *Interpersonal attractiveness* - use of clothes and artifacts that are not intimidating or discouraging; *Perception of truthfulness* - fluency in communication, eye-contact, open body language; *Likeability* - smiling, head nodding, open body language, eye-contact; *Interestingness* -volume range and pitch that is changing according to feelings; *Assertiveness* - laughing in context, smiling, use of sturdy voice. However, Goffman (1961, p. 339) claims that “the server’s increasingly proficient attention to the interests of the client can lead him to form ideal conceptions of client interest, and this ideal, together with professional standards of taste, efficiency, and foresightedness, can sometimes conflict with what a particular client on a particular occasion considers to be *his* own best interest.” Goffman argues that the service provider often maintains a performance that implies disinterested involvement regarding the customer’s issue. The customer on the other hand shows respect for the service provider’s competence. Goffman (1959) discusses two strategies for actors to show respect for other actors: the first is to be sensitive to potential criticism of the audience; the second is for the actor to avoid expressing his or her opinion, even though s/he knows or has an opinion about the topic in question.

Mutual respect expressed between the two actors, service provider and customer, is hence to be seen in an ideal service interaction (Goffman, 1961). Mutual respect implies that the role of a service provider involves perceiving oneself to be a person who, for a fee, can provide himself his competences and services to a customer. The role of a customer involves: “to believe that there are strangers of good will in society who are highly competent and dedicated to their competences in such a way as to lend themselves to one’s concerns for only a fee.” (Goffman, 1961, p.336). When a house owner invites a SME contractor to his or her house and later accepts the tender regarding upcoming improvement measures, the house owner places his or her trust in the contractor’s willingness and competences to improve the house in accordance with their agreement. Even though the contractor and house owner behave properly and according to each role, each actor can form anxiety and doubt about the other actor.

Goffman (1961) discusses the character of the service relationship between service provider and customer to require persons who voluntarily use and provide service. The voluntary aspect is for example that service providers tend to select customers based on technically irrelevant elements (e.g. solvency, status, social class), and so do customers as well (Goffman, 1961). He further claims that power only exists with each individual and not as a collective. A service provider is therefore not dependent on any one of them and can turn down the customers he feels he will not provide adequate service to, and similarly for the customers. But, when a relation and service process has been initiated and started “clients often attempt to transform their service specialists into confidants” (Goffman, 1959, p.158).

During the first interaction between service provider and customer, the service provider engages in the object to diagnose the problem and he also engages in verbal exchange with the owner. According to Goffman (1961), everything that goes on in the verbal exchange can be derived from and understood in terms of three components:

> “a *technical* part, namely the giving and getting of relevant repair (or construction) information; a *contractual* part, being a statement, often discreetly brief, regarding approximate costs, approximate time for the job, and the like; and finally, a *sociable* part, consisting of a few minor courtesies, civilities, and signs of deference.”
>
> (Goffman, 1961, p. 328-329)

The service provider interacts with the two sources of information: object and object owner. They contribute to the service provider’s diagnostic of the problem and his understanding of the task in order to solve it. Goffman (1961) discusses that the two sources of information are to be treated in different ways: the object in a technical perspective; the object owner in a social and ritual perspective. He means that the success of service is strongly related to if the service provider can keep object and object owner apart, while giving each its equitable attention. The object where the task is needed is in this case a house, and the house-owner is the object owner. The contractors are service providers and task solvers.

An assumption exists regarding service and objects, and that is that the customer is not inextricably tied to his object, he can thus hand it in at a service provider’s workshop and leave. The time a customer is without his object is not entirely wasted. Renovation of houses is however a bit different and this assumption is not applicable. A house owner can most often use some parts/areas of the object while other areas are temporarily unavailable for use; which may complicate a house owner’s routines in everyday life. In addition, Goffman argues that a house owner has no, or little, control over his or her home when other actors are entering. He writes: ”A price must, of course be paid for the privilege of giving a performance on one’s home ground: one has the opportunity of conveying information about oneself through scenic means but no opportunity of concealing the kinds of facts that are conveyed by scenery” (Goffman, 1959, p. 100). Implying a house owner would not be in control of an interaction with a SME contractor in the house owner’s own home. Through the empirical material I will show that the control of an interaction can be slightly more complicated than what Goffman claims.

3.6 Development of interactions and the importance of rhythm

Regarding service interactions there is an interesting aspect of the initial meeting which is how two individuals start to interact. When an individual has started a performance, he wants to finish it and the individual’s initial performance in an interaction determines what his future performance will be built on (Edgley, 2013). As the interaction progresses there will be developments of performances as in modifications and changes, but it will not contradict the initial performance taken. Goffman (1959, p. 22) claims that it is easier for an individual to choose what performance to take in a beginning of an interaction than the possibility to alter it during the interaction. Even though there is a continuous development on the first interaction and that the roles will adjust and change, the initial presented role will represent the base from where to start (Edgley, 2013; Goffman, 1959).

When two actors, unknown to each other, meet to interact for the very first time there is a deliberate and cautious, ‘feeling-out process’ involved, to figure out opinions and statuses. This process can be perceived as a “dance” (Carlsson & Koch, 2014a). Each actor drops his guard and admits his view a little bit at a time and then waits for the other actor to confirm his action by doing the same and show that it is safe to continue. However, if no confirmation is given, the process of admittance will stop and the one making the last action can pretend that his last statement was not really what he meant (Goffman, 1959).

When a person wishes for a certain response he can perform a certain action (Edgley, 2013). O'Driscoll (2013) discusses how a specific action can have an impact on other actors' behaviors and create a move/a change. One example can be drawn from Ling (2008), showing that the use of mobile phone interrupts or changes an interaction. LeBaron and Jones (2002) show that "rituals are enacted is subject to negotiation as conversational participants mutually influence one another." (p. 562). It is thus not only the action that creates the response; the response also creates the action.

The performer tries to control the situation, either by having control of the setting which is seen to be an advantage, or through his actions to achieve a sense of security (Goffman, 1959). The control also allows a performer to use strategic actions to decide what information to enable for the audience. Goffman explains that the performer tries to guide and control the impression the audience forms of him, but at the same time does the audience guide and control his performance. There is thus a movement back and forth between the actors and the performances evolves and the interaction develops. This movement can also be seen as an adaptation of the actor's opinions and attitudes, to find alignment in some common ground where they can meet for further interaction. It can also be seen as two actors trying to find a joint rhythm.

The rhythm is usually neglected in favor of the outcome or the content of an interaction (Teeger, 2007). Nevertheless, there have been studies about rhythm in interactions. For example, Miles, Nind and Macrae (2009) looked at the importance of synchronized actions, coordination of behaviors during interactions, to increase the feeling of connectedness and possibility for exchange. Valdesolo, Quyang and DeSteno (2010) investigated, actors who move together and have coordinated behaviors, enable for a joint goal to be achieved.

Teeger (2007) discusses the rhythmic aspect of social interactions which he means is a common feature in interactions. Teeger (2007) draws on Adam Kendon (1970), Condon and Sander (1974) and Stanford Gregory (1983) to argue that conversations involve not only sharing of speech, but also sharing of rhythm. Teeger argues that each individual has a personal rhythm which is brought into an interaction. Through the interaction the two actors share, and also negotiate, their rhythm. The rhythm of the interaction will become one of the two initially brought rhythms or a new rhythm. Teeger further claims that the actor who is the most centered in his or her rhythm, in the sense that s/he is 'locked in to' his or her own rhythm, is less likely to move and share the other actor's rhythm.

Rhythm is also important regarding performances and impression management. This can be really well exemplified by the orchestras where "a single note off key can disrupt the tone of an entire performance" (Goffman, 1959, p. 60). It is also the case for interactions and how timing and the rhythm of events impacts on performances and how individuals are perceived to appear before others (Edgley, 2013, p.4).

In some situations, we find that the actors are out of step with each other, this can for example happen when the social status is not in sync (Hochschild, 1983). In an interaction between a house owner and a SME contractor it means that the house owner can have higher status than the contractor. Goffman (1959) argues that the performer is inclined to feel distance towards other performers of equal and inferior status as well as superordinate status. Hochschild (1983) describes this further in his study of flight attendances and their performances; balancing between being friendly and assertive. Goffman (1959) argues that at occasions between customer and service provider, where social status is not in sync, the customer will have high status and low information control while the server has low status and high information control. The service provider may then be "over impressed with the weaknesses in the show that his betters put on" (Goffman, 1959, p.154) and forget about his own weaknesses. The service provider might also develop ambivalence and feel cynical about the situation.

When statuses are not in sync, first impressions are shown to be important. When the service provider is of lower status than his customer this implies he have to use a "subtle aggressiveness" (Goffman, 1959, p. 21). Goffman uses an example of how a waitress takes charge of a customer that has taken a seat on his own, even though the table is not cleared from the customer before him. For persons in service occupations, this means it is important for the service provider to seize and hold the initiative in the interaction for the customer to be impressed and behave in accordance.

Summary of Theoretical framework

Goffman's dramaturgical theory is the theoretical lens used for this thesis. The theoretical framework is mainly driven from Goffman's (1959) most famous book "The presentation of self in everyday life". Goffman (1959) uses the theatre and dramaturgy as metaphors to explain social life, interactions and situations. He argues that social life, just like a theater, consists of persons performing roles on stage in front of an audience and that we exist through the meeting and interaction with others and by being seen by others.

The dramaturgical theory is argued to consist of three perspectives: Actors; Resources and Activities (Lowe et al., 2012). And during an interaction there are four main issues of concern for the performers: 1. To define an overall single definition of the situation; 2. To express the definition and sustain it; 3. To keep control of one's performance; 4. To avoid disruptions or an open conflict (a scene) when defining the situation.

The main theoretical concepts in focus are: performances and roles; social front; scripts; front stage and back stage in role performances; and the three components *technical*, *social* and *contractual* that a service interaction consists of (Goffman, 1959; 1961). In addition, a brief exploration of Goffman's concepts concealment and visibility are included as well as an explanation of how interactions between house owners and SME contractors can be seen as service interactions where rhythm and alignment of interactions seem to be important aspects.

4 Methodology and methods

The thesis' methodological frame and the methods chosen to work in the field are presented in this Chapter 4, which starts with the thesis' methodological frame, action research (AR). AR focuses on actions and changes and is used to work for social change, e.g. development of new practices and increased energy renovations. The methods used during the project follow thereafter: the project startup, selection of participants, how to engage, and also the various methods used in order to achieve the aim of the thesis, e.g. observations, workshops and interviews. My arguments behind each method are found the respective section. The chapter also contains explanations of methods for analyses, trustworthiness, ethics, discussions about the researcher's role(-s), and the methods used.

The project started with an AR review in 2014 (Carlsson & Koch, 2014b). The review concluded although many action research projects were performed, none of the ones found used social theory to analyze their work and processes. Thus, using social theory in an action research project might be perceived unusual, or even come as a surprise. There are even those who claim that combining action research (AR) and social science is problematic, that AR is special and does not need social theory (Gustavsen, 1996; Pålshaugen, 2006). However, the review (Carlsson & Koch, 2014b) shows that AR is not as special as it is sometimes claimed to be. The argued gap between AR and social science is not that great. Instead, AR has developed into a mainstream social strand, which can and should be complemented and lifted by social theory. Thus, it is important – and could even be seen as a theoretical contribution – to use social theory with AR. In this thesis, the social theory used as a lens to interpret and analyze the individuals' everyday interactions and work for social change is Goffman's (1959) dramaturgical theory.

It can be perceived as contradictory to combine AR, with its focus on processes and change, with Goffman's dramaturgical theory, which focuses on stabilized behaviors and routines in interactions. However, I see change and stabilized actions come together; change is not happening all the time, but stabilizes in periods. In addition, stabilized actions are not completely stabilized all the time; they change and evolve during interactions, something also Goffman (1959) claims.

These two perspectives were chosen due to their theoretical focus. They are well in line with the focus of the research: micro sociology for the house owner-contractor interactions and for the interactions among SME contractors; AR to work for change and collaborations in and among SMEs and to develop new business opportunities. (The choice of Goffman's dramaturgical theory is further discussed in chapter 3, on the thesis' theoretical framework.) Although initially the two perspectives can seem contradictory, I see them as complementary; they support each other. For example, Goffman's (1959) dramaturgical theory focuses on stabilized behaviors, routines and performances. These stabilized actions can help to clarify how development and change among actors can be hindered. And the AR focus on change can create clarity regarding SME contractors' established practices and maybe further provide understanding of how to create change.

AR as methodology was not a straight forward choice however, even though it was hinted at in the research proposal. Several voices were raised during the initial phases of the research process that clearly recommended that I use another methodology – e.g. collaborative research (but then the change process seemed to be lacking), or intervention research (but then the focus would be to follow a change, which was problematic since it was the change that was lacking). Therefore, with the thesis' aim as an important vision and starting point, I found it important to find a methodology that would transform practices and create change *with* the involved actors; a methodology that would help me support a change-process with actors working within the field in focus; a methodology that would go beyond describing and analyzing a process, but use systematic intervention with practice in order to support work for social change. Other methodologies could surely have been used, such as organizational development (French & Bell, 1999); however, during the search for the most fitting methodology for this research, AR stood out as *the* methodology for this project.

It is also important to understand the underlying philosophies, when aligning two perspectives. It is necessary to make sure that the researcher is grounded in similar, and not conflicting, underlying philosophical considerations with regard to the research process, and to clarify whether and how the two perspectives can be aligned.

A common heritage

As previously stated, although it might seem contradictory to align dramaturgical theory and AR, these two perspectives are not so far apart in their underlying philosophical assumptions as one might think. Dramaturgical theory is derived from symbolic interactionism. It has its roots in American pragmatism as does AR, at least some parts. Even though AR's heritage is considered to lay with Kurt Lewin, John Collier and the Tavistock Institute, that strand of AR is quite experimental. AR is an approach that can be divided into several classifications, depending on aim and research focus (Greenwood & Levin, 2007). Due to this project's problem-solving agenda (to help actors create a collaborative learning process and develop something new – thus continuously creating experiences and learning during the process), a better fit for this AR project was to acknowledge its historical roots in John Dewey's (1938; 1997) American pragmatism and learning from experience.

American pragmatism is based on the thinking of William James (1842-1910), John Dewey (1859-1952) and Charles Sandler Pierce (1839-1914). They saw the social world to present possibilities and barriers to the individual, and they saw the individual as active and knowledge seeking (Bertram, 2007). Charon (2007, p. 31-32) further described four basic premises for American pragmatism: 1. "human action occurs in a given situation"; 2. "knowledge is learned, remembered, and applied according to its utility"; 3. "humans respond to their environment indirectly through their interpretation"; 4. "in a given situation usefulness of objects influences what humans selects to notice". Thus, meaning is interpreted and created socially, and interpretations of the environment create actions. These premises are also found in symbolic interactionism (which Goffman's dramaturgical theory is based on) as well as in AR, where actors are active creators of the social reality to which they continually adapt (Schneider, 2011, Greenwood & Levin, 2007).

Symbolic interactionism and also Goffman's (1959) dramaturgical theory and AR are thus related through the activity that occurs when actors interact with one another to establish meaning and create social change. AR's purpose to create social change might contradict dramaturgical theory's focus on routines and established practices, but when actors interact, they do so in accordance with the meaning they interpret through symbols and actions. This indicates that meanings are neither exact nor completely stable but rather "fluid", and thus possible to change. Since the interpretation of meanings and social change create a social world that is simultaneously both fluid and stable, creates possibilities for social change in understanding and action (Duguid, 2014). Duguid (2014) argues that symbolic interactionism not only becomes a theoretical account of the dynamic of change, but also an empirical lens for researching social change.

Literature review to find the "right" action research approach

Since I wanted to work for social change with practitioners, with focus on their social practice (which later turned out to also be mine), my search for a research approach started with AR. There is plenty of literature about AR, and after digging deeper into the approach I realized that there were many types of AR, designed for various types of projects (Greenwood & Levin, 2007). I examined the various types of AR to figure out which of them would fit my research purpose. At first, participatory action research (PAR) seemed possible, as the methodology behind it seemed to be what I was looking for; however, further reading showed PAR to be about helping people in development countries who usually do not have the power to make change and improve their situation (Chevalier & Buckles, 2013) – not really applicable to this project and its participants, so the search continued.

After reading several books (e.g. Herr & Anderson, 2005; Johnson, 2011; Stringer, 2014) and articles (e.g. Avison, Baskerville & Myers, 2001; Fals Borda, 2013; McGrath, & O'Toole, 2012), taking a 15 ECTS PhD-course about AR, and talking to colleagues, I realized many of the various types of AR were not as specific as they first appeared to be. The different types were also used interchangeably in the literature. Most of the literature covered self-studies in education (e.g. Carr, 2006; Sagor, 2005) and/or empowering people in developing countries (e.g. Chevalier & Buckles, 2013; Ortiz et al., 2008). Although this type of AR did not seem to cover the problem for my research, I did adopt some aspects of these perspectives (e.g. the importance of dialogue, engagement and work for a democratic process and encouraging participants to be more self-aware). I therefore decided to simply use the term *action research* and explain how I understand it, and how it is used in this research. Several interesting pieces of AR literature were studied during this period, and a review of 27 of them was written and presented at the 2014 EURAM conference (Carlsson & Koch, 2014b). In the review we discussed e.g. normalization of AR, the lacks or weaknesses in AR analyses; the framing of an AR project and its implications; and the research strand's tendency to prefer to be perceived as special.

4.1 The action research approach

In relation to AR, Greenwood and Levin (2007, p.54) argue that reality is more complex, dynamic and interconnected than any theory can describe. This can seem a bit contradictory to their own as well as others' argument (e.g. McNiff & Whitehead, 2009; Stringer, 2014) that AR is a theory-generating methodology. Carr (2006) describes AR as the study of social practice, "designed to provide a research methodology that would integrate theory and practice by drawing on theoretical knowledge" (Carr, 2006, p. 428). However, what separates AR from general problem-solving practices like consulting is its focus on scientific study; the problem is systematically studied and informed by and analyzed through theoretical lenses (O'Brien, 2001), in this case the dramaturgical theory.

However, AR explicitly rejects separation between action and thought; knowledge is rather derived from reasoning engaged in through action, and action is the appropriate way to generate knowledge (Greenwood & Levin, 2007, p.6). Reason and Bradbury (2008, p.4) further define AR as:

> "a participatory process concerned with developing practical knowing in the pursuit of worthwhile human purposes. It seeks to bring together action and reflection, theory and practice, in participation with others, in the pursuit of practical solutions to issues of pressing concern to people, and more generally the flourishing of individual persons and their communities."

The underlying assumption behind AR is that knowledge is created in the interaction between actors, and the best way to understand a problem is to engage in dialogue when a problem occurs and try to change it (Greenwood & Levin, 2007; Stringer, 2014). Stringer (2014, ch.8) also argues that the quality of the research is dependent on a high level of reflection on the researcher's role during the process in co-constructing the research and the results together with the participants (Stringer, 2014). Although I agree with the importance of reflection, I am not as sure as Stringer that the researcher's reflection is the only aspect that influences the research's quality and results.

AR is commonly initiated due to a local, practical problem (Herr & Anderson, 2005). The research is performed *with* the actors, in a collaboration, to develop knowledge and learning, to generate social change and scientific knowledge production and improve social practice (Greenwood & Levin, 2007; Reason & Bradbury, 2008) – quite an extensive goal for a methodology. All aspects can occur to various degrees, however, and the claim does not indicate how much learning or how great a change an AR process is supposed to generate. Somekh (2006) writes that AR starts from a vision of social change, an argument that still seems to be relevant. The perceived outcome of the research then depends on the initial vision.

Although the outcome (the degree of change and learning) can be questioned, AR still aims for social change and co-generation of new knowledge through interaction, analysis and reflection, and involves both professional researchers and practitioners (Greenwood & Levin, 2007). Especially three pillars seem to define the approach: 1. *Participation* (with actors in society); 2. *Action* (occurring now under the influence of both former experiences and future wishes); 3. *Research* (learning and sharing knowledge). Greenwood and Levin (2007, p.5) highlight that research can still be performed with one of the three pillars missing, but it would not be AR.

Another critical aspect of AR that especially Stringer (2014) highlights is reflection. Reflection enables actors to understand the actions carried out and the current phenomenon, in relation to how it has been and how they want it to become. Knowledge can be created when participants and researcher reflect on their actions, which can initiate improvements and social change (Gaventa & Cornwall, 2001; Stringer, 2014). AR is commonly used in relation to social problems, where the actors have to engage in the problem and collaboratively work to make a change (McGrath, & O'Toole, 2012). AR is therefore a methodology that aims at integrating social science inquiry with participants' practical actions in order to enable agency with all involved. AR is not however about erasing differences; it is rather about acknowledging differences among the participants and finding solutions that work for everyone, despite differences (Greenwood & Levin, 2007).

Interaction and participation in an AR-process

Greenwood and Levin (2007) argue that AR is a continuing and participative learning process in which participation and collaboration are context-bound and "always located within broader hierarchical social and political boundaries" (Greenwood & Levin, 2007, p.256). The participants are supposed to steer in collaboration with the researcher to achieve social change. It is argued (for example by Martins & Solé, 2013) that a project's success is mostly about limiting the tensions between the elements that might act as barriers for collaboration, and creating good relations between the actors in the project (Olsen, Harmsen & Friis, 2008). These aspects are not however as simple as they might seem. The researcher needs to be aware of possible tensions related to various aspects in order to support the process to move forward, and support collaboration and sharing of knowledge among participants, i.e. to work for change *with* them.

For information and knowledge sharing, it is important that the process is open, enabling interaction and differences of opinion (Svensson, 2005). When a process is open to new voices and opinions, it is more democratic and less distorted towards those with power and their specific knowledge (Chisholm, 2001; Gaventa & Cornwall, 2001). Greenwood and Levin (2007, p.53) mean that "AR rejects the superiority of the professional researcher's knowledge over the practical knowledge of local stakeholders". Even if AR is argued to be an open and democratic process, it can not be taken for granted that practitioners might neglect and/or dismiss the "superiority of the professional researcher's knowledge". For example, if a researcher initiates a project with participants who really want to be part of the project, then they may end up in a position inferior to the researcher. In addition, creating equal terms for all participants might not be the best way to initiate change. It might be more rewarding for all to focus on making sure all voices are heard (that want to be heard) and to find a balance between listening and talking among all participants.

Even though the process is the main focus, it is the actors who carry the process. Thus, to support the participants, to keep their interest and willingness to be active, to talk and be listened to – these are all aspects of great importance for the interaction between the participants and the process.

AR is an evolving process and according to Greenwood and Levin (2007) the various parts will fall into place as the research progresses, and a clear path and defined goal will emerge. This sounds easy, almost like everything will happen by itself, without any special effort being made. But, the researcher/-s and the participants are supposed to define the problem to be examined, then investigate, act, interpret results, reflect, learn, and develop together – that is, if all goes according to plan (as projects rarely seem to do). When acting in accord, the participants are argued to change from passive receivers to influencers in relation to what they want to learn and engage in (McNiff & Whitehead, 2009). In other words, if all goes according to plan and everybody acts as the theoretical books about AR imply, then the participants will solve the problem collaboratively and become active change agents in their context, instead of objects of research. This research however is carried out with real individuals, with their own interests and timeframes, and the results from this research also show that this can complicate an AR process a bit.

Schön (1971, p.73) discusses '*dynamic conservatism'*, where practitioners commonly pull back to status quo regarding their values. Rules and norms in society and individuals' practices are taken for granted, and if unchallenged become "the truth". The role of AR and the action researcher is to challenge these "truths" and not legitimatize the status quo. Thus, in AR projects, interactions are not seen as passive adaptation. Instead, all parties involved in the interaction need to identify and discuss problems and handle collaboratively; they must create solutions while sharing knowledge and develop competencies together (Mortati & Cruickshank, 2012).

Making sure that the actors collaborate and interact gives them an opportunity both to understand and change the knowledge being shared; however, challenging someone's "truth" is likely to create defensive and self-protective actions (Herr & Anderson, 2005; Schön, 1983). This conservatism of "the truth" presents the challenge of practitioners who do not want to change. Greenwood and Levin (2007, p.243) discuss the concept of '*pseudo-constraints'*. When people do not really want to change, excuses (e.g. about administrative limitations and resource constraints) and further actions might make the attempts for social change fail. It is important to be aware of these types of pseudo-constraints in order to address them before they can escalate and cause the attempts for social change to end in failure.

The process of an action research project

When AR is described in research articles, researchers commonly build on and refer to the AR-cycle, also referred to as the plan-act-reflect cycle to learn (Lewin, 2005). The cycle represents the core activities to facilitate behavioral and conceptual changes among the participants. However, even as a model, I find the cycle to be simplistic. It does not recognize the dynamics of an AR process. Several researchers discuss the complexity of AR processes, with their non-linearity (Herr & Anderson, 2005) and messiness (Chisholm, 2001). Stringer (2014) also discusses these aspects, but he still acknowledges the cycle as a compass. There have been various attempts to develop the model, and activities have been added (for one example see Stringer, 2008). Since the process is dynamic, the activities will not always be carried out in a specific order (sometimes they might be parallel, and sometimes an activity might be left out). Thus, regardless of how many activities there are in the cycle, the model cannot even come close to covering a process' complexity. There is not always a cyclic, forward moving mode going on during a process, and this is even more important to acknowledge. Lewins' (2005) cycle is also missing the context for the process; the current context in which the situation takes place is an element which should not be neglected. When interaction and communication take place between persons, this always occurs in a context. An AR project and its participants are also context-bound. The context, the situations, the conditions, and the participants determine the results of the process. The context for the research is therefore of most importance and should at least be part of an AR model.

Greenwood and Levin (2007) argue that there are three important pillars for the AR approach (participation, action, research). There are additional aspects, however, that are just as important for an AR process: For example, Reason and Bradbury (2008) point towards action and reflection and Stringer (2014) argues in his book that analysis is an important part in working for change in AR. In this thesis, these three aspects are seen to be embedded in each other, together with research, theory and practice, three more aspects important for qualitative research. All these aspects are interlinked, and if one part is missing, the other parts do not function properly. To clarify, I perceive these six aspects as constituting five dimensions that are necessary for an AR process: *Practice*; *Theory*; *Action; Research; and these* are all connected through the fifth dimension, *Analysis and reflection* (see Figure 3.1). There is no certain order for the five dimensions to occur; they are all part of the process (Reason & Bradbury, 2008).
Through my engagement in this project, I have come to understand the process as a flexible, 3D-movement; the process can move in all directions, forward, backward, sideways and even up and down. Sometimes, the process even stops and it needs an active push of some kind to get going again (e.g. by feeding the process with new information, or making participants work actively with something they all can benefit from). I have tried to show this in my own model (see Figure 3.1), which includes the context. The process, represented by the figure within the figure, should be seen as a 3D-figure, capable of moving and turning in all possible directions within the context. The 3D-figure moves when participants and the researcher engage in the process. The context in the model is deliberately square, to represent the places, conditions and situations where the process (the 3D-figure in the middle of the model) can get stuck and need an active push to get moving again.

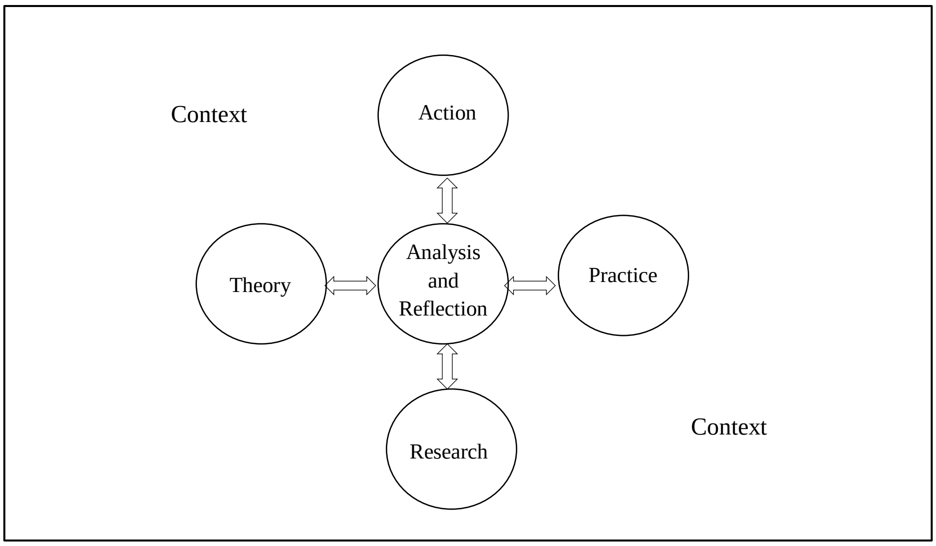


Figure 4.1: *My interpretation of an action research process*

Action and research are deliberately opposite each other, to represent that the participants, as well as the researcher, might have different agendas for the research and that their reflections, focus and concerns can differ. I see the 3D-figure as flexible, however, implying that the two parts can move closer to each other (e.g. in collaboration, when a certain practical issue needs to be solved). Also, theory and practice are opposite each other. Stringer (2014, p.38-39) argues that AR concerns the relation between theory and practice, and it is important to pursue a balance between the two and not neglect either part. This model represents theory and practice as always present, but the two perspectives can be very far apart – e.g. when practitioners talk about practical solutions and experiences that the researcher might not be able to understand on a practical, hands on, level. On other occasions, theory and practice can be overlapping –e.g. when theory and practice feed each other with information and both perspectives are created and develop through and with support from each other (McNiff, 2010). The model can be seen to be related to both systematic combining (Dubois & Gadde, 2002) and abduction. It highlights especially the non-linearity and the interrelatedness of the various aspects during the research work. Instead of linear planned phases, the researcher moves among the aspects and activities to broaden his or her understanding of the empirical focus of the study.

4.2 Methods

The thesis' methodological frame is AR. The methods used in an AR project can be considered as the answer to the ambition to shape a process in the best possible way and to facilitate answers to the research questions (Greenwood & Levin, 2007). For this thesis, I have an interpretivist understanding, and I use a combination of methods. Each of these methods has its own strengths and limitations in relation to gaining insight into the thesis' aim and the two main processes on which the thesis is based. Also Goffman was prone to use complementary studies in order to achieve a more comprehensive picture of a specific aspect than either study could give on its own (Morse, 2003, p.190).

In this thesis, I focus of two main parallel processes. I chose to combine multiple methods, because I wanted insight into the two processes, and also because I wanted different perspectives on the processes in order to gain a more nuanced understanding. The two processes and the main methods are as follows: 1. *SME contractors and house owners' interactions*. In line with my usage of Goffman's dramaturgical theory, the main method of gaining insight into the interactions is observations; 2. *Collaborations with SMEs to develop their businesses towards energy renovations*. Workshops were used to create collaborations with SME contractors in groups and to jointly develop their businesses. In addition to these methods, interviews were used, but only in order to gain a basic understanding for the work with the workshops, or as complementary understanding of the observations made.

Each method was important to obtain insight into a specific aspect; each method also served as a compliment to the others. For example, the observations of the interactions were used in order to gain insight into the two actors' actions, roles and performances during the interactions. They were also used to understand the interactions in order to support the process of developing the contractors' businesses. The purpose of the workshops was to develop the contractors' businesses towards energy renovations of single family houses and to gain insight into the contractors' actions and social practices and their work for social change. They were also used to gain further insight, from another perspective, of contractors' actions and expressions in their interactions with house owners. Through the use of workshops, it was possible to gain deeper insight into the interactions, and visualize tensions and ambiguities.

Thus, multiple methods (observations, workshops, interviews, business development) were used during the process of the project in order to increase our understanding of the interactions between SME contractors and house owners, and also to work for social change. Further information about the methods is found under each method's headline and also in the method discussion.

As described in relation to methodology (see figure 4.1), the methods were performed parallel in time to support the progress of the process (see table 4.1).

Table 4.1: *Activities performed during the process*

Activities/Time	13:3	13:4	14:1	14:2	14:3	14:4	15:1	15:2	15:3	15:4	16:1	16:2	16:3	16:4	17:1	17:2	17:3	17:4
Lit. review																		
Find SME																		
Observations																		
Basic Interviews																		
Compl. Interv.																		
Workshops																		
BM activities																		
Plan process																		
Refl. of process																		
Thesis writing																		

The left column in the table shows the activities performed during the process; the top row shows the time each activity was ongoing (the time is abbreviated – the 3rd quarter of the year 2013 becomes 13:3). The AR should be seen as the overarching "umbrella", under which all methods performed come together and support the process' progress.

Nevertheless, to carry out any observations and workshops, SME contractors who were interested in participating in the project had to be found.

Project start-up and selection of participants

The wider frames of the project were initially formed by my main supervisor. After introducing the project (by reading the project plan and discussing it with my two supervisors for plenty of hours), all planning was mainly done by me (with support from both of my supervisors in the initial stages of the process) together with the participating contractors. My main supervisor also participated in the initial stages of the project (e.g. the first workshops and the initial interviews). Later, only the SME contractors and I worked together.

A crucial aspect was to find engaged and interested SME contractors, open to change and interested in developing something new (Martins & Solé, 2013, p.601). Energy renovations were mainly seen to occur in the big cities in Sweden (LåganBygg, 2016). The project was therefore carried out in the area of Gothenburg, Sweden's second largest city with almost one million inhabitants in and around the city (SCB, 2015). To increase the chance of getting SME contractors who work within or close to the city, an online search engine was used to find relevant SMEs within a maximum of 100 kilometers from Gothenburg.

The traditional number of participants in AR groups is six to eight participants, to ensure that all voices can be heard and enable variations in perspectives and experiences (McGrath & O'Toole, 2012; Pedler, Burgoyne & Brook, 2005). The desired outcome was to have three to four groups of SME contractors to collaborate with, and about six to ten SMEs in each group. Thus, about 20 to 30 SMEs needed to be found that were interested in working collaboratively towards new, innovative solutions.

Greenwood and Levin (2007) argue that when participants start to work collaboratively, they will use knowledge from former experiences. To get different perspectives and to increase the potential for innovative thinking and facilitate creativity (Perry-Smith & Shalley, 2003), it was important to reach SME contractors from different sectors, with different perspectives and experiences in relation to single family house renovations. The main areas of interest were: electricity, construction, carpeting, insulation, mason, tile, heating and plumbing, energy efficiency and ventilation. The SMEs found were scrutinized in relation to four aspects: *1. Their financial history* (they should at least break even); *2. Years in business* (they should have been active at least two years as a business; the enterprise should have some experience); *3. Number of employees* (Olsen et al. (2008) show that company size might be a crucial aspect for how enterprises interact and how decisions are made. SME size was set to a minimum of five and a maximum of 25 employees); *4. Area of business* (single-family houses should be their main area or at least part of their businesses' focus). SMEs that met these criteria received a short information email describing the project as a business opportunity and presenting the project. 92 SMEs (see table 4.2) matched the criteria and were contacted by email.

Table 4.2: *Amount of SMEs contacted in each sector*

Company Size	Carp.	Plumb	Energy HVAC	Insulat.	Tile	Mason	El	Vent.	Total
SME	53	5	7	2	5	3	11	6	92

Two out of the 92 SMEs replied to the initial email: one SME owner wanted to participate; one declined further information and was not contacted again. 91 SMEs were followed up by telephone within two to three days. The ones interested were sent a more thorough description of the project and the participation expected. Another follow-up call (with an average of 40 minutes) resulted in 24 SME owners who agreed to have their SMEs receive a visit to discuss the project and potential participation.

The majority of these first visits were made by my main supervisor and me (I made six myself). The strength in an AR project is argued to be when all participants are engaged and motivated to change and collaboratively move towards a shared goal (Stringer, 2014). The visits aimed to obtain the SME owners view of the current context, present the project, and address engagement and motivation. Valuable information was obtained through the visits, useful for various activities later on in the process (e.g. planning workshops).

After the visits, 21 SME's from different fields decided to participate in the project (see table 4.3). Some of the construction SMEs expressed interest in making energy renovations for private house owners and also in their own buildings or the buildings they served and were thus divided into *construction* and *construction and property service*.

Table 4.3: *Amount of SMEs in each sector which participated in the project*

Company / Size	Construct (C)	Construct prop serv (CPS)	Energy HVAC (EH)	Insulation (I)	Mason Construct (MC)	Electrician (E)	Total
SME	9	5	2	2	1	2	21

The SMEs differed in customer focus, years in business, employees, number of owners, corporate form. Details can be found in Appendix 1 (Presentation chart of the 21 participating SMEs).

The SMEs (the contractors who decided to participate from each SME) were divided geographically into three groups: North, South and East (of Gothenburg). During the first visits, the contractors were asked if they had any preferences of group affiliation; all preferences were able to be met. The three groups became:

The South group: 9 SMEs: 2 electricians (E1, E2); 1 insulation (I1); 1 energy and HVAC (EH2); 2 construction and property service (CPS1, CPS2); 3 construction (C2, C4, C5);

The East group: 7 SMEs: 1 insulation (I2); 5 construction (C1, C3, C6, C7, C8); 1 construction and property service (CPS6);

The North group: 5 SMEs: 1 energy and HVAC (EH1); 1 Mason and construction (MC1), 1 construction (C9); 2 construction and property service (CPS3, CPS4).

Each group consisted of: SME contractors (from 16 SMEs – the participants were the owners; 5 SMEs had two participants – owners, part-owners or employees of the SMEs (see further in Appendix 1)); and researcher/-s (my main supervisor took part during the initial stages of the process; later, I was the only researcher participating). All SME contractors in the study are men.

The methods used to engage in the field

AR builds on collaboration through participation (Reason & Bradbury, 2008, Stringer, 2014). Collaborations were initiated through workshops with the projects' participating SME contractors. For this thesis, it was also necessary to use several methods in order to achieve the aim and answer the research questions. Thus, in parallel with the process of the workshops, observations were also carried out (see table 4.4 for more details). In addition to observations and workshops, interviews and business model development were used, but only as complementary methods to the other two.

Table 4.4: *Activities performed during project*

SME	WS group	Basic interview	Basic interview phone	WS	Compl. interview	Compl. interview phone	Compl. interview Employee	Observ. house-own SME cont.	Comple. interview house-own. (observ.)	Compl. interview SME cont. (observ.)	Observ. SME cont. & SME cont.	BM develop
E1	S	2 hours		10	1.5 hours	1.5 hours						WS + Ind.
E2	S	2.5 hours		10	7.5 hours	1 hour		1		1		WS
MC1	N	2 hours		1		1 hour						
EH1	N/E	2.5 hours		3		2 hours		2	4	2		Ind.
EH2	S	2 hours		0	6 hours	30 min		3	2	3		
C1	E		1,5 hours	0	2.5 hours	30 min						Ind.
C2	S	2 hours		1	7 hours	30 min	2	4	3	4		Ind.
C3	E	2 hours		0								
C4	S	2.5 hours		1	7 hours	30 min		3	1	3		
C5	S	2 hours		0								
C6	E	2.5 hours		4		45 min						WS
C7	E	1.5 hours		4	2 hours							WS
C8	E	2.5 hours		0		40 min	2					
C9	N	2 hours		1		40 min	1				1	
CPS1	S	2.5 hours		4	3 hours	1 hour		2	3	2		Ind.
CPS2	S		1 hour	4		1.5 hours						
CPS3	N	1.5 hours		1		30 min						
CPS4	N	2 hours		0	2 hours	30 min		1		1		
CPS6	E	2 hours		4								
I1	S	2 hours		10	4 hours	1 hour					1	WS + Ind.
I2	E	2.5 hours		4			1	2	3	2		WS
Sum:		19	2	16	16	30	6	18	16	18	1	

In addition to the 26 SME contractors who performed workshops, there were also 23 house owners (18 interactions, but 5 contained couples); 6 additional SME employees; and 2 experts who performed in the project. Table 4.5 shows the activities performed throughout the process of the project.

Table 4.5: *Activities performed during the project*

Activity	Times	Timespan
Basic interview	21	90 min – 150 min
Basic interview phone	3	60 min – 90 min
Complementary interview	16	25 min – 7 hours
Complementary interview phone	30	10 min – 60 min
Compl. interview SME contractor (employees)	6	45 min – 60 min
Observation SME and house owner	18	20 min – 90 min
Complementary interview SME contractor	18	20 min – 40 min/observation
Complementary interview house owner	10	10 min – 60 min
Complementary interview house owner phone	6	10 min – 20 min

The process, with actions and methods ongoing in parallel, was somewhat iterative, and a systematic combining approach (Dubois & Gadde, 2002) was used. Questions, answers and actions in one stage have made me reflect over new material, relative to the theory and the material I already had. These reflections have resulted in new thoughts and new or slightly different questions in subsequent stages.

Observations

The purpose of the observations was to gain understanding of interactions between house owners and SME contractors, and to clarify what happens when the two actors negotiate about the scope of transformation of the house owner’s home.

The material from the observations was also used to “feed” the process. When interpreting the observed interactions, theory as well as practice can support the contractors’ collaboration processes to move forward. The empirical material was thus used to reflect on what happens during a house owner-contractor interaction; how house owner interactions can be improved for both house owner and contractor; and how these interactions can be improved to increase energy renovations. “Feeding” the material from the observations into the workshops (by challenging or giving feedback to the contractors’ claims or questions) also increased my involvement in the process.

After the first workshop with each group, contact was taken with some of the participating SME contractors (depending on the decided extent of their participation in the project) to make observations of their interactions with single-family house owners who wanted to make improvement measures in their homes.

Observations can be argued to be a complement to interviews, since interviews demand verbal contact (Lewin & Reeves, 2011), and participants prefer to talk about things they take for granted. An observation can however illuminate parts that an interview might not. Words are most often easier to control by the actor than actions and body language (Goffman, 1959). Speech is something an individual is more aware and conscious of than body language and actions, which are to some extent subconscious reactions,. Observations can enable a researcher to perceive ongoing behaviors as they occur (O'Driscoll, 2013). Observations are also argued to be particularly useful for studying individuals behaviors and also small groups and activities and processes that occur for a short time, to gather rich and detailed information of what is happening (Bailey, 1994, p. 38, p.244). However, Greenwood and Levin (2007, p. 6) mean that the world will not become known through observations alone; we need to participate in it to be able to describe it.

The researcher can apply four different roles during observations (Gold, 1958): 1. *Complete participant.* The researcher is part of the group; the group is unaware that it is being researched; 2. *Participant as observer.* The researcher is part of the group and documents what is happening; 3. *Observer as participant.* The researcher has less extensive contact and interaction with the group; 4. *Complete observer.* The researcher has no contact with the observed group (e.g. by using a one-way mirror). For this study, I used the role, *Observer as participant*. I had some interaction with the participants but did not actively participate in their discussions. Nielsen and Lyhne (2015) mean that the role of observer as participant can include dialogue with the participants (e.g. if the researcher feels uncertain or wants to clarify something important for the study).

Observations were performed of encounters between SME contractors and house owners who wanted to make improvement measures for their homes. To join them in their encounters was however not easy. Despite several attempts to convince the contractors that it was important and an investment for them to take a researcher along to observe their interactions with potential customers, it proved to be difficult. Instead, established customers – i.e. house owners who were already in the process of implementing an improvement measure (which had not been asked for) were offered a visit. Thus, a total of 18 observations were performed, involving eight SMEs, 14 SME contractors and 23 house owners. Nine observations were of first encounters, and nine observations were of interactions with established customers to follow-up or to continue ongoing work.

Workshops

The aim of the workshops was fourfold: *first,* to develop alliances between the contractors and their SMEs; *second*, to stimulate knowledge sharing and creation of new businesses regarding energy renovations of single-family houses; *third,* to raise awareness of EU's legislation on energy renovation (2010/31/EU); and *fourth*, to enable me to observe and interpret the SME contractors' expressions regarding house owners and their interactions with house owners.

Greenwood and Levin (2007) and Rickinson, Sebba and Edwards (2011) argue that letting participants collaboratively search for answers to situations they find problematic will make them more engaged and motivated to work for and come up with solutions. Participation is the foundation of AR (Stringer, 2014), and "AR rests on processes of collaborative knowledge development and action design involving local stakeholders as full partners in mutual learning processes" (Greenwood & Levin, 2007, p. 1). Collaborative work between the SME contractors was thus seen to be important. Workshops were therefore initiated where the contractors could gather and collaboratively work towards a joint goal (which they later formulated together).

The three groups, consisting of SME contractors and researcher/-s, were supposed to work collaboratively in workshops to find new ways of working with energy renovations of single-family houses and ultimately also change their businesses to focus on energy-efficient renovations of single-family houses. By working together with the same problem, they were supposed more effectively to achieve change that would fit most of them and their businesses.

The meetingplace for each workshop shifted (see table 4.10). In each group, one SME contractor was asked if the first workshop could be conducted at his or their place, and all three accepted. The three contractors were asked due to their SME's location, close to most of the other SMEs in their respective group. After the initial workshop, the meetingplaces for the workshops were up to each group to decide. They shifted for each group; we met at several SMEs and at the university. Six of the SMEs had no offices or only limited office space, but they did not mind going to the other SMEs who volunteered to use their locations.

The aim of the first workshop in each group was mainly to gain a shared understanding of how work was performed at that time; what challenges and preconditions there were to work with energy renovations of single-family houses built between 1950 and 1975; how the contractors viewed the project and its focus on energy renovations, in order to establish a joint starting point. An agenda was made by me, prior to the very first workshop in each group, the same agenda for all three groups. The agenda included presentations (of the project and the participating actors); topics from the core in Osterwalder and Pigneur's (2010) business model canvas (key activities, key resources, value proposition, customer relationships, channels (see figure 4.2)), without mentioning the canvas. The contractors then, in collaboration with me, formed plans for their respective groups. They were able to form their plans based on what they considered most important, and would work for their businesses. Thus, each agenda for each group was based on the groups' previous workshop/-s and unique for each group, their work and goals.

From the start of the second workshop, each group worked collaboratively, with support from researcher/-s, to create new concepts for how to increase energy renovations of single-family houses (see table 4.6 for details about participating actors' roles and tasks during workshops).

Table 4.6: *Stakeholders, attendances, roles and tasks during project workshops (ws)*

Stakeholder	Attendances	Roles and tasks
Veronica	16 ws	▪ Made agendas in accordance with participants' wishes. ▪ Leader of the workshops, but later this role shifted among the participants ▪ Took notes, compiled them and sent them out ▪ Observed participants' performances and expressions ▪ Asked questions to try and push and support development while challenging participants' assumptions and routinized actions
Main supervisor	10.5 ws	▪ Allocated role as expert by the contractors ▪ Asking some questions to try and push and support development while challenging participants' assumptions and routinized actions
Supervisor	2 ws	▪ Observing participants' actions and body language
SME contractors	Various attendance	▪ Collaboratively developed a new concept relative to energy renovations
Experts	2 ws	▪ Informing abut energy renovations, challenges and risks

The work began by listing current problems that the contractors had discussed at the initial visits and the first workshop. These problems were then discussed in relation to whether and how they could be changed.

All workshops were recorded and transcribed. During the workshops, the researcher also took notes of the discussions and decisions made, as well as comments that could be interesting to take up in future workshops. These notes were transformed into minutes and sent out to each group to comment and/or amend. In response to a demand from the contractors, the minutes were sent also to the other groups after a week to ensure visibility and transparency among them, and also to stimulate some competition between the groups.

In the initial phases of the project, a project description was sent out to each interested SME. It stated the need for three workshops in each group, nine in total; however, during the project 16 workshops were performed: One in the north group; four in the east group; and eleven in the south group (see Appendix 2, tables 4.7; 4.8; 4.9). The south group was thus the group that performed most workshops. The contractors in the south group were continuously working; they even wanted to meet once a month instead of three times a year, which was the original plan. Even when the contractors in the south group had set-backs in their work, they strived forward. It was also the south group’s work that finally ended up with a new concept regarding energy renovations of single-family houses. It is therefore from this group and its work that most empirical material for this thesis is derived.

Table 4.10: *Attendances at the 11 workshops with the south group*

Work-shop	Date	Participants	Place	Time (hours)
Ws 1	2014 Mar 19	Thomas, Erik, Oskar, Anders, Fredrik, Martin, Mattias, Markus, Per, Veronica, Christian	E2	3
Ws 2	2014 Jun 12	Thomas, Erik, Oskar, Niklas, Mattias, Markus, Per, Christian, Veronica	I1	2.5
Ws 3	2014 Sept 9	Thomas, Erik, Oskar, Mattias, Per, Veronica, Christian	I1	2.5
Ws 4	2014 Sept 23	Erik, Oskar, Mattias, Markus, Christian, Veronica, Expert	E1	3
Ws 5	2014 Oct 16	Erik, Thomas, Oskar, Mattias, Markus, Kent, Niklas, Veronica	E2	3
Ws 6	2014 Nov 13	Erik, Thomas, Oskar, Mattias, Markus, Niklas, Veronica	E2	3
Ws 7	2014 Dec 02	Erik, Thomas, Mattias, Markus, Veronica	I1	2
Ws 8	2015 Jan 16	Erik, Thomas, Mattias, Markus, Veronica, Oskar	I1	2.5
Ws 9	2015 Apr 10	Erik, Thomas, Mattias, Veronica, Oskar	E2	2.5
Ws 10	2015 May 19	Erik, Oskar, Mattias, Veronica, Christian, Niklas	Chalmers	3
Ws 11	2015 Sep 29	Oskar, Veronica, Christian half way through	Chalmers	1.5

The south group performed their workshops between April 2014 and October 2015 at four different places: four at insulation enterprise I1; four at electrician enterprise E2, one at E1; and two at the university (see table 4.10).

Interviews

While observations and workshops were the main methods, interviews were performed throughout the process. The interviews can be divided into two groups: *Basic*: To create basic understanding of what the contractors wanted to focus on in the workshops; *Complementary*: To add complementary understanding to the observations of the SME contractor-house owner interactions.

All interviews were semi-structured, informal conversations. Lewin and Reeves (2011) as well as Nielsen and Lyhne (2015) argue that a semi-structured interview contains an overview of topics to be discussed, and suggestions for questions that can change during the interview depending on the situation. Semi-structured interviews were chosen mainly to enable a more relaxed interview situation, both for researcher and interviewee.

Since the interviews had different purposes (basic and complementary) during the process, the interview section is divided accordingly.

Interviews and discussion meetings to create basic understanding

Before any of the SME contractors accepted participating in the project, they were visited at their respective SMEs. The visits were informal interview and discussion meetings, aiming to: explore the contractors' current interests; current problems and focus; explain and discuss details about the project and how it could be valuable for the SME contractors and their businesses; discuss how things could be better and what potentials regarding energy renovations they perceived to be relevant. The information received during these visits was later used to feed the process and also to challenge some of the contractors' statements during the workshops.

The visits followed a previous interview and information phone call, lasting an average of 40 minutes. Contractors from 24 SMEs were interested; 21 of them were visited. Three preferred not to meet, so longer interviews and discussion sessions thus took place by phone. The visits lasted an average of one hour and 40 minutes, and the phone interviews one hour and 15 minutes.

Also individual, follow-up interviews and discussions with the SME contractors were performed during the project. The purpose of the follow-up interviews was also to add basic understanding of the process and their businesses, which could be fed back into the workshops (see appendix 3 for interview and discussion topics).

Thirty follow-up interviews with 16 contractors were performed by phone, and 16 follow-up interviews with 10 contractors were performed face-to-face (see table 4.4 for further details). The settings for these interviews were decided by the SME contractors to ensure comfort and decrease inconvenience for them: some preferred to be at their offices; others at a restaurant or a café; and yet others were interviewed in their cars, while moving from one job location to another.

In addition, six SME contractors were interviewed at three of the observed encounters. They were not participating in the workshops, but employed by participating SMEs. These interviews were not planned, but were conducted informally in accordance with the situation. There were no prepared topics.

Interviews to add complementary understanding

The observations of contractors and house owners' interactions were followed up by semi-structured interviews in the form of informal conversations. Interviews were chosen as a method in order to gain a better understanding of the contractors' expressions of their work and the interactions they perform. Informal interviews also enabled both contractors and house owners to reflect on the interactions and their performances. To follow up the observations with informal interviews (with house owners in the house and SME contractors in the car on our way to and from a house owner's home) and let the participants reflect on the interactions, minimized also premature conclusions and added another dimension of clarity to the interactions (Lewin & Reeves, 2011; Nielsen & Lyhne, 2015).

I had prepared some topics (see appendices 4, 5) before the first observation. These topics were treated as conversation points, but they were only used if the conversation halted. The topics and questions were developed through reading background research for the project and also newspapers, EU-updates, Swedish laws and regulations regarding construction and energy etc. I read these documents to gain an understanding of the construction business, the context of energy renovations, and the current lack thereof. To claim that the questions could be derived from one source would not be possible; rather, a melting pot of different sources with various degrees of trustworthiness was used.

Eight contractors were observed in 18 house owner interactions; all eight contractors were interviewed in direct connection with these observations. All interviews were performed in the SME contractors' vans on the way to or mainly from the house owner in question (see appendix 5 for further interview and discussion topics).

Twelve of 18 house owners were interviewed after the observations at the house owners' homes – two by phone and ten straight away after the observations, while the contractors went to perform a task (see appendix 4 for further interview and discussion topics). Six house owners were not interviewed due to the situation and what was possible on the specific occasion (e.g. willingness of the house owners; language problems; SME contractor's pressing work schedule).

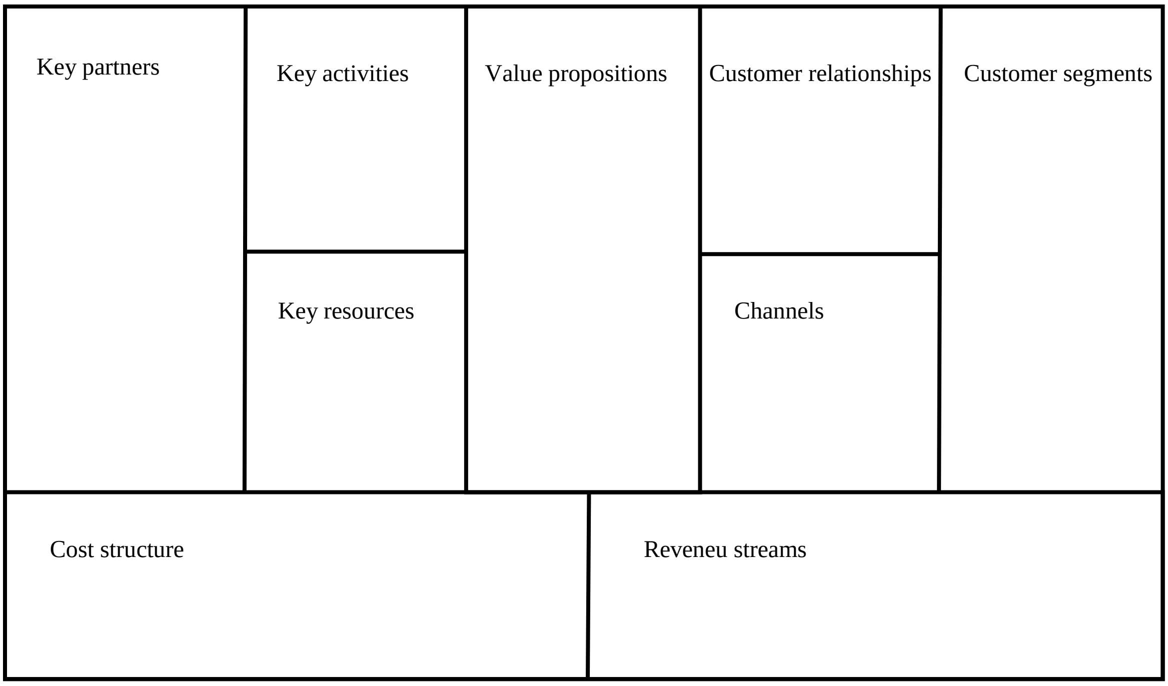
Four follow-up interviews were performed by phone two to three months after the observed encounters. The purpose of these interviews was to find out what had happened since the observation, whether they had hired the contractor, and if they were satisfied with him and the work performed. These interviews were informal without any prepared topics.

Business model development

To support the SME contractors develop something new, a business model development tool was introduced during the process. It was used implicitly during the initial stages of the process, but later introduced explicitly in the workshops. It was also used on one-on-one occasions at some of the SMEs (e.g. if a contractor asked for help, or if it seemed to be helpful to support a contractor analyze his business).

Schaltegger, Hansen and Lüdeke-Freund (2016) argue a need sometimes arises to describe and analyze businesses, and business models can answer this need. Chesbrough (2010, p.356) claims that "a company has at least as much value to gain from developing an innovative new business model as from developing an innovative technology". For this project, the business model was seen as a tool to support the SMEs to analyze their everyday business and actions, in order to see if it were possible to intervene in their current routines and patterns, and create change in their thinking and acting regarding energy renovations.

A challenge for people who want to design or innovate is to identify the key activities that describe the present state of what the enterprise does for a living (Lindgren et al., 2010). Eppler and Hoffmann's (2012) research indicates that visual tools can be helpful to facilitate understanding and to support the actors in their innovative processes. However, there are very few tools that support enterprises in their business model development (Lindgren, 2012). Also, even if the concepts and tools are there, the change process is still demanding, and there are several pitfalls along the way. One of the many difficulties is the lack of the tools' user friendliness (Eppler & Hoffmanns, 2012). A visional, seemingly user-friendly definition of a business model has however been introduced by Osterwalder and Pigneur (2010) in their business model canvas. The canvas is a model, a tool to help innovate a business model or transform and refine an enterprise's existing business model. In using the tool, the business is divided into nine building blocks (see figure 4.1), which represent the business' core functions.



Figur 4.2: *The business model canvas* (Osterwalder & Pigneur, 2010)

Each building block represents key areas describing the business' value chain. The value chain contains two parts: one part is about all activities needed to produce something; the other part is about all activities needed to sell something (Margretta, 2002). When working with the business model canvas, there are several options where you could start. It depends on what to focus on and whether you already have an idea in one of the segments (Buser & Carlsson, 2015). Osterwalder and Pigneur (2010) describe their model to start in the upper right corner with *Customer segments*, defining the segment of customers the business should focus on; it continues with *Value proposition*, describing what is offered to the specific customer segment; *Channels,* describing how the business reaches and communicates with its customer segment; *Customer relationships*, describing what kind of relations the business has with its customers;

Revenue streams, describing the business' earnings (profit is important, not only for its own sake but also because it helps show how well the business model works (Margretta, 2002)); *Key resources* and *Key activities*, describing the most important resources and activities that will make the business model work; *Key partners*, describing the network of partners and suppliers important for the business model; *Cost structure,* defining all costs needed to manage the business model (Osterwalder & Pigneur, 2010).

It might be asked how Goffman's dramaturgical theory and business model development can be used in the same thesis, when the philosophical assumptions that the two perspectives build on differ. But the intention was never to use BM (and its underlying theory) to interpret the material. Instead, the BM has been used as a tool (during workshops, in work with single enterprises, and to gather empirical material) to support the contractors to interact in the workshops, and to help visualize performances. In this sense, BM cross-fertilizes Goffman's dramaturgical theory.

The usage of a tool – e.g. a business model canvas in an AR project – can also be seen to "go against" the intention of AR. In AR, you should not tell others what to do but rather support knowledge sharing and challenge established practices (Hildrum & Strand, 2007). However, the BMC was only used at two workshops (in the East and South groups) and at six individual enterprises. The BMC was presented as a voluntary exercise. It was a tool to map current actions to see if new aspects could be visualized with the help of the canvas, and try to intervene with the contractors' current routines and patterns. It was used to challenge the contractors to step outside their everyday actions and ways of thinking, to gain insights related to potential areas for innovation and development of their businesses regarding energy renovations of single-family houses.[1] Osterwalder and Pigneur's (2010) business model canvas was thus used as a tool in the project, to help bring in new practices and perspectives as well as visualize established ones.

4.3 The researcher's role(-s) during the process

In AR, tension exists between being part of the practical process, while at the same time trying to create distance to the process in order to develop a broader perspective of what is happening and why (Greenwood & Levin, 2007). This two-fold complexity is part of the researcher's role and is interesting to discuss. It is also important to address the role of the researcher (Greenwood & Levin, 2007; McNiff & Whitehead, 2009; Reason & Bradbury, 2008), especially since I use Goffman's (1959) dramaturgical theory with its focus on roles and the reflective approach of AR.

The role of the researcher is to provide a clear, analytical view of the actors' interactions and the contextual situation they are part of; to clarify the collaborations, since the research process of working for social change was performed *with* participants (Greenwood & Levin, 2007).

[1] Further information about the business development and a more detailed description of the process with the workshops can be found in appendix 5.

In AR-projects, there is one internal and one external role for the researcher to acknowledge (Greenwood & Levin, 2007). The external role involves: making sure the project is carried out within set timelines; plan project startup; write, analyze and reflect about what is happening, how and why, in order to make sure there will finally be a scientific result to present; write reports, articles and communicate results to increase knowledge about the context. This thesis is thus part of the external role.

The internal role is argued to be very important for the project's process (Greenwood & Levin, 2007; Reason & Bradbury, 2008) and is therefore given some extra space here. The internal role includes: facilitating the process and supporting the participants to engage in dialogue, analyses and critical reflections; asking counter-intuitive questions from an outsider perspective; promoting transformational and social change; supporting reflections; acknowledging decisions and actions that have taken the participants to where they are today: and finding new ways to act and decide. The internal role is thus first and foremost to keep the process going. Since this differed during the process, I performed multiple roles. Some of them were recurring, while other roles were performed on a few specific occasions. Certain tasks could imply certain roles. For example, Bill and Olaison (2009) propose having a moderator to facilitate the process, someone who observes the work and takes notes. If a discussion ends, the moderator can comment on what has been said previously and ask for further comments. In order to have access to notes for the research and to move the process forward, I found the role of moderator important to address.

Martins and Solé (2013) discuss three more roles: catalyzer, communicator and mediator. I reflected at the beginning of the process that these roles could be useful to adopt during the workshops. In hindsight, it can be seen that all three roles were used during the process. What role to perform when, however, has not always been decided beforehand. The roles were performed in relation to perceived needs in the group. Martins and Solé (2013) also conclude that the three roles are problematic, since roles are dynamic; they change and adapt to the current context. It might thus be good to adapt a role in the beginning of the process and let new roles emerge during the interactions between the actors.

Even though the researcher can be said to have multiple roles connected with the internal role, the main and "umbrella" role is that of facilitator. The facilitator should act to make sure the group is focused on and works towards the main purpose and for social change (Kelliher, Foley & Frampton, 2009; Stringer 2014). It is important however to clarify that it is not the researcher or the research that creates the change. It is the participants' learning and development that enables change. Even though I really tried to facilitate the process and the actors' interactions, it can be seen that there are various intensities of facilitation. At one end, there are facilitators who challenge all statements and intermingle in all dialogue all the time. At the other end, there are facilitators who observe, mainly trying to keep a dialogue open and thriving, and only intervening if strong statements are made or specific topics arise. The dialogue between the contractors in the south group was most often thriving, with active actors. Since the discussions and process progressed, I chose to try to keep a low profile and not steer too much in any direction when it was not really necessary. This choice of facilitation is also due to my perception that it is quite difficult to create actions and change focus etc. from "the side", without claiming the leader role. Instead, I focused on enabling the participants to steer and decide what to do, when and how. I also challenged them and their statements sometimes and made them reflect.

To create reflections is also part of the researcher's internal role. Reflection is not only for the researcher, it is also for the participants (Greenwood & Levin, 2007; Stringer, 2014). Mainly, three different approaches were performed to facilitate and support participants to reflect and further interact about their current practices: *The first approach* was to question what we were currently doing in relation to the project's aim in order to ensure that we all had the same understanding; and to evaluate whether the process was moving towards the project's aim, and make adjustments if it were not. *The second approach* was to interview the participants one-to-one and observe (some of) them in interactions with house owners. Their responses and actions were made anonymous for the rest of the contractors and "fed" into the workshops as discussion topics, to challenge their assumptions and current social practice. *The third approach* was to challenge and question answers and actions during workshops and during one-to-one interviews.

These three approaches can further be connected to the importance of making sure that all participants are kept involved and engaged (Hildrum & Strand, 2007), another aspect of the internal role. Schönström (2005) argues that one way to address engagement is to make the actors see the project as an investment. Olsen et al. (2008) highlight however that this depends on how the SMEs perceive the future impact of their performance in a project. Different SMEs (and in this case different SME contractors) have different preconditions, interests and strategies for how to develop and collaborate with others. It was thus important to have a common goal for all participants. And also, that the project's goal and the collaborating groups' as well as the enterprises' goals were aligned (Olsen et al., 2008). The goal 'to develop new and innovative solutions regarding energy renovations in houses built between 1950 and 1975', was communicated by the researcher/-s from the beginning of the process, and later discussed and agreed upon by the SME contractors. In addition, Stringer (2014) argues for the need to provide information, to make participants discuss and engage in the process. A general goal of AR is to generate knowledge that is fed back into the setting (Herr & Anderson, 2005). Throughout this process, information was provided in several ways, e.g. research in the focus area, observations of interactions, information and/or statements from interviews, media-monitoring, current and potential trends. Each group also received one occasion with an individual they perceived to be an expert within the field of energy renovations and healthy houses.

The presented internal and external roles might seem clear and well defined on paper. The two roles are however deeply intertwined, and both are needed to perform and present an AR project (Greenwood & Levin, 2007; Herr & Anderson, 2005; Stringer, 2014). When discussing the internal role, Herr and Anderson (2005) highlight that a researcher is an outsider to the participants and their practices. But Greenwood and Levin (2007, p.115-130) introduce the concept of the "friendly outsider", a person who supports and guides the participants, who perceives their assumptions performed through their actions, and helps them realize their competences and knowledge of their field of practice. To do this, it helps to be an outsider to whom the local knowledge is not familiar and therefore easier to identify (Greenwood & Levin, 2007). The concept of the friendly outsider that Greenwood and Levin (2007) advocate is related however to AR projects within a local and/or established group. This process was made with SME contractors from various enterprises, unfamiliar with each other. Therefore, I had to create a platform, a collaborative space, to work from and between and among them.

In addition, working with SME contractors from various enterprises implied that it was not only the researcher who was an “outsider” in relation to the practitioners; all actors who took part in the project were outsiders to each other. Nevertheless, since the aim of the project was to develop something regarding the contractors’ practices, the researcher was still “more” of an outsider than the rest of the participants, being without previous knowledge of or work experience from the field. AR demands some kind of intervention with the research setting (Herr & Anderson, 2005), however, and the role of the friendly outsider can change. Traditionally, AR was conducted when a researcher initiated research in a setting in which s/he was an outsider. S/he then performed the role of change agent, and in collaboration with insiders, acted for social change (Herr & Anderson, 2005). But both the insider and the outsider perspectives are interlinked and brought into the research when collaborating. Therefore, Herr and Anderson (2005) mean that the action researcher can begin to take on an insider perspective over time.

4.4 Methods for analyses

The analysis should lead to improved understanding of the aim of the study (Stringer, 2014). It is not only important to perform an analysis however; it is even more important for the researcher to show how the empirical material has been worked *with* (Stringer, 2014), in order to enable others to validate the analysis of the material (e.g. how the sorting and categorizing of the material was performed to find answers to the stated research questions).

Since the study builds on Goffman’s dramaturgical theory, the unit of analysis was mainly the actors’ actions and performances during their interactions: the SME contractors’ and house owners’ interactions regarding improvement measures in the house owners’ homes; and the SME contractors’ interactions when collaborating to develop their businesses and discuss house owners and their interactions. I have analyzed with regard to: how these actors act with and/or towards each other, in terms of expressions given and expressions given off; the different roles they assume; and the signs and signals they express during interactions. In this study, language and rhetoric are seen as part of actions, but as research has shown (see e.g. Schön, 1983) what people say they do and what they actually do are not necessarily the same. It is more difficult for people to “hide” their inner thoughts and feelings in actions and body language than through talk. The main focus has therefore been on actions, roles and performances. Roles are not only interesting due to my usage of Goffman’s dramaturgical theory. Roles are also interesting in relation to the AR process, where they are seen to emerge, evolve and change over time (Perrone, Zaheer, McEvily, 2003).

The analyses were performed in two steps: first, an initial, basic analysis of sorting and writing the sections presented in this thesis on the empirical material; and second, an analysis of the presented empirical material, i.e. the analysis sections in this thesis.

The empirical material consists mainly of material from the two parallel processes: observations and workshops. The material from the workshops is important to show the tensions and ambiguities in house owner interactions; but in accordance with Goffman’s dramaturgical theory, the observations are the main focus of the analysis. The analyses of the two methods differ, since the material from the two methods differs: field notes from observations; recordings and notes from workshops. The description of how the analyses of the empirical material were performed is therefore divided into three sections. The first section focuses on observations; the second on workshops; and the third section describes how the two analyses come together and create the foundation for the findings.

Analysis of observed interactions

There have been reflections and analyses of what has been performed, why and how from each observation of the actors. Analysis has been an ongoing process during the fieldwork and while writing the thesis (Charmaz, 2006). Although Charmaz's book focuses on grounded theory, she uses Goffman's work (1959) in a couple of her explanations, and I found her work helpful for my own analysis work. My work was for example inspired by Charmaz's (2006, p. 72-95) descriptions of memo writing. When certain aspects of the interactions emerged as interesting, I have written about them in a specific document and elaborated on them in relation to the topic. An example that triggered reflection and memo writing was a situation that arose during an encounter:

> *The SME contractor Robert has a folder with pictures of three types of pellet stoves. He tries to explain their pros and cons. He has barely started before Amanda (the customer) tells him which one she wants "This one will look perfect in here! It is neat and pretty and white, and it has a big glass window so I can see the fire. This one, I want this." Amanda points at one of the pellet stoves in the folder. She turns to Robert and holds the folder out towards him so he can see. He agrees that it is a good stove for her purposes. "I like that one myself and have a similar at home," he says. He then points to where the pellet stove should best be placed, by the short side of the living room wall: "So you can see it, but also so you get the best use of it." She holds up the brochure with the picture of the pellet stove she likes; she looks towards where Robert is standing, squints her eyes and concludes, "It will be perfect!"*

This example is from a first encounter between a SME contractor and a house owner, and it triggered me to write the following memo: "The example could be argued to show that the contractor shows inferior performance towards the house owner, where he expresses that he will perform what she prefers. However, the contractor tries to convince the customer what to choose; he uses verbal expressions and materiality to show and explain and to strengthen his argument. By doing so, he shifts scripts from contractor to sales person. Later, he shifts his sales person script to a private script, showing his private self when he says that he uses a similar pellet stove at home. When shifting from a professional script to a private script, he creates distance to his professional role and aligns himself with the customer's script. The example further shows that the technical solution is not only about warming the house; it is also about design, how will it look in the customer's home."

With the help of memo writing, I understood that materiality is used here to strengthen the contractor's argument; and also that a contractor's professional role may lack "strength" in its performance, which can make it difficult to convince other actors what to do. A shift in scripts (from contractor to private) might be felt necessary in order to "meet" with a house owner in his or her role. The two actors thus met in their private scripts, and this can have implications for how the interactions are carried out and their outcomes.

In addition to Charmaz's memo writing, I was also inspired by Braun and Clarke (2006) and Riessman (2008), and performed a thematic analysis of the field notes from the observations. To show and explain the improvement interactions, six cases were chosen from the 18 observations, showing maximum variations among the theoretical concepts. The analysis started by reading the field notes several times. As I was looking for expressions given as well as expressions given off, I wrote "codes" in the margin where I could detect similarities. From the "codes", I searched for patterns that could constitute themes around which to organize and restructure the material and develop the analysis. Six themes were found: search for control; how to sell and perform competence; performing on assumptions; scripts, roles and performances; explanations; impression management of symbolic artifacts. The material was structured under the themes, considered in relation to the theory, and revised several times while working with the material. Eventually, three themes were developed: performing to achieve control; usage of setting and symbolic artifacts to create performances and joint understanding; and misalignment between actors and the usage of scripts and roles.

However, the material from all six cases turned out to be too extensive, so I had to remove some. A table was developed with the most discussed concepts from the theory (see table 4.11). It was used in relation to the six cases to find the most telling cases that show the concepts most clearly.

Table 4.11: *Table to systematically search for theoretical concepts*

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
Role	X	X	X	X	X	X
Front-, back stage	X	X	X	X	X	X
Personal front	X			X	X	X
Scripts	X	X	X	X	X	X
Ideal conceptions	X	X	X		X	X
Technical social contractual	XXX	XX-	XX-	XXX	XXX	XXX
Loss of face	X	X	X		X	X
Symbols	X	X		X	X	X
Concealment	X	X			X	X
Visibility				X	X	X

Although most concepts were found in most cases, only the clear examples were counted in order to make it easier to show and explain. In the end, cases 1, 5 and 6 were chosen due to their clear and telling examples.

When the three cases were presented after each other in the thesis, it proved to be difficult for the reader to know what to look for. The choices were: cut the cases up in pieces and show a small piece at a time; or keep them intact and give a brief analysis after each case to clarify what to look for. I decided to keep the cases intact for several reasons: It is an important aim of this thesis to create understanding of what happens when a SME contractor and a house owner meet to interact about improvement measures. Also, I use Goffman's dramaturgical theory, drawn from a theater, and who wants to see only parts of a play? Furthermore, it is an aim to be transparent with my material and enable others to build on or challenge what I conclude from it.

My decision thus implied making a brief analysis after each case, and then an additional cross-analysis of the three cases under the three developed themes.

Analysis of workshops

The material from the workshops (SME contractors' expressions about their interactions with house owners) was used to add additional aspects and dimensions to the material from the observations.

The notes and recordings from the 16 workshops were transcribed, resulting in 292 pages. The pages rested for a month and were then read through from beginning to end. Next step was twofold: to go through the pages and remove material that definitely did not relate to the thesis' aim; and to identify passages, statements or actions that could be connected with the aim. These statements, passages etc. were color coded into four categories: *House owner interaction; Energy renovation; Business development;* and *Group work*. The four categories overlapped somewhat but the intention with them was mainly to ensure that things that could not be connected to a category should be removed. Most of the material coded as group work was moved to the method chapter. Detailed arguments for functional and dysfunctional technical solutions were removed. I then decided to focus only on the south group. Now there were 55 pages. The material needed to be condensed even further, but the work to identify potential themes seemed relevant (and possible) to develop further.

For this thesis, I was interested in the interactions between SME contractors and house owners and their performances when interacting with each other. Six themes were developed, related to the contractors' interactions with house owners and their assumptions about them: What house owners focus on and why; house owners as customers; how to influence house owners to invest; what to offer; how and when to reach house owners; and how to handle lack of customers. After sorting and reducing the material within these themes, the material consisted of 23 pages.

The process of analyzing and finding abstracted themes started with line-by-line coding (Charmaz, 2006). Codes can be seen as labels to segments of the empirical material (Charmaz, 2006, p.3) that assign symbolic meaning to the information of which the empirical material consists (Miles, Huberman & Saldaña, 2014). When coding, I looked for actions and performances, and after each sentence I reflected on whether I could "detect" something that was underlying the action or statement and its meanings with regard to expressions and performances. The codes were revised twice, with minor alterations. A third revision was made with the intention to find patterns among the codes. In order to find patterns and themes, the researcher not only condenses the material but also selects what material to focus on and what material to exclude (Rennstam & Wästerfors, 2015). To know when a theme was found, I followed Ryan and Bernard's (2003, p. 87) advice: "You know you have found a theme when you can answer the question, What is this expression an example of?" Table 4.13 presents the development of one theme from the empirical material.

Table 4.13: *Examples of one theme developed from line-by-line coding*

Statement or expression from actor	**Line-by-line coding**	**Theme**
Thomas [a contractor]: "Yes, there is no point in going out [to the house owners] and waffle."	It is important to show competence and talk about relevant stuff for the house owner.	How to perform competence and show professionalism
Oskar [a contractor]: "The customer should then possibly perceive us as a professional, if we are trying to help them and not just look after our own interests."	It is important to be perceived as a professional.	How to perform competence and show professionalism

The first column in the table shows the actor's statement; the second column shows my coding of the same statement; the third column contains the theme. Three themes were developed: how to perform competence and show professionalism; acting and performing on ideal conceptions; performance of materiality and the importance of visibility.

The cross analysis
Six themes, without hierarchical order, were thus developed from the observations and the workshops. These themes were used as headlines and under each theme, I wrote reflections about the theme in relation to the material, a process technique Ryan and Bernard (2003) refer to as cutting and sorting. This technique enabled me to go through the analysis and connect the meaning behind the interactions with the theory, both details and broader viewpoints. I also put the six themes next to each other, in an attempt to show several common denominators in the themes – what they were "actually" about on a more abstracted level (Becker, 1998, p. 126-127), and/or how to link them into a theoretical model (Ryan & Bernard, 2003). This technique helped me see the material from another perspective, and three themes could be connected to the material: *The search for control while trying to get a feeling about the other; the professional role as a contractor;* and *the usage of certain performances during interactions*. These three themes were used to structure the material, and to clarify similarities and tensions regarding SME contractors' roles and the contractors' and house owners' actions when interacting with each other.

4.5 Trustworthiness

When describing the research process, it is important to clearly describe whether the performed research has generated knowledge that can be trusted (Greenwood & Levin, p.67-68). AR is not an exception. The importance of the topic is highlighted in books (e.g. Greenwood & Levin, 2007; Herr & Anderson, 2005; Reason & Bradbury, 2008; Stringer, 2014) and, however less frequent, in articles, (e.g. Dillon, 2014; Gustavsen, 2014; Reason, 2003).

According to Creswell and Miller (2010), it can be a challenge to use the concept 'validity' in a study about social science. I have thus chosen to follow Herr and Anderson (2005). They argue that validity is foremost a positivistic concept to vindicate that causes and effects have been isolated. AR on the other hand, builds on qualitative studies and Lincoln and Guba's (1985) concept of trustworthiness is of better use. According to Lincoln and Guba (1985), trustworthiness involves presentations of if and how the researcher's interpretation of the empirical material is credible. Thus, the somewhat lack of discussions of trustworthiness and/or validity in AR articles, of how knowledge has been generated, may be due to Hildrum and Strand's (2007) finding that AR articles have shown to be very weak in their analysis sections.

The concept of trustworthiness that Lincoln and Guba (1985) present, can further be divided into four concepts: credibility, transferability, dependability, confirmability. All four concepts will be addressed. Main focus will however be on credibility that is seen to be a "fundamental issue" in AR (see for example Stringer, 2014, p.92).

Credibility in AR involves the participants' trust in the integrity of the process (Stringer, 2014) and if the generated knowledge can be trusted by outsiders (Herr & Anderson, 2005). Stringer (2014, p.92-93) has revised and developed Lincoln and Guba's (1985) four aspects, to acknowledge and increase credibility in AR projects. For this project, Stringer's (2014) seven aspects have been used to create and support participants trust in the process and to strengthen the credibility of the study (the concepts are presented without any internal ranking):

Prolonged engagement. To support participants to gain deeper understanding of the project's aim, an engagement needs to be prolonged in time and not only consist of brief interviews or a conversation (Lincoln & Guba, 1985; Stringer, 2014). The project has been ongoing for 4 years and the participants have been partaking for 3 years.

Persistent observation. Observations should be consciously performed and notes taken for several occasions (Lincoln & Guba, 1985; Stringer, 2014). Observations have been performed of interactions in various settings, with various actors for several occasions. Notes were taken at all occasions (see 'Observations' in method section for further details).

Triangulation. Goffman (1959, p.13) claims that "Many crucial facts lie beyond the time and place of interaction or lie concealed within it". It was thus important to use several methods and to work with the SMEs in different situations during an extended period of time to make the concealed visible. Several sources of information, empirical material and perspectives clarify meaning and enhance the studies credibility (Lincoln & Guba, 1985; Stake, 2005; Stringer, 2014). Different perspectives have been derived from contractors, house owners, supervisors, researchers at conferences, PhD students, colleagues etc. but also from research, trade journals, information from questionnaires, ongoing media discussions regarding the studied field. In addition, there have been several methods used to create deeper understanding and knowledge of the interactions (e.g. observations, workshops, interviews).

Member checking. Participants should be able to review and comment on notes and analyses (Lincoln & Guba, 1985; Stringer, 2014). In the project the participants have been able to read the own group's as well as the other group's protocols, based on my notes from their interactions. Information from observations and interviews has been brought up during workshops to challenge the participant's views. Through this, I have verified my understanding and interpretations of their actions and interactions during the process. In addition, a follow-up meeting was initiated to: present results for feedback on this before it was publicly announced; follow up thoughts and reflections that may have arisen; enable interaction between participants; jointly end the project together with the participants. A first invitation and later a reminder for the meeting was sent to all participating craftsmen in the project. Together with the invitation, I also sent a popular scientific description of the project. 2 participants responded to the first invitation that they were fully booked, no participants responded to the reminder. The meeting was thus cancelled. One of those responding to the invitation, however, wanted continued cooperation in the future if more projects were to be initiated. He also requested more information from the project and thus received the thesis.

Participant debriefing. Participants should be able to reflect of their feelings and emotions that might cloud their interpretations of performed actions (Stringer, 2014). This aspect was addressed during workshops and interviews. However, the interviews were probably a more fruitful place for this since the contractors seemed less guarded and spoke more freely during one-on-one situations.

Diverse case analysis. All stakeholder groups' perspectives are supposed to be included (LeCompte & Preissle, 1993; Stringer, 2014). SME contractors (26), house owners (18), and researchers' (3, my two supervisors and I) perspectives have been acknowledged and included during the process.

Referential adequacy. Concepts and ideas within the study should be clearly drawn from the participants, their perspectives and experiences (Stringer, 2014). The majority of Stringer's (2014) seven aspects are quite straight forward (e.g. triangulation and member checking), the aspect of referential adequacy are however slightly ambiguous. Considering the diversity of information sources and individuals' perspectives and experiences that should be included and acknowledged during a process, it can be difficult to know exactly where and from whom a concept or idea originates. You can also discuss the impact of concepts and ideas. From an ideas initial stage of being verbally discussed till it gets written down, is reviewed and published, in particular when one language is used with participants and another language to write and present the research.

In addition to credibility, Lincoln and Guba (1985) discuss transferability. In some aspects, transferability builds on the positivistic generalization. Since all meaningful inquiries are context bound (Greenwood & Levin, 2007, p.66) and AR deals with a specific setting, its outcomes only apply to the participants and settings involved in the study, transferability could be seen to be impossible to acknowledge (Greenwood & Levin, 2007). Nevertheless, it does not mean that everything in the setting and the process is unique and irrelevant for others. It is however important describe the process thoroughly to enable others to interpret what in this study can be applicable in other settings. For example, how and what methods have been used and how the process have developed. Detailed descriptions are also important for the studies dependability (Lincoln & Guba, 1985) to show that a systematic research process has been performed.

Lincoln and Guba's (1985) final concept of trustworthiness is confirmability, it address that the procedures described have actually occurred. This study builds its confirmability on: tape recordings; notes; workshop protocols; thick descriptions; transparency towards the two supervisors who have followed the researcher throughout the process and been participating at some of the workshops.

4.6 Ethics

Ethics is an important aspect to highlight, especially regarding AR where the researcher is doing research and action *with* the practitioners in the field. During an AR project, the researcher might face various dilemmas or considerations of ethical concern that need to be considered (Reason & Bradbury, 2008; Greenwood & Levin, 2007). Dilemmas might for example refer to participant's confidentiality, integrity, anonymity or voluntariness. The Swedish research council (Sv: Vetenskapsrådet), is a federal authority established 2001. Its purpose is to support scientific research and has created four ethical principles for Swedish research (Hermerén, Gustafsson & Petterson, 2011; Vetenskapsrådet, 2007): 1. *Information principle.* The researcher shall inform the participants of the aim with the research, that it is voluntary to participate and that they have the right to end their participation whenever they want; 2. *Consent principle.* The participants need to give their consent to participate in the research project; 3. *Confidentiality.* All ethically sensitive information that might evolve or be brought to the researcher's attention during the research will be stored so no unauthorized person will access it; 4. *Utilization.* The information that has been gathered will only be used for scientific research purposes. All four ethical principles have been acknowledged and respected. Extra concern was given to principle 3, to ensure that the participants knew professional secrecy would be applied as the business development might reveal new innovations or possibilities still in exploration.

There are also other ethical dilemmas the researcher might face during an AR process, important to reflect about. For example, it is important to let the participants decide over the process, that they own the problem and their choices, and guide them without taking over (Gustavsen, 2001). Gustavsen (2001) argues that the researcher's trust in the participants is the foundation to ensure that the participants are able to make decisions and own the process. When trust is the foundation for the researcher, multiple other aspects are important to have in place for the participants: e.g. the participants' willingness to own the problem and decide; their confidence in the matter; their trust in the researcher; their willingness to invest in the project.

4.7 Discussion of methods used

Individual's social interactions and actions are an exciting and also elusive area to study. All the methods chosen for this thesis have advantages as well as disadvantages. To strengthen the trustworthiness of the study, it is thus important to discuss how and why the methods were used. For future improvements and developments, it is also important to highlight negative aspects to enable criticism and a healthy discussion of the study. Furthermore, how the methods were performed have implications for the perceived empirical material (Greenwood & Levin, 2007; Lewin & Reeves, 2011). The researcher's design of the project and methods chosen create the conditions for what is seen, heard and experienced. The following method discussion aims therefore to clarify the reasoning behind the chosen methods and possible implications of the performances.

The method discussion is divided into three sections: observations, AR and workshops, and interviews.

Observation of contractor and house owner interaction

Kawulich (2005) argues that the observer as participant is a good method to investigate nonverbal communication and expressions of feelings during interactions. Observations enable the researcher to obtain detailed descriptions of the actions and to gain understanding of the basis for the participant's practices (Stringer, 2014, p.113).

Nevertheless, the method implies that the researcher has to rely on the participants in order to gain access to the interactions (Kawulich, 2005). Several interactions during the project's process were not observed, because the participants claimed they forgot to mention them. The number of observed interactions was therefore less than planned, and the interactions that were observed could have been chosen by the contractors for reasons unknown to me. The dramaturgical theory describes that members of backstage groups often worry that their knowledge will be exposed to the frontstage and thus to a bigger audience (McCormick, 2007). This can have consequences for the researcher’s and the SME contractors’ sharing of knowledge. The researcher may not be perceived as a trustworthy member of the backstage group. To a certain extent, the concept of backstage can explain whether the contractors were resistant to sharing knowledge with the researcher. It could also imply that the contractors felt discomfort at having a researcher present during the initial phases of a potential renovation project. Schensul, Schensul and LeCompte (1999, p.143) argue that any interaction changes what is observed. Just by being “there” to observe, a third person – when it usually would have been two – affects and therefore changes the interaction. During the observed interactions, I followed the SME contractors to, from and during the encounters with the house owners. Through my presence, I probably impacted the staging and the performances of the actors. Perhaps the contractors felt the need to stage themselves for the researcher (e.g. as competent, experienced, skilled, trustworthy). The house owners may have felt disadvantaged, perceiving that here were two from the SME instead of one, which could have affected their actions and staging.

Schensul et al. (1999) argue that another disadvantage of observations is that it is difficult to describe what is seen and not interfered. This thesis, however, focuses on actions and performances in interactions and requires observations as method to clarify these actions and create understanding. The material from the workshops highlights the tension between expressions given about interactions (talking about) and expression given off during interactions (interacting with).

AR process and workshops

It is important to negotiate the goal during the initial phases of an AR process so that all participants have a joint understanding and focus (Greenwood & Levin, 2007). The workshops were however a melding of interests. All participants had their own interests in the research. Even though an overall aim was discussed and agreed on, the specific outcomes for each participant seemed not to be coherent among them. In addition, AR projects are supposed to be “owned” by the participants (Stringer, 2014, p.83-85), but when an AR project is initiated by a researcher from “outside” a specific focus area, the frame for the project is set beforehand with respect to time, research question/-s, financing, and specific field of interest. The participants are then invited to be participants. It can thus be very difficult for the participants to make decisions and “own” the project; rather, the participants own only the parts of the project that can still be negotiated within the already set framework (Carlsson & Koch, 2014b). As researcher, I opened and closed the project. I owned the initial agenda and the decision making during the process, partly because this role was given me by the participants, and partly because I might have been given this role because of my lack of transparency or support with respect to sending the decision-making role/-s back to the participants.

Have I then really performed AR *with* the participants? Yes, I claim that it is an AR project, and that it was performed *with* the SME contractors. Cooperation and collaboration *with* the contractors was in effect during the whole process, from the time they were invited, until they decided to end their participation in the project or give up on the concept. It can be discussed however whether the research was conducted with equal degrees of influence, just as it can be discussed whether employees have equal degree of influence when collaborating with managers. It depends on the setting, the frame and how the process is negotiated and clarified, in the beginning and all the way through the process.

The researcher has the role of being in charge. S/he cultivates and drives change in relation to the negotiated problem within the set project framework and challenge assumptions and “truths” that do not fit with the research agenda. The researcher can only hope that the participants want to participate and invest. S/he can motivate them to participate by making them see an outcome that is sought after and wanted. If there had been one or more enthusiasts who were fully engaged and could have driven the project, this discussion would probably have taken another turn. And if the knowledge gained through this process could have been known in advance, this process would probably have been different.

Another aspect of the workshops is the contractors’ performances. Since actors perform roles, it can be problematic to gain insight into the contractors’ backstage thoughts. In workshops, however, a backstage space is created, which enables the contractors to give expressions among “themselves” (as in backstage “us”) about frontstage actions with house owners (“them”).

Additional reflections on the AR process are elaborated in chapter 7.

Interviews

The interviews were not a main method. They were used to create basic understanding in relation to the workshops, and to create complementary understanding to the observations. It is still important (at least briefly) to discuss this method, since it relates to Goffman’s dramaturgical theory with its focus on actions, expressions and performances.

An interview is flexible and dependent on the situation and the persons interacting. Actors in an interview setting may feel they need to perform in a specific way. Depending on how they define the situation, concealment some things and highlighting others may feel important and can affect what information is shared (Goffman, 1959). Is it even possible to receive any reliable answers when the two actors (the interviewer and the interviewee) are performing roles and creating the interview setting together? King and Horrocks (2010) argue that interviews are co-constructed by the interviewer and the interviewees; they are thus intersubjective and enable the actors to share and discuss the social world. Hochschild (2003) argues for the possibility to share “magnified moments” (p.16); moments that stand out to the actor. If a moment represents something important for an actor, it performs a symbolic function that is possible to share. Lamont and Swidler (2014) argue for the usage of interviews when they are necessary, but there are limitations. In a footnote (p.160), they discuss briefly the lack of vocabulary about how things (e.g. various settings) influence interactions and actions. Missing vocabulary to explain things is an important aspect to clarify and take into account; however, by performing interviews as informal conversations in conjunction with the observed interactions, participants could refer to something concrete that had happened.

When performing interviews, tools such as recording devices can be used to strengthen the study. The interviews for this study were not recorded. This can be perceived as a weakness in regard to method; however, it may also have enabled the respondents to relax, speak more freely and be less “forced” to stay in a professional role. Also, to use time to inform about recording and record in an informal interview session that is constrained in time – e.g. with a house owner while the contractor is out getting something in his car or doing something another place in the house – seemed to be the wrong priority.

Summary of Methodology and methods

The chapter first introduces action research as the methodology and framework for the thesis. AR focuses on social change and interactions with the actors who participate in the research. The merging of action research and Goffman’s dramaturgical theory (with its focus of routines and stabilized actions) is discussed, followed by an explanation of why this methodology was chosen and a presentation of the methodology. The process builds on a model (see figure 4.1) that uses the five dimensions: *Practice*, *Theory*, *Action*, *Research*, *Analysis and reflection,* and highlights the non-linearity of the process and the context.

The methods used during the process are then presented. Two main methods were used: observations of the SME contractors and house owners’ interactions when discussing the scope of the transformation of the house owners’ homes; and workshops attended by the 26 contractors from 21 SMEs who chose to participate in the project. The SMEs were divided geographically into three groups: North, South and East of Gothenburg. The participants worked collaboratively to find new ways to work with energy renovations of single-family houses; and to change the focus of their businesses to energy-efficient renovations of single-family houses. In total, 16 workshops were held. Two groups dissolved during the process, but the south group continued to work, and the participants were able to develop a new concept regarding energy renovations of single-family houses.

In addition to the observations and workshops, I have visited the SMEs; held business development sessions with SME owners; and conducted interviews with SME contractors and house owners. In addition to the,26 SME contractors participating in the workshops, 23 house owners participated in the research project as well as six additional SME employees and two experts.

5 Empirical fieldworks and analyses

Chapter five contains both empirical material and analyses. The empirical material has its focus on SME contractors and their interactions with house owners, and it is derived from two different settings: observations of interactions between SME contractors and house owners; and workshops in which SME contractors interacted to develop their businesses with regard to upcoming and previous interactions with house owners. Each setting is followed by an analysis that draws on Goffman's dramaturgical theory with focus on roles, actions and performances. The two settings, each with its respective analysis, are followed by a third, cross-analysis of both settings.

Since this thesis draws on Goffman's dramaturgical theory, the reader requires a brief presentation of the stages on which performances and interactions take place in order to understand the situation before the empirical material is presented. There were two major types of stages for the performances: 1. Interactions between SME contractors and house owners; 2. Workshops.

Even though the observations of the interactions and the workshops were conducted in parallel, they are presented here consecutively, starting with the observations.

Empirical fieldwork I - The first stage was the SME contractors and house owners' interactions at the house owners' homes, where they discussed possible improvement measures. During an interaction, a house owner is able to explain what, how and possibly why s/he wants such measures, and a contractor is able to determine whether it is possible to make the improvements asked for and estimates the costs. In addition, a period of time before and after the observed interactions are included to enable the description of frontstage and backstage performances related to the interactions.

Each interaction case is quite rich and extensive however, and in order to clarify and highlight the main points in the interaction for analysis before the next interaction is in focus, a first analysis is presented after each case. Thus, one case is presented and then analyzed before the next case is presented, so that each case stands on its own and case-specific actions are highlighted. The three analyses of the three cases are followed up with a more detailed cross-analysis in Analysis I.

Empirical fieldwork II - The second stage for performances is the workshops with the South group were the SME contractors worked to develop their businesses towards increasing energy-efficient measures in existing houses built between 1950 and 1975. Their interactions about upcoming as well as previous interactions with house owners is presented in order to shed further light on their roles as SME contractors and their performances when interacting with house owners.

Analysis I, II and III – The empirical material is analyzed for roles, actions and performances with support from Goffman's (1959) dramaturgical theory. The analysis of the empirical material from the three house owners' and SME contractors' interactions is presented in Analysis I, and the material from the workshops in Analysis II. A cross-analysis of Analysis I and II is presented in Analysis III, where additional material from the interviews is added to strengthen some arguments. Since the empirical material and the analyses are presented alternately in the same chapter, the empirical material is in a different font, so it can easily be distinguished from the analyses.

5.1 Empirical fieldwork I – Observations of SME contractors' and house owners' interactions

The three interactions were chosen to show the diversity among the interactions and highlight some of the various actors, their actions and performances and also situations that occurred during the process.

The first interaction starts in one of the SME contractor's vans on the way to meet a house owner who wants to improve something in his house, a potential customer whom the contractor has not met before.

First interaction, Niklas and Ove

The SME contractor Niklas (from CPS1) drives his pick-up truck with a relaxed hand. The phone rings. Niklas looks at it and tells me it is one of his friends. He answers. After a brief update to the caller of what he is doing he hangs up. He tells me who it was and gives me a brief context about last weekend's adventures.

I ask if there are any typical customer meetings and if and how a customer contact is kept through a process. He explains that all meetings are unique. After having done his work for about 25 years however, he now recognizes some reoccurring patterns. There are also occasions when he gets surprised, he says and laughs. He then argues how difficult communication is, how important it is to talk to and ask house owners what they really want. "It sounds simple, but it is easily ignored" he says. "For example, one of my employees called me one day. He asked what he was supposed to do regarding a specific renovation. I told him to ask the customer. The employee insisted that it was not necessary. This was repeated a couple of times until the employee went to ask the customer". Later that same day the employee called Niklas again and this time to tell him how the customer had not wanted it like the employee thought, but in a completely different way. Niklas concludes: "I think it's important to keep in contact with the customer throughout the project. It's after all the customer who pays our salaries".

Niklas turns the pick-up truck around a street corner. He tells me the house number and we look at the houses. Suddenly Niklas sighs loudly: "No, not one of those." He parks outside a house where the front yard is filled with junk, e.g. old rusty cars, plastic sheets, oil barrels, car pieces. We step out of the truck, he says with a voice probably just meant for himself: "I knew I shouldn't have gone here, just a waste of time." Niklas, dressed in jeans and a checkered shirt, takes a notebook and a folding ruler from the back of his truck and tells me: "Come on, let's get it over with." There are some dogs barking angrily in the direction of the house. We head towards the grey painted, wooden house that barely seems to be hanging together.

A man opens the front door, he wears worn clothes. He smiles friendly, greets us, presents himself as Ove and shows us inside. I bend down to take off my shoes. He says that we should keep our shoes on. I continue out of politeness, but he insists we should keep them on; it makes me relieved. Ove turns towards Niklas and starts immediately to talk about how bad the kitchen is, how they now finally have decided they need to do something about it. "Come in, come in" he says and walks ahead of us. We walk straight through the house to the kitchen, located in the backside.

All three of us cramp up in the end of the oblong, narrow kitchen. Ove explains: "We want to expand the kitchen by removing this wall…" He points at the wall with the refrigerator and freezer, "…to make the kitchen bigger, so one can sit in it and eat and not have to walk around with the pots." Ove uses his whole body when he speaks. He waves his arms, points at things. When arguing for how narrow the kitchen is, he presses himself towards the cabinets and leans towards the countertop. Trying to show how he and his wife move around each other when they are in the kitchen at the same time. He suddenly turns around: "And open up the wall here" pointing at the outer wall, "and add a door and have a porch outside." Niklas has taken out his notebook. He looks where Ove points and make notes. Ove speaks again: "So, is it possible you think? How long will it take and when can you do it?" Ove turns, looks happy and leans eagerly towards Niklas. Niklas looks up at Ove, says: "Hmmmm" and continue to write notes. He then takes out his folding ruler, commenting that he forgot his laser measurer and starts to measure. Niklas repeats the different things explained to us by Ove and notes them down with measurements. He moves so he can knock at the inside wall and asks Ove to have a look at it from the other side. "Of course" Ove says. He shows us to the other room, there are more things. Niklas leans over piles of things to see the wall. Ove says: "I find it difficult to throw things. But I figured, if the wall needs to go it means I have to clean, at least in this room". He looks at me and smile. I smile back and nod. Niklas says: "Hmmm" again, turns towards Ove and smiles briefly. I ask how long Ove and his wife have lived here. He explains that they moved here over 30 years ago. "We like it here. But Gothenburg is expanding, when we moved here it was just our house and one more on this street. But we have nice neighbors so it's ok".

Again, Ove asks when Niklas can come and do the job. Niklas says he needs to look at the outside as well since they want a porch.

We walk back the same way we came and step outside. Ove puts on a pair of old clogs and all three of us head outside and around the house. Ove walks up to the wall and claps on it: "Here should the door be" he says. "And then a porch that are alongside the whole back of the house and about this far out." He walks in the grass and stops about 3-4 meters out from the house. "That's quite a big porch." Niklas comments. "Yes, yes" Ove says. "We're at that age now. It's no fun to have the chairs and tables wobble around. It would be nice with some solid wood to have them on" he continues "What material do you think would be the best? We have thought about both wood and stone, but we're not sure." Niklas says "Hmmm" looking at the place for the porch. Once again he folds out his folding ruler and starts to put down measurements in his notebook. While Niklas is measuring Ove again asks when Niklas can come and do the job. Niklas says: "Hmmm" and then he says: "Not before June at least, but after that it should be possible" [note for the reader: it was middle of April when we were there]. Niklas comments that wood would probably look better together with the house, but he will give Ove price suggestions regarding both alternatives.

When Niklas is finished measuring he says that he needs to write down all details and make Ove and his wife a tender. He will send them the tender over e-mail. If they accept the tender they can discuss more precise dates for when the work is to be performed. Ove smiles and nod. He comments that it is nice out in the spring sun, however a bit wet in the grass due to last night's rain. We agree and smile. Niklas comments that it will probably be warmer this upcoming week.

He then looks at his watch and says that we need to get going if we should make it till our next meeting. I know we do not have a next meeting, but I agree with him and we shake hands with Ove. We say thank you, goodbye and head toward Niklas pick-up truck. Ove follows us around the house and heads back inside.

When we are back into the truck with doors closed Niklas expresses how this was one of the worst places he has seen in regard to having a lot of junk: "It seemed to be some junk everywhere." I comment that it seemed to be a huge porch Ove wanted. Niklas tells me that he will make a quick calculation, probably be a bit pricy, and send it to them. "These people usually never have the money anyway, so there is no use to put down too much effort on it". He starts his truck, puts in the gear and we drive away.

This story could have ended right here. Three weeks after this meeting however, Niklas calls me to let me know that Ove has accepted the tender. "Even though I deliberately made it pricy" Niklas says. I am surprised as well. We talk for a bit and when we end the call he comments that: "Well, one never knows…they have not paid yet, so we should probably not say too much yet." However, the job was performed (in late June) and Niklas was paid in accordance with accepted tender.

Analysis of first interaction, Niklas and Ove

Several scripts (Goffman, 1959; Darr & Pinch, 2013) were observed during the case. When Niklas talked to me about the case, he used a private script. He also used a private script when he talked about his role and what he does for a living, creating distance to his role as a contractor. But he used the SME representative script, when he talked about his employees and what they should or should not do, and he used a professional contractor script when talking about interactions with customers.

Niklas argued that both uniqueness and patterns occurred with customers, but there was no talk about performing in a certain way to get a certain result. He showed no awareness of using his impression as a possibility to influence customers in a certain way. Instead, he insisted in the importance of listening to customers and their wishes. He further claimed that he thought it was important to keep in contact with the customers, since they pay their salaries. Hidden in Niklas' statement is that he, as a contractor, has to answer to the customer and that the customer is in control. His statement also shows the customer's position in the process, the customer as a manager to whom the contractor has to answer and show progress.

Ove, the house owner, owned the setting for the interaction. When Ove opened the door he used a host script – he smiled and bid us welcome. He also showed that he was the owner of the setting and took the lead in the interaction. His performance of a host script also implied that the contractor and I were guests in his house, thus framing the performance. The guest script involved limitations for how to act – not walk freely in the house but stay with the host or in frontstage areas of the house (e.g. living room, dining room) or else ask permission to visit another place if necessary.

In the kitchen, Ove immediately started to talk about what he and his wife wanted and why, thus defining the scope of the interaction. His actions also indicated that he expected Niklas to perform in accordance with his contractor role.

Ove used his whole body to explain and strengthen his arguments for a renovation of the kitchen, acting to convince Niklas about what needed to be done and why. However, Ove expressed not knowing the details or what the best solution would be for him and his house's condition. Ove switched focus, moved the attention to Niklas and asked Niklas for suggestions, opening up for Niklas to explain and give ideas and become part of Ove's play, which he still seemed to own.

Niklas continued to perform his contractor role. He knocked on the wall and interacted with the material, and he assumed an inferior role to Ove, who still owned the setting, and did not challenge Ove in his ownership. Niklas moved according to a guest script, asking Ove for permission to go to the adjoining room. He then waited for Ove to move ahead and show him the way. Niklas also looked where Ove pointed and used his notepad to write measurements and notes regarding the potential job.

When Ove asked Niklas when he could come and perform the work, Ove did not really receive any answer. Humble and submissive in his actions, Ove did not push Niklas much with his questions but seemed nevertheless eager to receive a confirmation from Niklas in the form of a timeframe for the work. Niklas was at this point managing an impression of the focused contractor, involved in what he was doing at the moment and not able to answer Ove's questions. Niklas responded only with "Hmmm", which could be understood as a concealing (Goffman, 1959) of his thoughts that the performance and interaction were a waste of time. Niklas used his role_– looking in his notes, measuring, interacting with house and tools - to keep from answering Ove's questions. Niklas' performance can be interpreted as a strategy to avoid the lead position and not give any ideas or hints of any kind, avoid promising things he did not want to do or seem too interested in being hired. But by not answering, Niklas also took the edge off Ove's performance and lead. By not giving any answers to Ove's expressed questions, by pretending not to hear or performing as if the questions were not relevant to answer, Niklas seemed to create insecurity in Ove's performance. It was not until the end of the interaction process that Niklas gave Ove some indication of the time needed for the upcoming work. In doing so, Niklas shifted his script from being a professional contractor performing what is asked for to that of a SME representative/owner who makes decisions, tells others what to do, and makes administrative and economic decisions. As Niklas' role shifted to a SME representative/owner, his actions changed and seemed to create a shift in control of the situation, e.g. when he told Ove what to expect (a tender) and how to perform (if the tender were accepted, further discussions would follow). Niklas also expressed that he first needed to write a tender, and then he would be able to discuss further details such as the duration of the work. This expression pushed any potential future claims from Ove further away.

It could be argued that Niklas could not answer a question about time until he had finished measuring and could calculate how big the job would turn out to be; then he could calculate approximately how long it would take. However, Niklas clearly showed, in the expressions he gave and the expressions he gave off in the backstage setting before he left his pickup truck, that he had formed an 'ideal conception' (Goffman, 1961) of the house owner he was about to meet. Niklas showed that he believed he knew how the performance would end. He really did not want to be at that specific setting; he did not want Ove as a customer; and he thought the upcoming meeting – the play – was a waste of time. However, even though Niklas did not want the job, he still performed his role of being a professional contractor visiting a potential customer. He started the play by expressing, "Come on, let's get it over with", and performed his contractor role until he was back in his truck again. Because he performed his role all the way through, it was impossible for Ove to know Niklas' thoughts and future actions. What Ove saw was a contractor performing as he was supposed to. By performing his role, Niklas was not only saving face, both Ove's and his own, but also "the face" of his enterprise, since a contractor is usually perceived to be connected to the enterprise he works for. Thus, Niklas' performance of not answering might have been due to his not wanting to get into any discussions, e.g. about the pros and cons of various materials. He just wanted to perform his role as a contractor as effortlessly as possible and get going.

Before the final ending of the play, the two actors started to talk about the weather. Such expressions can indicate that the interaction was about to be ended soon, but they also create space for any last questions. But, when Niklas looked at his watch, he indicated more strongly that he had to go, ending the play by using materiality and strengthening his performance with the script of the busy contractor.

When we were back in the truck in a backstage performance, Niklas talked about Ove and the setting just visited. Before arriving at Ove's, Niklas argued that customer meetings have a mix of patterns and uniqueness. His previous experiences had created stereotypes and assumptions, but he was still aware that he could be surprised. In this case, however, he expressed not really being open to surprises, since he judged Ove on the basis of his front and his house's performance (junk everywhere) and said it was a waste of time to go there. When he expressed, "These people usually never have the money anyway, so no use putting too much effort into it", he showed he was acting on the basis of previous experiences that had formed ideal conceptions (Goffman, 1961) of house owners with fronts and performances like Ove's. Niklas also assumed that a high price would scare Ove and his wife off, but sometimes our assumptions do not hold. Ove accepted Niklas' tender.

Second interaction, Martin and Simon

Martin, owner of CPS4, drives his van with relaxed handling. He says that when he started to work in the business his job was to build. Today his job is about driving around and talk to customers and performing administrative work: "I barely work any longer." He turns onto a narrow road leading us down to a small residential area. After a wrong turn we end up at the right house. It is a grey, wooden, 1½ story house. The house and its front yard look clean and tidy.

Martin parks and step out of his truck. He is dressed in a white polo shirt and black work trousers filled with various tools. He takes the lead towards the front door, rings the doorbell…but nothing happens. We stand silent for a moment, listening for any sounds, but all we can hear are a few screaming seagulls. Martin rings the doorbell again. Suddenly a door slam close by and we turn towards the sound. A man in rugged jeans and a casual long sleeve shirt comes from around the corner of the house. "You are late" he says with a slightly upset tone. "You were supposed to be here for almost an hour ago." The man does not listen to Martins excuses. Instead he interrupts and tells us we have to go in through another door: "That door is only for guests at nice occasions."

The door we may enter through is on the side of the house, leading in to a hallway with washer, dryer, boiler. "You can put your shoes on the side" he says. He points at the right side by the door and heads into the house. "It was about time you came" he shouts a head of us. Following the sound of his voice we see him walk up some stairs. The second floor is an unfinished story. He expresses how he needs to go to work but he really wants Martin to have a look at the job and get a tender from him. Two other contractors have looked already, but Martin had gotten the best recommendations.

The man, whose name is Simon, explains he has two young sons. The boys share one room at the moment, but will soon be big enough to require separate rooms. Thus, he would like to get the second story livable so that they can have the floor for themselves in the future. He then lets us know that he wants at least a couple of bedrooms, one bathroom. and a joint living room. He walks around in the area when he explains what he wants. He shows approximate sizes and places for the rooms to be with his arms. Martin has taken out a notepad and a pen from his trousers and makes a quick drawing of the place. He brings out his laser measurer and measures all the walls, existing and potential, and notes the approximate measurements in his drawing.

While Martin measures, I present myself and my presence for Simon. Simon then moves so he has his back towards Martin. He lowers his voice and says: "It is good that someone checks up on construction workers". When trying to explain that is not the purpose of my presence he interrupts me. He tells me that when he was about to renovate his hallway (the one we were not allowed in through) he had a construction enterprise come to make a tender for the job. The man from the enterprise had told him to tear down the wallpaper, putty and level out the walls and only then he could come and do the finishing, detailed work. "Construction workers have so many jobs right now; they don't want to do the 'dirty' job any longer". Simon turns a bit and looks at Martin: "But this one has gotten good recommendations, so I hope he's better". He turns back to me: "To be honest, I really don't want to have anything to do with contractors. One will be fucked regardless of what one does". Simon continues explaining that he feels uneasy with hiring contractors. He means that you never know what they know and can and it is impossible to find out. "If you knew that they are good and will do a good job, it would feel so much better".

Martin has finished his measurements and asks Simon what type of insulation he wants. Simon mentions a new type of insulation and how it is supposed to work. Martin seems to listen and look around: "Well, considering the buildings' physics it would logically work. But I would recommend you really look it up, so it doesn't create a lot of problems for you, if that is what you want". Martin moves around in the open space and says that the type of insulation sounds nice given it will not take up so much space: "But if it was me I would go for mineral fiber insulation and make sure the ventilation air-gap is enough." He gives an example of a construction enterprise that wanted to please his customer and make the most space possible of the second story and skipped the ventilation air-gap. It became very nice, but after half a year the house owner called the company and complained. They had gotten pretty bad moisture and mold problems: "It all ended that they had to remove everything and start over". Simon, who looked skeptical when Martin started to tell him the story, now looks a bit uneasy. He puts his hand on a beam and strokes it. Martin shifts, he says that if Simon really wants that type of insulation he should call the enterprise who sells it and have them come out and have a look: "Explain what you are worried about. Make them write an attestation that it works on your ceiling with the conditions your house has". Simon looks a bit thoughtful. He says he is bothered that the other two contractors who had been here did not mention there might be a problem. Martin nods but does not say anything.

Simon asks for a price for the job. Martin tells Simon he works with written agreements and photo documentation and he will send Simon a tender. Simon looks bewildered and asks what photo documentation is. Martin explains how they take photos during the process that the customer gets on a memory stick when the work is finished. It ensures the work is properly documented for a potential future selling, possible concerns or insurance issues. Simon looks impressed and nods: "That's really good". He then asks how long time it will be till he gets a tender. Martin says it will take him two weeks. "Two weeks?!" Simon emphasizes and makes a grimace. Martin, who is writing something in his notebook, stops writing, lowers his hands and focuses on Simon. Martin says: "We have a lot right now. I don't want to promise anything I can't keep so it's better that I say two weeks." Simon seems to relax a bit but he looks disappointed: "But if it will take two weeks then I would like to have a price estimate at least, so I know if I will wait for your tender or not. I do have the other two that will send me tenders as well". Martin is silent for a brief moment. He then says that he usually does not do that, not to put himself into situations he can not to live up to or follow through. Simon says he understands but he just wants something to be able to compare with the others. Martin stands quiet. He looks around and in his notebook; finally, he gives Simon a number. But he immediately emphasizes he does not promise anything. The tender might become quite different in the end, also depending on what type of insulation he decides and so forth. Simon smiles and nods, he writes the number down on his phone. When he does, he apparently notices what time it is. He swears loudly and tells us we have to go; he really needs to go to work! He also expresses that he is very happy that Martin came and had a look. With one of his hands he shows that we need to head down the stairs. "I look forward to your tender" he says while we all walk toward the door. Martin slips into his shoes and I take mine in my hands and put them on outside to get out faster. Simon reaches for the door handle to close the door after us. Before he closes it he leans out and says with a big smile: "thank you so much and have a nice day now." We also thank him as he closes the door, then we go to the van.

"He came around in the end, compared to how he was when we came" Martin grins at me. His comment brings out a laugh from me and I agree in that he seemed pretty happy and satisfied when we left. Martin says: "It's important for us to get satisfied customers. Most of our customers we have come from satisfied customers. It's the best and cheapest commercial." I mention that photo documentation is a great customer service that must add to their customers' positive experiences of them. Martin nods, looks at me quickly, smiles and says that it is not only for the customers. He explains that they had so many complaints about things they were accused of having done, even though they knew they had not done anything. And there were situations with customers who refused to pay things they claimed had not been performed. "Thus, the photo documentation is just as much prevention for us and our work as it is for the customers." He puts in a gear and we drive away.

A couple of weeks later I call Simon to hear if he has received a tender and what he decided to do. He tells me he has received a tender. He also tells me however that he already knew when we were with him that he would hire Martin; as long as his pricing was not completely wrong: "Sure it's about the price, but I have to say after meeting Martin I got another perspective of the other two. He seemed to know what he was talking about in a completely different way compared to the others who were here before him. That is important to me". Simon expresses how one of the other contractors even had seemed to be unsure and that did not look professional or convincing to Simon.

I ask how he feels now to hire Martin as a contractor since Simon told me he was uneasy about this when we were at his house. "Well, he has gotten so many good recommendations, so I think

I have to trust him…I have to hire someone, and if not him I don't know who. And he gave me a good feeling when you were here, so I just think I have to trust him…"

Analysis of second interaction, Martin and Simon

Backstage in the van before coming to Simon, Martin expressed his view of his contractor role as that he barely worked any longer, implying that the role of professional contractor is to build and work with materials and tools. He did not consider meeting customers and doing administrative work to be a contractor's job.

When we arrived at Simon's house we experienced that the type of entrance through which an actor enters a house can separate guests from servants and indicate what roles and performances are expected (Pinch, 2010), but it can also indicate social positions and status.

By letting us in through the backdoor, Simon showed that a contractor is not among the people he considers to be 'nice guests'. Simon did not even perform a host script to welcome us. Instead, he showed through his performance that he expected Martin to perform his contractor role from the start.

Simon showed how he was in control of the situation. Even though the contractor arrived late, making Simon wait for him, Simon owned the setting. He took charge of the situation right away and defined Martin's status in the play and the role he was supposed to perform. He still owned control of the situation, when we headed up the stairs to the second floor where he showed and explained what he wanted. He created an impression of himself as a house owner who had other things to do, and a contractor as someone who should serve and carry out what he has been told. Martin played along, performing an inferior role. He asked what type of insulation Simon wanted and Simon answered. But then Martin changed the ownership of the interaction.

Martin expressed doubts about the new type of insulation Simon wanted, creating insecurity in Simon. Simon slowed down in his actions and even gently stroked one of the beams, showing affection for his house. Thus, Martin took over the lead in the interaction and the situation. He performed a shift in his role, from creating insecurity to creating a positive impression by using a friendly attitude. He expressed himself as a professional contractor who looks out for and helps a house owner. Simon then shifted focus of his concerns, from the insulation to the two other contractors who had not mentioned the potential problem with the insulation. Martin did not answer verbally but only nodded. Thus, he did not overstate his agreement at the expense of the other two contractors but still confirmed Simon's concern – a well-played performance, which may even have cost the two competitors the job.

At that time, however, Martin did not know whether Simon would finally decide to hire him. Thus, the fact that Simon had already been in contact with two other contractors put Martin in a competitive position. Simon also used the two other contractors as a lever to get an approximate price from Martin. Instead of "surrendering" to the contractor, Simon created the impression that to work on his house was sought after and interesting to fight for.

When Simon expressed that he would not be happy to wait two weeks for Martin's tender, Martin stopped focusing on the "job" and focused on Simon. He expressed that he had a busy schedule and was unwilling to promise something he could not keep. Through this statement, Martin emphasized that he was a contractor to be trusted in that he was unwilling to give promises he could not live up to. But his actions were also a performance meant to shy away from giving a price and to conceal his thoughts and plans. Finally, he did give Simon an approximate price, but immediately after he performed a defensive performance (Crane & Crane, 2002). In order not to lose face, he explained how the tender might turn up to be quite different. His performance thus enabled him to add changes to the final tender.

Simon then took the lead over the situation by saying he had to go; he showed us out, verbally as well as physically. But, Simon softened a bit in his performance at the very end of the play, when he used a host script; he expressed that he was happy that Martin came and wished us good day.

Through his expressions – given as well as given off – Simon performed insecurity and fear of putting his house "in the hands of" someone who does not know or chooses not to perform the job in a professional way. At the same time, he showed not really being able to tell if the contractor knew what he was doing or not, due to his own lack of knowledge. After Simon had expressed with his body as well as verbally what he wanted and where he wanted it, Martin took over the stage. He used his tools to measure and performed his role as a competent and professional contractor with full concentration. While Martin performed his role, a backstage moment with Simon occurred when Simon commented to me that it is good that contractors are checked up on. Thus, Simon expressed distrust and indicated his ideal conceptions of actors performing the profession; he also showed signs that he did not know if Martin was dishonest or not. Simon even said, "This one", about Martin, implying that he barely saw Martin as a person but more as a servant, implying hierarchical positioning between them. This backstage moment occurred while Martin was measuring close to where Simon was talking to me, but not so close as to have been overheard. Simon showed assumptions about contractors as a group, but even though he claimed that no contractors could be trusted, he still expressed some faith that Martin might be different.

Simon had received recommendations for several contractors, but Martin had better recommendations than the others; thus, Simon seemed to prefer, if not to hire Martin, then at least see for himself if he should hire him or not. The "feeling" Simon got from interacting with Martin seemed important for Simon's decision. During the encounter, Simon looked at Martin a lot, not only when he talked but also when he moved around to measure.

To create trustworthiness and to strengthen the professionality of the enterprise, visual tools such as photo documentation were used, a strategy to increase control for a contractor but explained as a service and for the good of a house owner. It was thus a tool that could be explained frontstage to be used for house owners' good but was actually used backstage for the contractors. The photo documentation seemed to influence Simon, who even expressed being impressed, both verbally and in his performance.

Back in the van another backstage moment occurred when Martin used a contractor script and talked about Simon coming around at the end, showing awareness of Simon's performance. Martin then switched to a SME representative/owner script, when he told me it was important for the enterprise to have happy customers.

Another backstage moment came when I talked to Simon a couple of weeks later. Simon expressed that his choice of contractor was already made when Martin was there and that it was not only based on price. He implied that it was Martin's performance that had convinced him to choose Martin for the job.

Third interaction, Johan and Henrik

I have booked a day with Johan (owner of C4) to visit some house owners and look at some of his enterprise's ongoing projects. Before we leave, he asks me to sit down for a while, so he can finish what he is doing. It is a nice spring day, I go out to sit in the sun. I am just outside his office. The office door is open and I hear how he calls someone. He sounds honest and sincere and has at the same time a slightly apologetic tone. He mentions: "I'm sorry…I've probably forgotten that…" Further into the conversation his tone changes to annoyance "I'm not an idiot either, but…" As the conversation evolves his tone changes again; he makes jokes and laughs loudly. They seem to have reached an agreement. Johan hangs up and comes out to me: "Some customers think they can treat you however just because you are a contractor and get paid by them. It's ridiculous. One has to put them into place in the beginning and show that they cannot treat you in whatever way they like. Otherwise it will just be problems later". I ask if it is not difficult to take a stand for himself when it goes against the customer's opinion. He agrees that it has taken some time and a couple of "hits" to be able to do that. He has learned the hard way that: "It's better to face the problems right away and stand up for what you believe in than take the hit later. Because the hit always comes and when it comes it's much more costly than if you would have taken it from the beginning". While we continue to talk he brings a hoodie from his office and we sit in his van and drive away.

On the way to the first house owner he tells me that this house owner called him a couple of days ago. The house owner, a man, had been recommended to contact Johan of his neighbors. Johan and a couple of his employees had been with the neighbor's house six months ago to set up a new façade, new roof and install a new kitchen. "Nice people, but they had some strange choices in terms of colors and materials if you ask me. But it's not me who will live there." Johan gives me a quick smile. He then says he knows the area well. They have worked in several of the houses close by, but despite that he cannot remember how the house looks like that we are heading to.

When we arrive in the area Johan suddenly realizes that we have passed the plot without realizing there was a house there. He has to back up. The plot is covered with giant pine trees, bushes and it is corrugated metal sheets on and around several small sheds. Between and behind all that there is a small house. Johan laughs and says: "Now I understand why I couldn't remember it, I haven't seen it".

When Johan parks the van a small, black dog comes happily barking, running across the lawn towards us. Behind the dog comes a man walking, wearing jeans and a plain t-shirt. He says the dog is not dangerous, just happy. The man greets us, we shake hands and pet the dog. When I introduce myself, he looks surprised and says: "Great, I need someone from the university who can tell me if I've been thinking right". When I tell him that I do not focus on materials but interactions, he has already his focus on Johan. He tells him about the house and how he and his wife bought the house and moved here for about a year ago. How they knew from the beginning that it needed to be bigger, but they could not afford it. While they have saved money, they have really gotten tired of living 'at' each other and: "It would be nice to have my own place now, you know." He smiles and winks at Johan. Johan laughs and agrees that it is important to be able to do his own thing occasionally.

The owner, Henrik, wants to show the outside of the house first. Johan says he prefers to look inside first and then go out. We all go in, except the dog is told to stay out.

The house is small. It looks like an old summer house [The building requirements for summer houses compared to permanent residence houses are not as strict]. Henrik goes before us and we enter a small, narrow, clean kitchen. There is a blueprint on the kitchen table. Henrik explains they have been in contact with an architect to get the best possible solutions for them. He turns the blueprint, so we can see. Johan looks at the blueprint and asks Henrik about walls and openings in the new and existing building. They discuss insulation and heating. Henrik says it is ok to have the same amount of insulation in the new walls as in the existing. Johan tries to explain that it is better to put in standard amount of insulation in the new walls. "Then it's in any case done in that part of the building" he says. He argues it makes more difference that one thinks: "I extended a part of my house for almost 10 years ago and I can actually feel the difference between where it's extra insulation and where it's not. The insulation in your existing exterior walls is not thicker than this." He shows between his thumb and finger and explains how it does not give them much prevention when it is cold out. "And if you are going to keep the electrical radiators it will be expensive for you during winters. You do as you want of course, but if it was me I would put in the extra insulation. It does not cost much more, and it will pay off your electrical bills". Henrik has looked at the blueprint and Johan the whole time Johan has talked, now he scratches his head and looks a bit pensive: "Will it not affect the rest of the building then? I mean, you hear all these horror stories about mold and all that…" Johan agree one should be careful. It is not the wall insulation as such that creates problems however, but moisture, improper ventilation and over pressure. Henrik looks a relived and says they will go for the extra insulation then.

They start to talk about the design of the extension. Henrik points out that his wife and he have discussed this, and it is really important for them the new extension has the same design as the present. Preferably, it should not even be possible to see it is an extension. He begins to talk about his neighbor and how they have mixed materials and colors; how they clash. "I don't understand how one can do it like that".

Johan's phone rings, he looks at it and makes an excuse. He needs to take this call. He walks off into an adjacent room with an open door. He does not close the door; we cannot see him but very well hear him. While he talks on the phone I ask Henrik why his wife and he decided to hire an architect. He says a couple of their friends had hired this architect earlier and they were really pleased with the results. It has also to do with his wife. She renovated two of her previous apartments and she was really frustrated with the contractors; they never gave her any suggestions of what she should do or what she should not do. She had to come up with everything herself. "So we figured, now when we are going to do a project of this size it's best to ask a professional who knows what they are doing. Then we can tell and even show the contractor what we want and how we want it." He is silent for a while, he then adds: "Sure, it's an additional cost. But he helps us with the papers to the municipality, and frankly, we would never be able to figure out how to do the extension as he has."

Johan returns to the room. He asks about a window in the adjoining room where he was talking on the phone. We all walk into the room, Johan walks up to the window. He shows Henrik and I his concerns: "It needs to be replaced, or renovated". The window is an old double-glazed window and it is barely left in its frame when Johan slightly pushes it. Henrik makes big eyes and nods: "I knew it was bad, but I didn't think it was that bad". They discuss renovation compared to replacement. Johan says a window renovation works well and is usually a bit cheaper. Henrik claims that new is always better. Johan tries to bring up some pros and cons, but Henrik is determined to go for a new window.

Later, Johan asks for a tour of the house to get an idea of the house and its conditions. Since the house is very small it is quickly done. Then we go out. The dog comes and greets us again. It follows us to the left side of the house, where the extension is supposed to be built. Johan asks Henrik about foundation, Henrik says that they have thought of slab. Johan nods quickly and agrees that it would probably be the best here. They are discussing it for a while and then Johan tells Henrik he only uses running account. Henrik says he has heard that from his neighbors and he expresses to be fine with it. We slowly return to the van. In the meantime, they discuss when to get started. But because they need an approved building permit before they can start, and Henrik does not know how long it might take, start date cannot be determined.

Johan notices a model plane in a shed that is open and comments on it. This leads into a 30 minutes discussion of flying model planes, various techniques, models, rules and regulations before we can end the interaction and leave.

When we go, Johan is sitting quiet for a while. He then comments that some encounters are really nice. I ask what he means, and he explains that he thought Henrik seemed to be a nice guy. "It is nice when the customer listens, but also that one connects with someone about something. I mean, something else than the work that I'm there to perform. It makes the whole process easier…"

Analysis of third interaction, Johan and Henrik

Johan was in control of the setting at his enterprise. When he told me to sit down and wait for him, he implied that it was his setting and his rules. While I waited, Johan performed a phone conversation with a customer. The overheard conversation highlights how performances during such conversations can evolve: Johan started off his performance by being apologetic and making excuses (Crane & Crane, 2002), then changed it and became offensive and intimidating (Jones & Pittman, 1982) before ending with another switch of performance that showed assertiveness, where he laughed and agreed (Leathers, 1990; Leathers & Eaves, 2015). When Johan came out to me after his phone call, he showed awareness that I had overheard his conversation with the customer, and he explained his actions. The situation thus became a backstage situation in which he explained his frontstage actions with his customer. This had also in a way been a frontstage performance for me, since he knew I was able to overhear him. When he came out to me, he explained what he had done and how he had felt, thus allowing me into his professional backstage area. Johan then explained how his performances with customers have evolved and developed through time and with experience.

Johan also acted backstage with me in the van, when he talked about the house owners who had recommended him to Henrik. Through his comments about the previous customer's choices of materials and colors, he implied that his role as a contractor is to do what he is told and not to question decisions, even though he might have another opinion. However, his expressed performance can be seen to be a bit ambiguous. During his interaction with Henrik, when he discussed both amount of insulation and change of windows, he showed to try at least to influence Henrik in his decisions. Johan used his contractor script, explaining the amount of insulation needed and why. He followed up the contractor script with a private script, giving an example of his private experiences. Then moving back to the contractor script, giving arguments of how it would feel (cold and expensive), and showing the thickness with his fingers. He was however not pushing his opinion on Henrik. Even though he was arguing for thicker insulation he still told Henrik that it was his decision and it was Henrik who was in charge of what to do. Thus, Johan was implying that he would perform what Henrik decided. Henrik then expressed insecurity towards added insulation due to horror stories he had heard earlier. Johan used the contractor script; he listened to Henrik's insecurity and agreed it is important to be careful. Henrik seemed to be a bit pensive about what to trust: the stories he had heard or the contractor who stood in front of him. Johan confirmed Henrik's insecurity but also explained what aspects to be worried about. Thus, Johan performed the role of a translator/intermediator for the house's needs and conditions. Through his performance, he helped Henrik save face and this seemed to help Henrik to make his decision.

From the beginning of the play, when we arrived at Henrik's house, both Johan and I acted in accordance with Leathers (1990) and Leathers and Eaves (2015) and their six important aspects of how a service provider should act. Henrik performed a host script when he came to greet us, showing us we were guests in his house, his setting. Johan and I expressed appreciation, also towards the dog and not only to Henrik, the owner. The dog can be seen as a prolongation of the owner, part of the owner's front. But when Henrik started to tell Johan about the house, he showed Johan it was time to work and perform his professional contractor script. He still performed a private script, however, expressing how nice it is to have a place on one's own and winking at Johan. A private script was also performed by Johan when he agreed with Henrik about the importance of having his own place. Thus, Johan met Henrik in his private script, creating distance to his role as a contractor and thus enabling him and Henrik to initiate a relationship through finding some common understanding.

Henrik showed he was the owner of the setting and he performed various scripts: from the private script as dog owner to a host script welcoming guests, and then back to the private script as a house owner who needs help. As a house owner, Henrik tried to take the lead at the start outside, but Johan shifted his script from guest to contractor and asked for another setup for the inspection, which Henrik accepted. But it was not a lead change – as we headed inside, Henrik was still in the lead position and acted the host script when he invited us to follow him and showed us inside. But when we looked at the blueprint, the host script was no longer in action since we were standing all the time. A standing position implies that this will not take long, and Johan was the contractor who was there to serve and not a guest.

The blueprint and the discussions about it highlight that the design and thus visibility were important. Henrik told us that one of his and his wife's friends had recommended the architect. However, by Henrik's comment about his wife's previous experiences it is possible to interpret that not only recommendations create new actions but also previous, similar experiences seem to create new actions, and also ideal conceptions of the profession and its actors, even though it is not the same actor or the same type of renovations.

To ask for help from another professional indicates that various roles have specific performances. To have a blueprint prepared by an architect degrades the contractor to an implementer, instead of him being able to come with suggestions as he is told what is wanted.

Materials can thus create actions and make actors perform (Ling, 2008; Pinch, 2010), which is seen for example with the blueprint. Also Johan's mobile phone created a performance when it rang, interrupting Johan's frontstage performance with Henrik and making Johan look at the phone and explain he had to take the call. Johan left the stage. Without asking for permission, he entered an adjoining room with an open door, close to where we were standing. Still, the room he chose could be seen to be semi-frontstage since he left the door open. We could not see him but hear him perfectly well. It is interesting to note that he chose to hide his body and his expressions given off but not his verbal expressions.

When Johan had finished his call and came back on stage, Henrik became quiet. He had performed backstage with me in relation to Johan and quickly got back to frontstage performance, when Johan returned and was visible to us. Johan then wanted us all to shift rooms for the performance to look at the window. Thus, Johan took the initiative for actions using his contractor script to make Henrik aware of the window.

In the adjoining room, Johan interacted with the material to show and strengthen his argument that the window needed to be replaced or renovated. When he showed this to Henrik, Henrik made an excuse for not having acted before (Crane & Crane, 2002), trying to save face. He thus expressed awareness of the window being in bad condition, but he expressed not having been aware enough to act on it, thus he had not done anything.

Before we headed out to end the play, Johan asked for a tour of the house, using his guest script to enable him to see the house's condition for his upcoming work. On demand, Henrik used the host script and showed us around. Back outside, Johan engaged in a contractor script, asking Henrik about his plans for the foundation, implying that Johan's role was to do as he was told. He then initiated the SME representative/owner script, however, when he moved on to say that his business would use running accounts.

During the final phases of the interaction, Johan and Henrik met with their private scripts, talking about model planes. Through their private scripts, they met on neutral but still somewhat personal ground, where both seemed to have an interest.

When Johan and I headed off in the van, Johan initiated a backstage performance with me and discussed Henrik and the previous interaction, the previous frontstage. He commented on the pleasantness of using the private script with Henrik and to be seen as something more than "only" a contractor.

5.2 Analysis I – Cross-analysis of the observed contractors' and house owners' interactions

Since the topics of energy or new materials and/or solutions regarding energy saving barely came up in the interactions between house owners and contractors, it is not a main topic in the analysis. But due to the lack of energy talk, it is even more important to understand the interactions and the roles and performances the actors expressed.

Analysis I, which is a cross-analysis of the three cases, is presented under three headlines: Performing to achieve control; Usage of setting and symbolic artifacts to create performances and joint understanding; Misalignment between actors and the usage of scripts and roles.

Performing to achieve control

Goffman (1961) claims that a service provider is not dependent on any one customer and can therefore turn down a customer, if he feels the service he can provide will not be adequate. A rather strong statement, since a contractor still needs to earn money; but implicitly, a contractor controls who he will have further dealings with. However, it may not only be the contractor who uses a performance to enable him to control the situation and pick and choose what and who he wants to do business with. A house owner can also use his or her position as house owner to be able to pick and choose the contractor s/he wants, especially if the job – the improvement measures for which the house owner needs professional help – is a job that several contractors are interested in inspecting and making a tender for. To have several contractors competing for a job puts a house owner in a favorable position, where he can pick and choose whoever he prefers. But the house owner can also play them against each other to (potentially?) get a lower price and better service. In addition, the various circumstances behind the encounter might also influence whether the situation is to be considered weak or strong (Van Iddekinge et al., 2007). If a house owner really wants a special contractor, or if a contractor really wants a specific job, this can influence and override the strength or weakness of the situation and implicate the use of impression management techniques and their likelihood to exert influence. Thus, it is possible that there were no other contractors who had inspected the house, and that it was only a performance Simon used to put pressure on Martin to give him a price and make the job look interesting and sought-after.

My claim that the actors try to be in control of who they want to have dealings with can be connected with Goffman’s (1959) argument that actors try to control their performances and the setting in which the performances occur, when interacting with others. However, Goffman also argues that a house owner is not in control of his or her setting when s/he has guests. But in these interactions, it was the house owners who owned the setting and were in control of the interaction in the initial stage. By using a host script, a house owner can indicate what actions are appropriate for the contractor (and me) to perform. The contractors showed signs of being inferior in the initial stages of the business relationships, which later seemed to change (and in some cases even completely switch) when a contractor could gain “control” of the interaction (not the setting). Thus, the one who was in control shifted during the progress of the interaction. The house owners owned the setting and initially took the lead of the interaction. They were thus in a position of advantage from the beginning. It was not certain, however, that the lead of the interaction would stay with the house owners. Instead, the lead of the interaction seemed to shift between the two actors.

When contractor and house owner interacted at the house owner’s home, the house owner was in control of the setting. However, the house owner was not in full control of the play. S/he had asked the contractor to come in and enter the house owner’s stage and take part in the upcoming play. The contractor had been accommodating and come to the house owner to see if he wanted to take part in the play. Thus, the interaction between the two actors can be seen as an audition. But instead of one actor auditioning for a role, both actors audition for roles in a mutual play. A contractor comes to see if he wants to take part in the play; thus, he is auditioning for the contractor role. But the house owner can also be seen to be auditioning for his or her role, if s/he finds that the contractor is someone s/he wants to create a play with. If s/he wants him to work within and with the setting, s/he better perform well so as to inspire the contractor’s interest in taking part in the play. The interaction between contractor and house owner can thus be seen as auditioning for roles, or also as a joint decision about who will comprise the play’s ensemble. Both actors seem to be searching for control of their own performances. But there were also performances not to give away their intentions regarding the final decision of whether take part in the play or not – for example, various performances were observed that aimed to conceal their intentions and opinions.

Another action to gain control can be connected to the contractual part of a service interaction. Even though the contractual part was present in some way during all observed interactions, the contractors did not push to make an agreement then and there (except in one interaction not presented in the thesis). Instead, the contract was postponed. And it was not postponed by the house owners (to give them some time to think before making a decision), but by the contractors. In all but one of the cases, the house owners' attention was shifted to the contractual part when they asked for further details about the job. The contractors were able to use the contractual part to shift house owners' attention from their questions, for example, about an upcoming tender. A contractor could then express a need for some time to calculate a price thoroughly and be able to check his calendar and so be able to write a proper tender. This action was of course argued to be for the house owner's best, so a well-calculated and proper tender could be sent with the right prices. However, the action to postpone answers enabled the contractor the possibility to be in control of his work and choose among the potential jobs he had at the current time. He also had the possibility to "forget" to write a tender, if he really did not want to deal further with a house owner and his or her potential job. It might seem foolish to shift the house owner's attention to the contractual part, since then the contractor will not close the deal while he can, and he might lose the job to someone else. But it can also be a performance to gain control of the situation, while enabling him to perform the professional contractor who is serious about his craftsmanship and shows respect for his customer. In all interactions, it was the contractors who took the initiative to write a tender. A contractor's usage of a contract at the end of the interaction also enables him to show the house owner that it is the contractor who will make the next move in the process to decide whether they will do business with each other. He can thus use the visual part, the contract or tender, as a tool to take control of the situation and as an excuse to conceal (Goffman, 1959) from the house owner his actual opinions, upcoming plans and decisions relative to the potential job.

In the first meeting between house owner and contractor, the two actors were seeking to understand each other and the situation without losing control over the situation and without making the other loose his control over the situation. It showed mutual respect between the two actors (Goffman, 1961). Seeking understanding of and affirmation from the other, by both actors, to know what actions are accepted and how to perform in front of the other so as not to lose face or make the other lose face, can be referred to as a dance (Carlsson & Koch, 2014a). The dance metaphor has its limitations, since in a dance, there is usually one who leads. This is not really applicable to the interactions. Instead, through the interactions, it became clear that one of the actors can own the interaction all the way from beginning to end, or it can be an audition that becomes a "dance" between them and where they find a mutual rhythm, moving interchangeably or at the same time, in rhythm with the other actor (Carlsson & Koch, 2014a; Miles et al., 2009; Teeger, 2007). However, it was consistently found in all cases that the contractors initially took inferior roles and waited for the house owners to invite to dance and decide the rhythm. But it was also seen that the house owner invited the contractor to take part or even take the lead in a dance. One way a house owner invited a contractor to take the lead was by asking questions, giving the contractor the chance to show his skills and expertise and then take the lead by showing the house owner things in the house owner's own home. The contractor could also use his role to indicate to the house owner what he should do and what he wants (needs?) to observe next. The two actors thus sought affirmation and confirmation from the other regarding their own role and performance. At the same time, the actors could be seen trying to align their performances and actions, maybe to increase the feeling of connectedness and the possibility for exchange (Miles et al., 2009), but maybe also to align their rhythms and negotiate what rhythm should steer or whether a joint rhythm could be developed (Teeger, 2007).

The meetings between contractors and house owners were thus as much decision meetings for the contractors as for the house owners. When a contractor comes to a house and a house owner, he steps into a setting he is not in control of. It is the contractor who has moved to the house owner's object that needs service, which implicitly puts the contractor in an inferior position from the beginning. Thus, he uses various performances to create perceived control over the situation (deciding when he can come and showing professionality through usage of tools such as notebooks and clothing) and also afterwards deciding whether he wants the job or not. In one sense, the purpose of the visit is for a contractor to inspect and gain understanding of what needs to be done and how, but the visit is also a "tool" to enable a contractor to perform with a house owner and get a feeling about him or her and see if he wants the job or not.

Usage of setting and symbolic artifacts to create performances and joint understanding

A van or pick-up truck or other type of professional vehicle was used by all the contractors. But the van stayed "outside" and was thus not really part of the frontstage setting and interaction with the house owners. The van was the contractors' private workplace, their backstage setting that they controlled, which was also noticeable in the contractors' actions and performances in and around the van. In the van, the contractors seemed to be somewhere between a private and professional setting. Their clothing and tools created a visible personal front for a contractor, showing others he was in his professional role, but his actions and expressions showed distance towards his professional role. During the rides to visit house owners, both private scripts and contractor scripts were used interchangeably, depending on the topic of discussion. The van allowed the contractors a backstage setting where they could be more than "only" the role of contractor, even in the context where I was following them around. The van thus allowed for private scripts and backstage performances.

Thus, the van was not the setting for the interactions. When it comes to house renovations, the setting for service is a home; it is not a service setting that a customer goes to. In this situation, the house owner is a customer and owner of the object that needs improvement measures, and also owner of the setting for service. A contractor will form his idea of what to expect and what roles are appropriate in accordance with the setting and the house owner's performance. The roles and performances chosen might also be chosen according to whether the contractor wants the job or not, which seems to indicate how much effort he will put into his performance (Darr & Pinch, 2013; Gardner, 1992; Kivisto & Pittman, 2007). A contractor can look for clues and symbols with a house owner but also with a house owner's setting, to get an idea about the upcoming job. The front of a house, for example, gives a first impression of the house owner and provides the contractor with a feeling about the setting for the upcoming performance, how to perform and what to expect. How a house is kept and the performance of a house owner can influence a contractor's ideal conceptions about the house owner, his or her economy and future performances. These ideal conceptions can influence the contractor to not want to align with the house owner, which can affect their performances towards each other and further decisions about wanting the job or not. This might be the case even though the ideal conceptions might not be consistent with the actor's economy or future performances at all, as was the case with Ove and Niklas. Thus, there are ideal conceptions about performances and materiality that might lead to surprises and potential loss of work for a contractor, if visual aspects are given too much weight in the interactions and the decisions made.

On the other hand, ideal conceptions can also support actors in their interactions with others. A specific front and/or setting can help actors show and explain to others how s/he wants things and how s/he wants to be perceived by others (Branaman, 2003; Goffman, 1959; Koslowsky & Pindeck, 2011). For example, the contractors are dressed in specific work clothes, one in jeans, but all with various craftsmen's tools, notepads and pens, and create an impression of professional contractors performing their skills. To show what role one has is important in order to perform the impression of a professional contractor to house owners. A house owner can then look at a contractor and judge from his behavior whether s/he wants him as a contractor or not, and what to expect and accept (the same can be said about a contractor).

But what can be said about a setting – that it does not necessarily show the "truth" – can also be said about actors. Just because a contractor looks as if he knows and performs to know something does not need to imply that he actually does. Knowledge is argued to sell, but is it really the knowledge that sells or is it the ability to convince the other actor that one knows? Simon expressed that one contractor seemed insecure, and therefore he did not want to hire him. Thus, showing insecurity was not something that enabled that contractor to get the job, which is interesting because it might have been a more honest performance. Instead, Simon preferred someone who performed as if he knew what he was doing. Thus, Simon showed to believe in the performance of the knowledgeable contractor even though he could not know for sure that the performance was accurate and would imply well-performed craftsmanship.

In the same way that actors put on symbolic artifacts (clothes, tools etc.) to show others who they are, they also use symbolic artifacts in their surroundings to show how they want to be perceived. Artifacts used were for example clothes, the houses' interior and exterior, gardens and its greenery, cars/vans, tools etc. But the implementation of energy-efficient measures can have a similar function:

> *Amanda wants to install a pellet stove and has called in Robert, a contractor, to see if it is possible and if so what to choose and where to put it. Amanda tells Robert while they are standing in the living room, "My friend told me it will probably be best to have it in the middle of the house so the heat can spread in all directions, but I think I want it in the living room, so I really can see and enjoy it and not just walk by it". When Robert has concluded that a pellet stove is a good choice for heating Amanda's house, he gives her a folder he brought with various stoves to choose from. He has flipped the folder open for her and tries to explain the pros and cons of the three models, but he has barely started before she tells him which one she wants. "This one will look perfect in here; it is neat and pretty and white, with a big glass front so I can see the fire. This one. I want this." Amanda points to one of the pellet stoves and turns and leans towards Robert so he can see.*

Due to the visibility of the flames, the symbolic artifact (the heating device) becomes interior design which creates another value of the heating device. To install a technical device or make an improvement to the house does not only have to be about heating and/or the economic aspect. It can also be about design of the symbolic artifact. The design of things in a house owner's home can indicate things about the house owner. Thus, solutions that are not hidden in basements or laundry rooms but installed in frontstage settings can have several purposes, e.g. to do what they are supposed to do (a chimney creates heat); to save money for heating expenses; and as a visual object, to strengthen the owner's performance of how s/he wants to be perceived. The technical solution is not all about saving heat and energy; it is also furniture that will create value because of its design and thus the impression it makes.

Another aspect of this interaction is that Robert used a folder to show Amanda different types of pellet stoves. He thus used a folder (a symbolic artifact) as a visual tool to enable the house owner to see various types and visualize how they would look. However, when he entered the room with the folder, he had already flipped it open to one page and thus limited the number of stoves to choose from. By limiting the number of stoves, he was able to influence Amanda to pick one of the stoves he had chosen for her. Robert thus used the symbolic value, pictures and design, and not really function, to influence Amanda's decision.

There have been multiple other occasions where symbolic artifacts were used by the contractors to help them visualize, explain and also influence house owners, e.g. in the case of photo documentation or a blueprint to visualize and explain and also to meet over. Darr and Pinch (2013) argue for the need to share a common understanding of a material if it is supposed to steer further actions. Even though the blueprint enables visibility of house owner wishes and clarifies potential problems, it also creates potential for discussions and a somewhat joint understanding of what needs to be done. A problem still exists however: the professional contractor and the house owner, if s/he is not used to blueprints, might read the blueprint differently, and this can mislead the actors to believe that they have the same understanding even though they do not. Thus, such artifacts can both help actors to visualize and meet, but they can also trick the actors into a false belief of security, thinking they understand each other even though they do not.

Misalignment between actors and the usage of scripts and roles

In line with Goffman (1959), misalignments in social status have occurred, or at least there were actors who tried to perform and create misalignment, e.g. Simon, who showed the contractor and me in through the house's back door. Simon even referred to Martin as "this one", implying hierarchical positioning between them. But there were also performances to find alignment between the actors, to find common ground to create a joint understanding and "a place" where a potential relationship could be built. Two examples are the case with Johan and Henrik, and their talk about model planes; and between Sam, a contractor, and Anna, a house owner who talked about their families and children. The actors can be seen to be using private scripts in which the contractors distance themselves from their professional roles and meet with house owners in their private scripts relative to the setting. Even though an owner wants help with his or her setting and a contractor is a professional who is focusing on improving/changing settings, the contractor meets with the house owner in the private script, on the house owner's stage in his or her script. The contractor thus distances himself from his professional contractor role and shows the house owner that he is more than "just" his role as a professional contractor.

Martin also distanced himself from his contractor role in his interaction with Simon. Simon wanted a new type of insulation, but Martin expressed doubts about the insulation. He said only “I recommend” when trying to convince Simon not to choose that type of insulation. He still agreed positively to Simon’s choice, but ended by saying, “if it were me…”. Thus, instead of using the legitimacy of his professional role as a contractor, he distanced himself from the contractor role and met with Simon in his private script. Then however, Martin used a horror story as a final touch to convince Simon not to choose the new type of insulation; it seemed to work. Simon showed he had become insecure by Martin’s performance and turned towards his house, showing affection as he stroked the beam. Martin ended his performance regarding Simon’s insulation question by suggesting a solution, and helped Simon put his decision into society’s socially constructed control through the use of tools and papers.

Five contractors expressed awareness that meetings with house owners show both uniqueness as well as patterns. For example, some meetings were performed quickly while others could last for hours, but still without being fully focused on the actual reason for the meeting. The patterns in the meetings provide a plausible explanation for the contractors’ usage of scripts to influence and interact with a house owner. Several scripts were sometimes in play during the interactions, and when one script was in play by one actor, another script tended to be expected to answer the first script in play, e.g. host-guest; amateur-expert; sales person- customer. The shift between different scripts might be due to the situation, as argued by Goffman (1959). But it might also be a way for a contractor to save the house owner’s face and thus put the house owner in a grateful position.

Branaman (2003) argues that performance of social characteristics enables an audience to stereotype the performer to only be what he performs to be. But the cases show, when a contractor and a house owner do meet over something “more” than the social characteristics of house owner and contractor, it seemed to create a positive impression towards the other. To pick a contractor might not only be about price; other aspects seemed to be of importance for the decision.

The personal meeting between the two actors, to get a feeling about each other, can also be important if the house owner has had earlier experiences with contractors, or heard about others’ experiences or perhaps the media’s rather problematic one-sided view of contractors as not performing their work properly. The role of professional contractor seems to have lost its credibility in certain respects. Goffman (1959) argues that when an actor suspects that a performance does not really hold (that an actor is an imposter), he will ask questions to find out if the performance will hold in the end. Thus, the personal interaction can be seen to be important to establish a feeling or a view of who the other actor is. The act of challenging the other actor’s role to see if the performance would hold was observed (e.g. between Anders and Olle - one example in methods for analyses; Simon and Martin), but also the performance of role distance. For a contractor to distance himself from his professional role in a professional situation, where he is trying to convince a house owner about his professionality, can be perceived to be a strange thing to do. But for actors to connect over something was observed to be important in enabling exchange and to reach a joint goal (Miles et al., 2009; Valdesolo et al., 2010). It can be easier for a contractor to connect with a house owner over something private. After all, it is in the contractors’ professional role and area of expertise that house owners seek help. Thus, if a contractor creates distance to his role and tries to connect about something else than work, it can help create a good impression of the contractor and support relationship building and further interactions for a potential business relationship. To create distance to the professional role, and meet for example in a private script can be interpreted as a performance to show that one is more than a contractor and has other qualities.

Some of the scripts in use also tend to imply a certain position or even status in the interaction, e.g. when the host script is used to take the lead in the interaction and tell other what to do. One example was when I accompanied Robert to meet with Amanda.

> *Robert and I walk the few steps to the house and ring the doorbell. A woman dressed in a modern dress opens the door. She looks at us, and Robert introduces himself and me. The woman smiles and says "Yes, great...welcome", and backs quickly into the house while she tells us twice to come in. She, Amanda, waits while we take off our shoes, and then she says, "This way", while she quickly turns and heads straight through the house to the living room.*

The example shows how Amanda waits for Robert to introduce himself, making him create legitimacy for his presence. She then performed the host script by saying come in and telling us what to do. The host script implies ownership of the setting and control of what s/he wants to show other actors etc. However, a contractor's role involves making sure the conditions of the house enable the improvements asked for. Thus, he may want to see other places the host is not prepared to show, which can become uncomfortable, as it happened for Ove, when Niklas needed to look in the room adjacent to the kitchen. One reason that Ove became uncomfortable might be because the room was perceived by Ove to be a "real" backstage area, not staged for a contractor as a "frontstage audience". Thus, a price may need to be paid for the house owner, when a contractor enters the house owner's home, e.g. if the stage for the play needs to be performed in other areas of the house that are not prepared for a frontstage act. If a guest performs a guest script, this implies that the guest stays in the prepared frontstage areas of the house, and the host can direct the show. But the host script will not protect a house owner from allowing a contractor to enter backstage areas, if he uses a professional contractor script instead of a guest script.

Scripts and performances were also seen to change due to the actors present and the situation. When Henrik talked to me and Johan came back from his phone call in the other room, Henrik became quiet and shifted his focus. This shift in focus created a change in his performance and body language from a house owner talking to another house owner, to performing host for the contractor who was ready to perform with him.

The contractors were also observed to shift between scripts and change performances. During the interaction between Robert and Amanda, Robert shifted between three scripts: first as a contractor investigating the house; second, a sales person showing different alternatives in a folder that might interest the house owner; and third, Robert performed the role of expert when he gave Amanda written information about the pellet stove she had decided to have installed. Amanda, on the other hand, used the role of a knowledgeable customer who knows how things will look and what to choose. Robert did not take the role of an expert, but was given it by Amanda. Amanda gave a long initial explanation of what she wanted and why she wanted it, but then, in the end, she still asked Robert for his professional opinion. She was trying to perform the role of the knowledgeable customer; but nevertheless, she sought confirmation that her decisions were "right". When she did this, Robert took the lead. He used Amanda's expressed interest in design, but he also expressed that another placement of the stove would imply problems, thus influencing Amanda's decision of where the stove should be placed. Robert's suggestion of where to put the pellet stove was not questioned or challenged. Instead, Amanda just accepted Robert's expert role and his decisions in her house. And before we left, Amanda asked Robert if he could be hired to fix other things than the pellet stove, extending his expertise skills into other areas of craftsmanship.

Another aspect that was interesting to observe, which I have not found in Goffman, was how all actors seemed to be more relaxed when entering the final phases of the play, talking about the weather or about upcoming or previous weekends. They became somewhat more private in their scripts, or if not private at least less formal. It seemed that the actors were aware that the play now entered a relaxed, less professional frontstage that did not imply negotiations or trying to perform professionalism and competence in order to be convincing. Instead, they performed as if the audition was over; they had both done their parts in the way they found suitable to the situation, and what would happen next was less relevant for the potential business relationship. This phase was also when actors in four cases started to talk about something else, as in the case with Johan and Henrik, and meet for a longer time in their private scripts.

Summary of Analysis I

Analysis I is a cross-analysis of the three analyzed interaction cases between SME contractors and house owners when they met in the house owners' homes to discuss improvement measures. The topic of energy did not arise in the interactions, and thus is not a main topic in the analysis. The main focus of the analysis is rather the house owners' and the contractors' roles, their performances and the expressions given and given off between them.

The analysis mainly shows five aspects: First, contractors as well as house owners search for control of the situations and interactions; but who "owned" control of the interaction seemed to shift between the two actors. Through the analyzed interactions, it became clear that either one of the actors can have control of an interaction all the way from beginning to end, or it can be a "dance" between them, where they find a mutual rhythm and move interchangeably or at the same time in rhythm with the other actor. Second, the setting is crucial for the actor's interpretation and further actions relative to the material. A contractor looks for clues and symbols with the house owner but also with the house owner's setting in order to get an idea about the upcoming job. The initial meeting between a contractor and a house owner is therefore important in enabling the two actors to get a feeling about each other and find out if a joint rhythm can be found, and whether they want to have further dealings with each other. In addition, the impression of a symbolic artifact can be important, e.g. a house can be seen to be transferred to the holder/owner of the artifact as part of the owner's front. Third, the actors hold ideal conceptions of the other actors; the implications of this for performances are briefly presented. Fourth, the concept of frontstage and backstage is discussed and how it affects performances. Fifth, various scripts were in play during the interactions. Some of the scripts also tend to imply a certain position or even status in the interaction, e.g. the host script to take the lead in the interactions, telling others what to do.

5.3 Empirical fieldwork II – Workshops with SME contractors

Only empirical material from the SME contractors in the south group is presented, due to that the contractors in the south group collaboratively developed a new business concept relative to improvement of energy efficiency through energy renovations in existing single-family houses, and thus focused on their interactions with house owners in more details.

During the first workshop with the south group, the SME contractors were supposed to present their expectations for the project. Their presentations highlighted two main concerns: 1. How to sell more and convince customers; 2. Concerns about materials and solutions. These two overall concerns were reoccurring topics during the process, which is also shown by the empirical material. The empirical material is structured and presented under six themes, showing the SME contractors' roles, their expressed performances with and underlying ideal conceptions of house owners.

When we enter the empirical material (under the first headline "house owners as customers"), we are at one of the participating SME contractors' enterprises, in the middle of the first workshop.

House owners as customers

Fredrik, one of the SME contractors, raised his voice and argued that people want to be a little 'green' today. And that "you want to show the neighbor that you are greener than him. That you are a bit cooler and trendier than your neighbors." Nevertheless, when it comes to energy renovations and implementations of efficient solutions the contractors expressed that it was up to the house owners to ask for it. When Christian asked if there are any ultra-radical eco customers, they were argued to be very few. Per: "Trends like that must come from magazines and media, it is nothing we [the contractors] can market ourselves. Maybe there is a turn in mind but nothing more than that." Fredrik agreed: "it's not enough hype yet. It's far too little…just those who really want to go all the way for it. But it's also about money…those who have a lot of money don't care, while those who don't have a lot of money are usually more interested in the environment and eco-friendly material that are good for one's health."

That house owners were considered difficult to work with was a reoccurring topic. The difficulties were argued to be partly due to 'Consumer services act' that sets out rights and obligations of contractors and house owners' when they enter into agreements with each other. This act was difficult to relate to with some house owners who were argued to use the rights to look for flaws or issues. Even though there were some situations during the workshops with heated discussions about contractors' lack of rights. The contractors also expressed they had some strategies to minimize misunderstandings when they worked with house owners. For example: "To document all agreements from day one"; "Specify the offer to clarify what's included in the price and what's not"; "Keep it simple and clarify trade specific words and concepts that might be difficult for a house owner to understand"; "Photo-document to make sure what's been done"; "Work with the customer's expectations. Explain and clarify and try to understand what it is that the customer doesn't understand and what it is that s/he expects".

House owners who had understanding and knowledge were appreciated by the contractors, as long as the house owners knew "the right" things. Oskar expressed: "It's great with well-informed house owners who know what they talk about and know what they want." Fredrik claimed further: "You can even say that there are two groups of house owners; the ones who know and a group of amateurs." Fredrik's statement triggered a discussion of house owners and their knowledge. Fredrik, Thomas and Oskar claimed it is great and a lot of fun to work with knowledgeable house owners if they know "the right" things. When asking what 'the right' things involved Oskar explained: "Internet has enabled house owners to be more knowledgeable than they were 20 years ago." And: "With the help of the internet, house owners can check what they want and why and then they're usually also aware that what they want is costly."

Costs and economic aspects were reoccurring topics. When discussing energy efficient solutions, perceived as additional selling, it was argued to be complicated in respect to house owners' economic aspects. Thomas: "How can one convince a customer of how to use and what to save?" Johan filled in that costs for conducting measures often exceed what a house owner wishes to pay. There were however opposite opinions as well, e.g. Fredrik: "The more one knows the more one can sell. Competence sells. Several customers have told us that they have experienced us to be a bit more expensive than others but that we seemed to know so much so they hired us anyway. So, the money issue is not the whole truth." Another opposite opinion was from Oskar who argued that economic related problems usually were workable: "One has to feel the customer and sell solutions considering the customer's conditions." This made Veronica ask, how do you know what conditions a customer has? Her question led to a brief discussion about the importance of symbolic artifacts, e.g. clothes, cars, accessories, and how much similar artefacts signal a person's economy. The whole discussion ended however with a joint laugh and no solution when Oskar gave an example of the eccentric billionaire.

It was not only the costs for *construction* work that was argued to be an issue. Niklas made a hint that: "One of the difficulties with private consumers is to make them understand that *managing* costs and *performing paperwork* costs. I cannot increase the hourly cost too much, because then they think we are way too expensive and lure them their money." Oskar agreed: "It's easier to get an understanding of customers for costs and to explain why things cost if the customer is well-informed and understands what things mean." Johan added: "Well-informed customers have also better explanations of what they want and why they want it. It's difficult when the customer comes with a drawing on a napkin. Then it's also difficult to calculate a correct price." The most difficult house owners were considered to be those who know nothing. Thomas clarified why: "They usually have no idea of what should or even needs to be done or what it will cost". In the end Per gave a conclusion to the problem: "I wish I could be more of a salesperson, and economist to be able to show that people can make money on what one performs…and a psychologist to listen to them." which the others nodded and smiled at.

What to offer

When Veronica asked: "How can we help customers want to perform energy renovations and make their homes a little bit greener?" it went silent for a moment. Then Per cautiously said: "Maybe one should be a little wider when one sells, also check other parts…" After a few moments his statement was followed by others. They started to talk about energy renovations. The importance of helping house owners to think correctly and how they could do it, this made them talk about collaboration over trades; difficulties and possibilities. Fredrik claimed: "When performing wet-room renovations one collaborates over the trade borders given its importance and implications if not performed correctly." Oskar agreed and argued: "If one shall look at solar panels maybe one should also look at the roof at the same time. One can help the customer to think a bit smarter with her or his choices. Maybe it's more effective to install floor heating than radiators or… The customer should then possibly perceive us as professionals if we try to help them and not just look at own piece of interest." His argument brought agreements from the others, but also disagreements. Johan: "Well, it will be difficult to tell that to the customer who only wants to renovate a hallway." It was however argued that it was important to feel the customer and then give ideas. Oskar: "Then if the customer does not want that [what is suggested] one has at least tried and given the possibility." They all concluded that it was a good idea to look wider when they met with house owners. To try to help house owners understand the bigger picture and thus make better choices. There were also difficulties raised, e.g. how to know enough about things to help customers despite not working with it. It was later decided that they did not have to claim house owners *had* to do something, rather suggest that a house owner should probably consider it for their own, or their house's sake.

When the contractors talked about working in a wider perspective, Veronica raised the question if they wanted to make a joint effort. If so, how they wanted to proceed. The question raised reflections of how to continue to work. Per: "I think, after we have gotten the customer, the first measure to perform must be an inspection." Oskar immediately agreed: "Yes, I believe so. If you go out on one of these inspections then one can look at everything; how does the ventilation look, how are the windows, how are the outer conditions." Niklas: "But, then that will have to be a joint attack." Oskar: "Shall we then come as the four vise men, then it will cost a lot […] instead of going out all four, we could have some kind of document that one can follow; these things are supposed to be checked […]. I mean all of us here have so much experience, so we will see how things look in regards to all the different professions…one does not have to be a genius to see if something is good or bad." It was still argued however to be interesting if all professional categories could look at a house and what it could cost to fix it. Oskar: "Because often people think that they live in a good house. If they have painted the living room in the flashiest color and have a nice kitchen, then one lives good, right […] and exactly as you [Niklas] say, they will fall backwards when they see how much it will cost to fix…" Niklas: "Exactly, and that is a tricky part, to convince the owners about how much they have to spend."

Markus: "I think it might be good to look at a house from a checklist, but we should consider what measures should or could be done. Sometimes it might not be relevant to change windows even if one sees that it is leaking around them […]. Maybe they only have 50.000 [SKr], then they should not focus on the things at the bottom of the to-do-list. If the roof is leaking or if the walls are not air-tight, then you should start there instead." Niklas agreed and continued: "And if we get in contact with a customer who wants to renovate then we can ask; Ok sure, you want to do this…but what do you think then? What is your goal? Because then we can catch them and tell them that then you should probably wait with that until you have done this and take that later. And start in the right end so to say." Markus: "It might be a good thing that one can highlight it for a house owner…because if the owners are younger…. They have so many things up in the air..." Markus continued on the thought a bit more: "But even if we have a checklist, we need to adjust and be flexible in relation to what the customer wants." It was agreed on, Oskar followed up: "Yes, because there are various wallets that we have to work with. But I think it's quite easy to develop a checklist of what to look at when one is out inspecting. The inspection should be able to be made of any of us."

The checklist was a recurring topic during the process and later served as a basis for what to focus on and as a tool to gather their thoughts around. Thomas: "One thing that I would like to focus on is solar panels. They fascinate me, and I would like to know more about them and try them." Erik argued it could be relevant to offer: "some kind of smart system, like heat steering and apps that check what apparels are on and how much power they use." Oskar then highlighted: "If we sell this concept to those born around the 40's, it will never sell. They are too afraid for the technique. Younger people however, they think it's really cool to sit in the couch and steer the lights and check variables and the like…" Thomas agreed: "Yes, it's…a generational thing." Oskar said: "I think it's important for the customer's sake not only to look at our own things but see the whole picture." Markus agreed and argued for the use of the checklist: "and then someone must perform an inspection, where these points should be checked in the house. From that we can offer some package or whatever." Thomas: "I agree…and if the houses are quite similar one will also learn a bit what to check for…and then it will go faster to inspect".

The topics on the checklist led to many discussions. In the end Thomas seemed to get tired of the discussions and wanted to act: "… now we want to go out and feel the customer, what they really go for. Then one will notice pretty quickly if they are willing to do any measures on their houses…or not." Niklas agreed: "Yes I think so, that we probably will notice very quickly…some will surely take it [the offer] but it will stop there". Thomas: "Yes, and then one is there…it's still they who are the owners…but if the feel is that the house is important and that one wants to have really good control and order….then we might book another time, and then for example really look into the attic. But ah, […] first of all we are supposed to get into the house, to the customer…to feel…and some they don't want to make anything they're like…ahhhh..."

Several arguments later it was decided that the concept and the contractors' actions should be developed stepwise, not to put too much effort into something they did not know what it would result in. It was also decided that the checklist was supposed to work as a basis in order to make plans for future work. Thomas meant: "This is a bit of a test right, to feel an area…maybe we should do something simpler and see how willing the customers are in an area…and see if we get any response at all" All agreed but not until they had clarified that the folder, the commercial for the concept, needed to be well developed. Mattias: "…first and foremost we need to get them [the house owners] to contact us, and to get them to contact us we have to make some…" Oskar: "Some commercial". Mattias: "Yes, and we are not going to do *that* poorly…the commercial folder needs to be professional and nice looking, it needs to be good initially…that we know…" Thomas "And then we'll see what happens…because the fun is to see if something at all happens and what will happen." This lead to discussions about the disposition of the folder and what should be in it, implicitly it meant making choices for what to focus on. Erik later suggested: "I think it's important that we explain that we act without being seen…and collaboration." Markus: "In addition, what we have to do is explain what are going to do, so the customer knows understand what's going to happen…as long as the customer knows what will happen there aren't any problems. But if they don't know they will be worried." [all agreed].

How and when to reach house owners

Niklas raised the topic: "Then it's about reaching the customers." Oskar: "Too bad there are no subsidies. If there is a subsidy it will contribute to people's interest, as simple as that." Thomas asked: "Should we create some kind of folder and distribute it in the area, and see who bites? If we make a folder, we can hand it out at other occasions as well […]. Otherwise we must knock on doors and that doesn't really feel relevant. I think it might be easier to make a distribution to all and see what it results in." Mattias agreed: "That [a folder] sounds maybe more appealing as a start." Just after saying that, Mattias shared with the group that his enterprise had recently made and distributed a folder to areas with similar houses that the group addresses. He meant that it was difficult: "Through experience we know that these specific measures…it isn't something people just do…we've noticed through advertising and distribution of folders, it might take a couple of years until they [house owners] take contact. Because it needs to grow with them for a long time before they make the move. The house owners who are a bit older, they need time… I have several examples where a person has called us and asked for a certain measure, and then we have to ask where he has heard about that. And then it's a *really* old magazine that he has had saved." Mattias' experience was however not followed up by the others. Despite Mattias' outspoken concern, a folder was developed.

Also the timing of distribution of the folders was a reoccurring topic. Oskar: "Then, it also has to do with when we send it out. If we send it out now we won't get any answers at all." Mattias: "No, we're at the wrong time of the year right now for energy efficient measures […]. That is completely uninteresting for them [the house owners]. That will come sure as fate in September, October when the fall storms are coming and when it starts to be a bit cold again. Then it will come […]. Now is just stupidity…it's better to wait till…." Thomas: "February maybe…when it's the coldest." Oskar: "It's like for us with outdoor lightning….they [customers] always call in the end of November, when it's the worst to be outside and work, ha ha ha!" Erik: "Yes, I think it's a big thing in this…we [humans] are not doing anything until it has crashed…" Thomas: "One shall also be aware that January is usually a month when people have pretty bad economy." Thus, it was decided to distribute the folders in February.

In addition to a folder, there was a discussion about trying to create a brand, certificate, symbol or something that visually could be seen, on the inside or outside of a house that had undergone an energy renovation. When a person buys a house s/he was argued to prefer to invest in a new kitchen or a new bathroom. To make people invest in energy renovations were more difficult. Mattias: "It is not as visual as a flashy kitchen…the bragging factor is quite low… But it needs to be something fancy that others can get curious about and ask about; what is this and why do you have this." The contractors concluded that a brand or a logo would be great to have but it would have to come later in the process.

What house owners to focus on and why

When they discussed which customers they should focus on, Mattias took the lead: "Maybe we should start with the house area and see which customers live there? The customer segment will become clear if we focus on an area. I think it's more important to find an area…a character…" All nodded and agreed. Thomas: "I also think that if we look at a house, we will see what the owners are interested in….*that* one notices pretty fast….and then it creates businesses." Thomas then continued: "But, even if the houses are the same, the owners might priority different things…we don't know that." Mattias: "No exactly, but if we then offer a concept it should have different options, possible to choose among." Markus: "The customers don't really know what they want… They want lower energy usage, but they do not know how to do that." It was again argued it was important the contractors helped house owners to choose what was needed in their houses. Markus argued, they should decide an area where they should try the concept. And the first area should be checked a bit thoroughly, to avoid problems. Oskar: "So, the first area should be on a hill." His comment brought laughter among the others. After some joking however, they all agreed that if it was possible to find an area on a hill that would be great. An area was decided for the first test run of the concept.

When the contractors discussed who might invest in a concept like the one they were developing, various aspects were raised. Mattias: "When we go out to make an analysis document, it's often to people who just have bought a house…they do pretty much. They can remove a whole interior and then one has pretty good possibilities to make something good out of it and improve the house's value, and save some future money for them". Oskar talked about house owners' awareness and feel of their houses: "I think the person walking around and feeling: 'I'm not really aware of my house, and my electrics is not really up to date' and then goes out to his mailbox and finds this [the folder]…then! But if you feel that your house is tiptop, then you throw it [the folder] out immediately." Thomas: "Yes, there are different types of humans, and some don't even care about their house and don't invest in anything…they go to Mallorca once a year instead." Mattias: "I think that […] the older people…that might have lived there all their lives….well, I don't think that this would be interesting for them… But, many times these areas get a turnover, and those who buy these houses are often younger families with children and so on… And for them it might be interesting… They will do something anyway…they usually do something…and they see it in a longer perspective […]. And, I mean, it's just to look at those who buy old houses today… They turn the whole house upside down… That's not how it was before. But now, everybody is more aware that it should look good and…" Thomas: "Yes, I think so as well. I believe in that a lot. But some older customers…they make huge investments to keep the value of the house when they sell it. They want everything in order when they sell it…" Oskar: "…Well, it all depends on the one who looks in the mailbox. How they experience their house and their needs...that's how it is."

How to influence house owners to invest

Oskar highlighted that they need to explain in the folders what an inspection includes and what it might lead to, to motivate actions. There is however a problem of explaining beforehand: "Because we don't know what kind of measures that are needed until we have inspected […]. But if we follow the checklist, I think we get a pretty good understanding of it [the house]…and then I can hand it over to you [turning to Markus and Mattias]. […] I think we'll get a pretty good understanding." Niklas: "*We* get an understanding of a house very fast… But we are supposed to translate it to the consumer…so he will not get the hiccups right away […]. So the customer understands; this is what we do the first time, and then we'll get back to you, and then there is step two or three, or how we prefer to work. So we don't bring the guillotine out to the customer….it might frighten a lot." Niklas' statement brought silence with the others, then Mattias argued: "I don't think we should divide it so between us, but […] it should be more, as Markus says, a holistic concept…so the customer feels that it's seamless. And they get…they get a totality that knows everything." Niklas: "Because it's that first occasion….it's there and then we're able to make a good impression.

And then they're supposed to get a feeling about us, as you say…should I call the builder there and the electrician there…but it's really *one*."

It was also seen as important to have the University's brand on the folder to show trustworthiness and expertise. Mattias: "It will show that it has more substance and power behind it".

When they discussed how they would show that they were a group, the topic of responsibility arose. Markus: "A major thing is that we take responsibility […] that they [the house owners] have one person to turn to. They don't have to turn to different persons and we won't blame each other. And in the long run, they will save both time and money. And in the construction business, generally, people […] they're afraid to be cheated and all the TV-shows that scare people…"

Niklas questioned how to make house owners interested in an inspection at all: "We have to entice…. It's like all selling…one has to entice the customer. I mean, the first half second as someone watches this folder, he'll be stuck; it must be interesting. Then, […] how do we make them interested?" Several suggestions were highlighted. Thomas: "Many of these measures don't cost a 1000 SKr, it's rather a lot of thousands we're talking about. And, then they [the house owners] need to finance it" Niklas: "Yes, exactly. And if we can show a calculation of...it doesn't really matter how much they need to borrow. It's more about monthly cost…it's always what's interesting." Thomas: "Yes, one can get a bigger market […]. There are always those who can cash straight up, but there are many who can't….but who want…but have to refrain due to that. If we implement these measures, they are value increasing. Then there will be an increased value of the property to take a mortgage on." Niklas: "I think *that* is really important, because, if they do these measures, they will not only increase the comfort but also the value of the property. That it's worth more when they sell." Erik however, had a slightly more diversified view: "I think it's difficult to make an improvement for them [the house owners] so they make *so* much money, so they chose it because of *that*. I think it's important to show that they will save money but also that they…the comfort…and *maybe* that they will get it [the investment] back when they sell it." Oskar added: "And that their houses will be energy efficient, and that they will get a lower maintenance costs, *and* better comfort". Markus: "In a secure way."

Niklas raised a slightly new topic, he argued: "We have to consider what more aspects we have to be aware of to appear professional and be able to perform correctly." Per filled in: "It is important to show the customer that one is a professional and not one of those poor workmanship guys. The more professional one is the better it is for the customer." Johan agreed and highlighted "Well, the problem however is *how* to show the customer that one is competent and professional." Per: "Well, you can have certificates etc. but that doesn't say really anything to the customer. He still needs to assume that he will have a good craftsman." Instead of certificates another way of showing professionalism was by taking pictures. Markus: "I also think it's important to take pictures…because there's a lot we do that doesn't show. And with pictures we can show what has been done and how. But also for our own self-control." All agreed, however three admitted to not take pictures during their everyday work as regularly as they probably should. Oskar: "We are a bit bad at documenting. It's the floor heating, but otherwise…it's not much…"

Even the use of brochures was appreciated as a tool to show professionalism, and giving weight to arguments. Thomas: "It's not the same with a screen to show customers. Better to bring a brochure that they can browse through, that then gives weight to what you say. And then you can ask them to take it home and read." Niklas agreed: "The eye sees things so fast just by flipping through a couple of pages. You can give any number of links, but it'll never be the same as something you can hold." This was supported by the other participants. Thomas meant that they've even printed brochures especially for the installers. "Because they find it easier to bring those [brochures] along and show the customers. So, they have those in their cars. It makes it much easier to sell things."

Regarding selling, the contractors talked about how to spread the concept and sell it. Thomas: "The best way is to get out to meet the customer. Make them curious so we can get out…it's *then* the selling starts: 'Oh, I saw that your windows start to fall out, I have a good suggestion.' So, it's a lot of selling at the location. But of course, we have to entice the customer to awaken his curiosity." Various solutions were discussed to entice potential house owners, for example solar panels. Thomas: "I think solar panels are good to show in the folder." Mattias: "I think so as well, it might be one of those things that can entice a lot of people." Thomas: "We are going to test it on our property, to see how it works and learn what will be the best way to install it and so on. It's better to make mistakes on our own things." Erik: "It's also easier to sell when you have touched it and worked with it, gotten a feel for it." Mattias: "Yes, that's always the case."

The aspect that things were easier to sell and spread when the contractors had gotten a feeling about it was also connected to contagiousness in areas. Markus: "Once we have come into a house, and sold this, then it might be easier to sell it….because then one can refer…" Niklas: "Absolutely! That is by far the best-selling argument…others have bought…others have…" It was also stated that there are many times a "risk of contagiousness" in areas where similar houses are built, and this contagiousness should be used. Markus: "Those areas are really good, because when one has done a house then one has done it, and then there might be interest from other neighbors and […]. If we only get one customer, and make a good job there…then I think it [the concept] is really easily sold; because then we get some status." Oskar agreed: "Yes, as I know from my parent's area, when one house owner changed his roof, suddenly all started to change their roofs. Some had even changed their windows. My dad was really stressed because he had not changed his windows… There is a really good risk of contagiousness." To put up a sign at the house where the work would be performed and to put information notes at surrounding houses was two ways to use this "risk". Thomas: "It might be good with an area that is a bit tighter built, then they talk more with each other" Oskar: "Yes, it might be like that, especially if they've lived there since it was built."

Regarding the problem of how to influence house owners to invest, the issue of saying "no" to potential jobs was highlighted by Mattias. He also argued for the importance to say "no" sometimes. Thomas agreed: "It's a strength to be able to say no: 'this isn't something we will perform because then it will be moisture damages and'…" Markus did not really agree: "Well, now I am not a sales person but…as a seller it might go against their nature…" Markus' statement created small laughter among all present participants, except from Thomas. He clarified what he meant: "But it doesn't have to [go against their nature], because you might awaken another interest with the customer when you say no. When he [the customer] realizes that this guy will walk away from here without getting any businesses, he might realize that something isn't right…'what kind of person is that….well that's a person who cares about doing it correct otherwise he doesn't do it.' I can say that I don't want to create those problems for you, so we have to find another way." Markus: "That's serious and shows professionality." Thomas: "But isn't *that* what you have to show when you make businesses. I want to make businesses, but I don't want to make the wrong businesses. It doesn't give anything in the long run." Erik: "We're pretty spared from these questions as we have the security and things behind us. And the customer has no super knowledge about our things. And then we can say, 'you have to do it like this'…and…what could he say." Markus: "You have to be alert yourself and tell them how things are" Thomas: "Yes, there's no point to go out and waffle". Niklas: "I can notice that with myself, I get an understanding really fast of what needs to be done, but you haven't, as the customer, walked around and thought about this for 6 months […]. I'm not there in my thoughts….*yet*. So, I try to '…ah, ok, yes, I'll look into this and then I get back to you.' So, I don't stand there, like you say [turning to Thomas], 'ah well then one can do it like this you know or like this….and then he says…but I want one of this…ah, right'…it can easily be…" Thomas: "That's an interesting area to talk about, but it's a very difficult area as well." Niklas: "Ah, but right! When you [turning to Veronica] have developed a model and a checklist for how to do that, then it's enough! Then you don't have to do anything else!"

How to handle lack of customers

A discussion of possible reasons for lack of customers took place after all participants had been informed and expressed their surprise that there had been no responses at all to the distributed folders. Oskar: "I start to think it might be the wrong area. But at the same time, I think that…it's quite central, many seem to be older that live there. And it's a mixture with families with small children, so I really think it would be a good…mix of people. And it's not too shabby cars that stand there…because that can also be an indication that you don't care that much." Mattias: "Maybe it's not so surprising after all, it's the wrong time of year [spring] and it hasn't been an especially cold winter. I would need to freeze pretty bad and find it uncomfortable to live and function in the house to make me react and energy renovate my house. If it's not too cold I might think that I can put my money towards something more fun." Thomas: "Sure, it might be more fun to take a nice vacation…and treat yourself with other things. And then it's also, we love to buy things that show. You would much rather have a BMW on the driveway than a Kia…why…because it's status, it shows. It's the same with the house; things are easier sold that stand out and are cool." Mattias: "But that's the same for all of us, the electrical cords and insulation and the like, it does never show. These things must be the most boring things to invest in." Oskar: "Sure…of course it's like that. But, we also know that people are renovating and dealing with their houses…that's how it is." Mattias: "Well, there's a bit of a conflict there. If you watch the ones, especially those who buy a new or a used home…they put extremely big amounts of money towards their houses today." Erik: "Sure, and in an area like this there should at least be some that are meticulous about their properties." Oskar expressed his surprise once more: "I am very surprised. I start to think that we might have designed the folder completely wrong, maybe. Well, we know that this is almost the most unsexy there is." Thomas disagreed: "But that's not something everyone thinks. We think it's pretty good, and we are several here who have thought about this from various professional businesses….so, it can't be *that* bad. And we also have the weight from Chalmers' [the University's] logo…it creates seriousity, it's not Donald Duck that is out […]. The question is if there is something in our offer that isn't…is it too expensive, is it…" Mattias: "That's difficult to say…of course people are careful about money. At the same time, if they in some way have had a thought about doing some kind of renovation, or some energy efficient measures, then it's not a big deal really. It's not a big pile of money then. It might be one thing, but it can't be the whole truth why no one has called."

A visual business model exercise was performed with the business model development tool (see method for further explanation), to clarify the concept and to find new ways to address house owners. Erik had one first look at the tool and concluded that to have customer relationships one first needs to have customers. He continued: "Well, customer visits… To get inside the entrance door…it's only then we can create a relationship. If we don't have the opportunity to enter, we will not be able to create any relationship either."

Through the exercise with the tool however new ideas of how to get in contact with house owners were created, for example online forums and exhibitions/fairs. Nevertheless, it was not until Mattias came up with his idea that everyone seemed to agree. Mattias: "Well, maybe we should use a nice spring day, chose a Saturday before lunch, smack up a party tent at ICA Maxi [a big grocery store] or something and stand there and give away some banners. Offer some coffee and some information." After initial jokes about making it into a beer tent, all agreed that the idea was really good for getting direct contact with house owners. Mattias: "It costs…well it costs time, but it won't cost much more than that. The category that buys at IKEA might also be a customer segment pretty close to the one we're looking for." Oskar: "But Bäckebol is good then, there are both IKEA and Bauhaus and…" Mattias:"Yes, you have Clas Ohlson, Bauhaus. In these issues I think it's…because these are not the fun parts in a house. It's not about kitchens and bathrooms and decorations. This is the boring technical parts and there…I think that the men are more decision makers than the women are, it's a guess at least. And I think that I notice […] the house owners that we're out at…It is very markedly men calling, receiving and showing…that's not possible to get away from. It's very few women in the households that show us up the attic, and show us what should be done…that's how it is." Erik: "Yes, that's how it is. It's usually the man who is at home and shows around. You become surprised if there is a woman that orders the job and is at home receiving us when we come, that's different, that doesn't occur regularly."

A final aspect that was discussed regarding reasons of lack of customers was if house owners get too much commercial in their mailboxes; they might have gotten tired of engaging in it. Another way of selling the concept might have been better.

The majority of the folders were distributed regardless of whether a sign was placed on the mailboxes with the text: "No commercial, please". One contractor shared an incident where one house owner had been standing in the window, watching him in his car. When he put the folder in the house owner's mailbox the owner raised and shook his fist towards him, looking really angry. The contractor thereafter chose to avoid those marked mailboxes. No one else had any similar experience, it was reflected whether house owners would appeal better to another media than folders. Thomas: "Maybe some unique things have to be sold in another way than to only distribute a folder." Oskar: "What we're missing in the group is some kind of marketing person, because that doesn't seem to be our strongest side." Mattias: "No, but then it's about….I think it's a lot about time as well." Oskar agreed: "And then it's about visibility too. Like a porch, that's perfect, that's visible and the neighbors can see that you sit there and have barbeques and the like. The porch has an attraction value which this [energy efficiency] doesn't have. Niklas and Erik agreed with Oskar who continued: "For us, it's easier to sell lighting in a driveway than what it is to get in and help improve the energy efficiency." Niklas: "There's so much cool-factor today. It's so much design, and it's supposed to look nice, and it's supposed to be nice and trendy." Erik: "People are afraid […] you put on the blinkers and then you continue with what you were doing. It's not until it's leaking in from the rain, then you might consider doing something about it." Mattias: "I think there's a lot in that statement. If one considers the older generation; they invested more in their houses. Now it's the younger…they want to travel, they want to…do other things." Erik: "The home isn't so carefully cared for and maintained any longer." Oskar: "Somehow it feels like we have to explain to people what it [the concept] is. It doesn't seem to be enough with the distribution of these folders, since no one has called."

Summary of Workshops

The empirical material from the workshops is drawn from the south group's process to develop a new concept regarding energy renovations in single-family houses. The topics discussed were the contractors' own roles and their interactions with house owners: e.g. their concerns for energy-efficient solutions and materials; how to work in a safe manner and not cause any problems for themselves or the houses; house owners were perceived to be difficult to work with, but the contractors also revealed strategies for coping with the difficulties; with house owners' understanding and knowledge were appreciated as long as the house owners knew "the right" things. It was also seriously discussed how to show competence and professionality and not be perceived to be dishonest and worry the house owners. In the final phases, various strategies for how to reach house owners were highlighted.

5.4 Analysis II - Analysis of SME contractors' interactions in workshops

Analysis II has further focus on the SME contractors' roles and interactions with house owners. In the workshops, where the contractors collaborated to develop a new concept of energy renovations of single-family houses, the topic of how to interact with house owners was reoccurring. In the light of the observed and analyzed interactions, it is interesting to use Goffman's dramaturgical theory in another setting to further explore these contractors and their house-owner interactions. Analysis II is presented under three themes.

How to perform competence and show professionalism

It was argued that selling could not be started until a contractor actually met with a house owner. It was only then they were able to convince a house owner that s/he needed something new or something else than what s/he already had. It was argued, however, that to describe to a house owner what improvement measures were needed in the house, and the cost of executing these measures, was problematic if the house owner did not have the "right" knowledge.

A house owner's knowledge of costs and needed measures could be connected to Goffman's (1961) concept of visibility, or rather the lack thereof, since the contractors seemed to be reluctant to put costs on their websites. It is only in the tender that a contractor sends to a house owner that costs are calculated and visible for the house owner as a potential customer. On the other hand, the concealment of costs might be a performance to enable contractors to select customers. Thus, prices might comprise information that is perceived to be important to control and conceal (Goffman, 1959), since it can be sensitive in relation to their performance and not comply with the impression they want to make.

Like other groups, the reputation of SME contractors depends on the reputation of the group as a whole as well as the reputations of the other individuals in the group and the audience's trust in the impression they perform. If someone is caught pretending or causing a scandal, this is transferred to the whole group (Goffman, 1959: 1967). As highlighted in the empirical material, there had been problems with dishonest contractors within the construction industry in Sweden, and national TV-programs had highlighted contractors who had delivered bad construction work. The contractors participating in the workshops argued that this was an issue for them, because it spread fear, distrust and suspicion of contractors' performances among house owners and others. It was even claimed that sometimes they had to start a house owner interaction by defending their professional roles and competence, and prove that they were not dishonest contractors. The contractors' performances were thus argued to be grounded in how to perform so as not to scare people, to show they were professionals who knew what they were doing and could be trusted, and try to perform to make insecure house owners less insecure.

Insecurity was also something the contractors discussed, and although it was occasionally felt in an interaction with a house owner, it was important to conceal it from house owners as potential customers, e.g. when a house owner asked a contractor about how to solve a certain problem. The contractors expressed that they know better than most house owners about the conditions and how things can be done, and are thus able to inform house owners of challenges and possible solutions. When informing a house owner about the present status of the house, it was argued that it is important to be clear and to the point, and not show insecurity. However, Thomas and Niklas both raised the difficulties involved in solving the first interaction, to be perceived as professional and competent and come with suggestions and solutions without losing face in front of a house owner. When discussing a potential job, the house owner is argued to have thought about the problem for a while before contacting a contractor. Thus, the house owner was perceived to have an advantage over the contractor, who faces the problem for the first time. Even though a contractor has additional knowledge and experience with construction work, he may end up giving suggestions a house owner already has thought about but discarded due e.g. to the space's conditions. It was expressed to be a dilemma for a contractor to show professionalism and keep control over the situation, while at the same time not lose face or show insecurity but conceal his uncertainty about what solution is the "right" or the best for the specific problem. Thus, the contractors had as a routine to say that they would look into the specific problem and get back to the house owner, thus concealing the search for possible solutions and allowing them to present a well thought through solution later and keep control of their performance of showing professionality and competence.

To be competent was argued to sell. One of the actors expressed how he wanted to sell solar panels, but he felt he did not have enough knowledge about them. Thus, he decided to install the solar panels he was thinking of selling on his enterprise's roof to gain knowledge of how to install them and how they worked. He expressed that if he knew how the installation worked, he would be able to argue for it and then also be able to be a convincing salesman. Darr and Pinch (2013) as well as Kivisto and Pittman (2007) argue that service providers like SME contractors need to be taken in by their own performance to be able to sound sincere and create belief in their performance. When this contractor installs solar panels on his enterprise's roof, it can be seen as a form of rehearsal before his performance of a competent role where he is certain about what he claims and argues for. The installation might also be related to confidence in his performance. If he feels that he knows what he is talking about and has confidence in what he does, he will probably show confidence in his performance and will thus be able to argue for and convince a house owner about the importance of solar panels (if his installation on his enterprise's roof works well for him, that is). Through learning about solar panels on his own roof, he can claim to know about solar panels as an added aspect of competence to his professional role.

Thus, individual’s roles can develop and change, and there are typically specific tasks connected to various roles that create meaning and stability. But these stabilized tasks can be a challenge if the roles are up for change. Through the collaborations, it was decided to evaluate not only the contractors’ own area of expertise, but also evaluate and consider selling within other areas. This was an innovative idea, but it turned out to be a challenge, because the contractors expressed themselves not to be very familiar with the other actors’ areas of expertise.

While discussing and forming the concept, the issue of limitations of their own roles and competences to perform the concept kept coming up. Wishes for other competences connected to other professional roles – e.g. salesperson, economist, psychologist – were seen to be important in order to be able to interact better with house owners.

However, even though the contractors argued that that they missed certain roles and competences, they did use various performances to show competence, professionalism and control of a situation. Even though manipulation (Kivisto & Pittman, 2007) is a much too strong word, it was argued that seven performances were used to show their professionality and seriousness. All seven performances were not used by all contractors, thus several of these performances are presented to include some ambiguity:

1. Showing competence through collaboration. By being in a group, they claimed to have more experience, know more, be more competent and have a stronger commitment to the customer, where all took their responsibility.

2. Using the word “no” to show professionalism and seriousness. However, even if they all seemed to agree that to say “no” to jobs that might imply problems was a good and professional action, some contractors still argued that it is difficult and not really something to apply even if it might be necessary.

3. The importance of performing measures in a secure way and take responsibility for their actions and performed measures. The contractors argued that it is important to perform quality work to decrease potential problems, and also to create a professional and trustworthy role for the house owner of the competent and knowledgeable contractor who takes responsibility and is not dishonest. What quality work means, however, seemed to differ among them.

4. Using materiality to create visibility of invisible aspects, e.g. certificates to show competence and knowledge (at the time for the workshops, however, certificates were not perceived to show something relevant for house owners). Materiality was also used to increase trust in what a contractor says, e.g. information folders to give house owners about specific aspects.

5. Charge a fee – to show that the concept is sincerely and seriously meant, it should cost something. This argument, however, assumes that house owners know what construction work costs and furthermore what an inspection would cost, which is in contradiction with their practice of not showing their prices.

6. Documentation – to show professionalism and control of the current situation, and also potential future situations, various forms of documentation were used. However, various kinds of documentation that could strengthen their professional roles were not used as much as they could or should be. The contractors also were unsure about how to use some documents and the

documents' actual strength in relation to showing and supporting the contractor's interests and not only the house owner's, if problems occurred.

7. The importance of similarity. It was argued that similar houses enabled contractors to conduct similar measures, thus creating potential for routinized actions and competence and professionality through experience. Similarity implies that contractors can act and argue with the confidence that comes from experience and having done things before.

Even though the contractors performed to improve the impressions of being competent and professional, they still expressed some difficulties convincing house owners about their professionalism and competences. Nevertheless, they argued that they wanted to "help house owners think a bit smarter", implying that house owners are not always on top with their choices and further decisions. This argument gives rise to the interesting question of why they have not already made it a routine to help house owners by trying to broaden their perspective. Instead, the contractors "only" focus on their own interest. But not going into other areas of expertise can be related to the perception the contractors seemed to have of their lack of knowledge about other areas than their own. To be asked a question by a house owner and not know or be able to explain the answer, was expressed to be unprofessional and revealing lack of knowledge, and thus important to conceal. For a contractor to show lack of knowledge implied loss of face and loss of a potential job. Thus, not to know went against the role of the professional contractor, who apparently was assumed to know *everything* regarding craftsmanship in renovating a house. It was therefore better to conceal lack of knowledge to save face and performance.

In addition to saving face and planning to create professional performance, the contractors decided to make a checklist, which can be interpreted as a manuscript and even create legitimacy regarding how to move in a backstage setting that is not theirs, and where they do not have the sociocultural "rights" to walk around wherever and however they prefer, without asking for permission. A checklist can be seen to be a document that will both create and steer new routines for new performances; it will also enable the contractors to enter and perform in backstage areas not theirs to perform in.

To write things down in a document, to know what to check and how to perform will also enable the contractors to make similar performances during inspections, also because, as earlier stated, it was argued to be important to look professional and not be suspected of being dishonest. Having clear, distinct things to look for would enable the contractors to look professional and show house owners that their actions are sincerely meant. The checklist would thus steer their performances of what to look at and for, and how to perform their roles. But they also formulated that they still should be open for house owner's potential suggestions, and that the checklist should not steer completely but be a template to work from. House owners, it was argued, differed, and they were aware of the need for different performances with different house owners. Depending on the house owner, the house's conditions, the situation etc., the checklist could serve as a basic "foundation", like a palette of actions to pick and choose from, to draw a picture and create a professional performance of the competent contractor. However, it was still expressed to be important to perform similarly, even if it was with different house owners and not create questions and various house owner expectations.

Acting and performing on ideal conceptions

Ideal conceptions of house owners were found in the contractors' rhetoric. Even though ideal conceptions can be good in some respects – e.g. an actor does not need to explain his professional role and intentions to all concerned and can also create structures for performances. One example is a house owner's ideal conception of labor costs, and a contractor's ideal conception of a house owner's bad economy, which seemed to become hindrances for action. To ease the tension, subsidies were seen to be a good way to convince house owners to invest in improvement measures such as energy renovations. But as five contractors claimed during the process, there is no cool-factor in energy savings, not yet anyway.

Ideal conceptions can also be connected to the contractors' own professional roles. A big part of being a contractor was expressed to be as problem solver; when things have crashed, it is a contractors' job to fix it. The professional role of contractors thus meant to conduct what was asked for and not to market or sell, especially not new things. Only one contractor in the south group expressed selling during his interactions, while the other contractors did not perceive themselves as sales persons at all. The job was to help customers with their problems, not to sell. This can be connected with the expressed insecurity in their professional role, and their not wanting to show insecurity. Instead, the need was to show the competent professional who is strong in physics and knows how to do "everything" that has to do with a house, even though problems in a house can relate to very different areas of expertise. Status in his role was something a contractor would achieve through performing the work in a good way and having a satisfied customer.

The need to be perceived as a competent professional was a recurring topic. For example, they argued that the innovative performance of helping house owners to think "right", also in other areas than their own, would mean that house owners would really perceive them as professionals.

The professional role as contractor was also argued to involve acting without being seen, and decreasing house owners' worries by explaining upcoming actions. But it was expressed as a problem to have to explain things to house owners. The contractors argued that for the most part gaining an understanding of the house and the problem in question was accomplished pretty fast, but the problem was to translate all this to the house owner in such a way as not to increase or create any worries (economic or material).

Furthermore, with regard to ideal conceptions, contextual and sociocultural rules also impact how the performer acts and presents him- or herself to others (Goffman, 1959; Schwalbe, 2013). It was argued that different areas of houses created different conditions and possibilities for performances for the contractors, but the conditions can also create different results, which can lead to undesirable future actions. Thus, it was argued, to prevent such possible future actions, which might include loss of face and/or ruin performance of the competent contractor, it would be good to start with areas and houses that would not be perceived to cause too many problems.

The contractors' actions can thus be seen to be context-dependent, but there seems to be something more to this context dependency. It was expressed to be advantageous to have several houses of the same type within a close area to enable house owners to spread the concept. Thus, new actions created in one place within a setting can be seen to spread if the setting and context enables this. Performances and actions with visible implications were seen to be contagious and could spread within areas with similar houses, due to the possible need for similar solutions, thus opening a possibility for group pressure through neighboring house owners' actions.

The contractors claimed to read house owners' fronts as symbolic artifacts and actions used by house owners (e.g. cars, clothes, jewelry, decorations etc.), assuming the artifacts and actions implied certain aspects. From the performance of the house, the outside as well as inside setting, and additional information from the owner, the contractors made a judgement of a house owner as a potential customer – e.g. "The cars standing there are not too shabby". This information is then used to decide whether to do business with the house owner or not. There was however also awareness that some individuals use artifacts only to create a certain impression, which might not be accurate but a statement about wanted group identity and belonging.

Goffman (1961) also highlighted that service providers form ideal conceptions of customers and their wants and needs. Even though all contractors in the south group argued on different occasions that house owners are different with different needs, knowledge and conditions, six aspects kept recurring as indicators, which determined whether energy-efficient measures could be interesting for house owners to invest in or not:

Money - It was argued that some could pay cash straight away (but those were argued to be quite rare) and others would have to borrow. The need to borrow or not was not expressed to be a deal breaker, however, because house owners who needed a loan could be convinced by the prospect of lower monthly expenses and increased property value that might enable lower mortgages. Thus, with regard to economic aspects, there were four types of house owners to work with: 1. The ones who have the money but do not care; 2. The ones who have the money and do it; 3. The ones who do not have the money but can borrow; 4. The ones who want to, but cannot afford it.

Age - It was argued that young house owners think technical stuff is cool, but they prefer to do other things than invest in energy renovations of their house, e.g. travel, new TV etc. Younger house owners have more plans, but they also need more direction and priorities. Younger house owners were also described to be the type of house owners who are usually more willing to invest in some improvement measures when buying a new house, have a longer perspective and think of living in the same house for a long period of time.

Older house owners were described as being afraid of technical stuff. They put more money and effort in their houses but needed plenty of time before they would make an investment. There was also recurring ambiguity with respect to older house owners and their willingness to invest: It was argued that they did not want to invest, because they might want to move soon; but at the same time, they might want to invest just because they might want to move soon, in order to maintain and/or increase the value of the house for a future upcoming sale.

Information and knowledge - It was argued that well-informed house owners are good to work with compared to amateurs who created problems and/or more work, due to the need for explanations and clarifications. However, well-informed house owners meant well-informed in the way that suited the contractors, so they did not need to explain what the contractors thought needed to be done, and that it would be costly.

Maintenance - It was argued that some house owners want to have control and order in their house and maintain it, and others not so much. In this respect, it is also interesting to highlight that house owners are seen to be less interested and willing to invest in maintenance “nowadays” than “previous” house owners were.

Gender - It was argued that women and men have different areas of interest for performing the role of decision maker in the house. It is more probable that a woman would take part or be the decision maker in design and visual aspects, e.g. in the kitchen or bathroom, whereas it was more probable that a man would be making decisions in areas relating to energy efficiency, like the technical aspects.

Change of ownership - Change of ownership was described to be often related to age, but sometimes not: thus, it gets its own headline. The contractors argued that there were two types of changes of ownership: 1. The house owners who had just bought a house and wanted to change and improve things according to their needs and preferences; 2. The house owners who invested and wanted to fix everything in order to sell.

These ideal conceptions of house owners, mixed with the contractors’ understanding of their own role, materials, solutions, the house’s condition and energy might prevent contractors to give possible investment suggestions to house owners.

Performance of materiality and the importance of visibility

To perform a well-maintained role for others, show status, well-being and own identity – to be a unique individual but still part of a group that one can identify oneself with – can be connected with setting, front and performing an impression. All three aspects have to do with visibility and the ability to show others how one wants to be perceived (Goffman, 1959). What is shown and seen by others impacts how they perceive the actor and his or her performance. A house and its materiality seem to perform not only as a frontstage and backstage setting, but also as a symbolic artifact for its owners, as part of the owner’s front, just as well as the house owner’s social attributes do (Goffman, 1959). The contractors’ argument indicated that when the visibility of a house is up to the standard of the area where it is placed (and the house owner’s perceived social standard), then the house is perceived to be a nice looking house that performs well for its owners. Thus, the role a house performs for its owner seems mostly to lie in its visibility and less in the actual performance of keeping its owner warm and dry, which was argued to be expected and taken for granted by the owners. It was argued that house owners are not used to or willing to invest in things that do not show or add status to their front. The aspects of energy renovations were even expressed by one of the contractors to be “the most unsexy there is”. Thus, visible materials and measures were used – e.g. logos, certificates, symbols, brands or something that can be seen and create interest and/or curiosity – to create interest in materials and measures that are not visible (e.g. added insulation). Also smart systems – e.g. techniques to measure and read power usage – were tools to make something difficult to see and understand become visible and understandable, and in some cases even comparable. The use of a pressure test (which was discussed during the workshops) can be seen to be a visible technical solution to obtain a feeling about a house and to get the house to “talk” and perform in a “clearer” way that is possible to understand, both so a contractor can see where improvement measures are needed and to make it easier explain and find relevant arguments to convince a house owner of needed measures. Thus, the use of techniques and materiality was discussed to create understanding with house owners.

Materiality was also argued to be part of creating a front and giving an impression of the contractors and their work as well as performing for the house owners. One example is the folder they created, representing the group and their actions and performances, which they used to perform a first impression of the enterprises. Through the folder, the concept was supposed to perform by itself without (much) constructor interference.

However, even though materiality is important, it is through the meeting and interaction with others, but also by being seen by others, that we exist (Goffman, 1959). Even though the contractors argued for a folder, they still expressed the need for face-to-face interactions in order to be able to create a relationship. If the contractors could not get inside the door, they could not create a relationship with the house owner. It is interesting how the door seems to be vital to being able to create a relationship – standing in front of the door equals no business; but if one is allowed inside, business is possible. There was an argued need to feel that the house owner is a customer in order to be able to do business. But it was still expressed that it was the owners who made decisions, and contractors should act accordingly.

Although they argued for the need for face-to-face interactions in order to create a relationship, they chose to make a folder, because to knock on doors was not expressed to be an appealing alternative. But putting folders in house owners' mailboxes implied that the door and the house owner, and thus a potential relationship, were quite far away.

Nevertheless, the contractors expressed that it is important to have something printed in order to market their concept. However, not a lot of folders were distributed in the end. They made a folder, but did not exploit its full advantage by distributing it. Instead, they seemed to expect house owners to contact them anyway. When no one did, they became insecure about their decision and performance: they started to question the areas; the house owners in the areas; the folder; their concept; the price; their own and other's performances etc. But they did not distribute more folders. Lack of response created insecurity and a will to understand what they had done wrong and how to change their "bad" performance in order to get the responses they sought. The solution, to figure out lack of responses, was not to contact the house owners that had received the folder, but to move themselves towards "neutral" ground, where neither house owners nor contractors could claim ownership.

Summary of Analysis II

Analysis II focused on the contractors in the south group and their discussion of house owner interactions while collaborating to develop a new concept regarding energy renovations in existing single-family houses. The analysis made it clear that the contractors' performances were grounded in how to perform in order not to create worries, while showing the house owners that the contractors are professionals who know what they are doing and can be trusted. The contractors further expressed difficulties handling the first interaction with a house owner, with regard to how to keep the situation under control while at the same time not lose face or show insecurity. To conceal any uncertainty about what solution would be "right" or the best to solve the specific problem was argued to be a dilemma. The contractors argued for using various strategies to show competence, and they found that seven performances could be used to show professionalism, keep control over a situation and gain confidence in the performance of the role.

Through the analysis, the contractors' ideal conceptions of their own role, and also the role of the house owners, were highlighted. Even though all contractors in the south group argued on different occasions that house owners differ and have different needs, knowledge and conditions, six aspects kept recurring as indicators for whether energy-efficient measures were interesting for house owners to invest in or not: money, age, maintenance, information and knowledge, gender, change of ownership.

The importance of visibility was also highlighted. A house and its materiality seem to perform not only as a frontstage and backstage setting, but also as a symbolic artifact for its owners, as part of the owner's front. In addition, house owners were argued not to be used or willing to investing in things that do not show or add status to their front.

5.5 Analysis III – Cross-analysis of Analysis I and Analysis II

The third analysis is a cross-analysis of analyses I and II, and aims to work further with the material showing the contractors' roles and interactions with house owners. Through the two settings of empirical material, tensions and ambiguities about performances can be highlighted. Two themes are used to present the main aspects.

The search for control while trying to get a feeling about the other

The contractors (but also the house owners) were seen to use different performances to own or try to own control of the interaction. Although there was a search for control, there was also an expressed ambiguity about control. The professional role as a contractor was to conduct what was asked for, and the "real" job was to work with materials and perform craftsmanship. Thus, interacting with house owners was not part of the "real" job. A contractor might not want to be in control of what should or could be done, but rather be told what needs to be done, so he can decide if he wants to take the job or not. But if only the house owner were in control, s/he would be able to control the definition of the situation and its outcome. Thus, a contractor needs to search for control of the situation in order to perform and be accepted in his professional role and be able to be part of the decision about the outcome, i.e. own the decision of accepting the job or not. But still, there seemed to be an ambiguity about the search for control being dependent on the audition. Interaction was necessary in order to get a feeling about the other and his or her preferences for what needs to be done and how. The search for control was thus important.

The search for control, nevertheless, needs to be clarified, since it is connected to two different aspects of control: control over setting and control over interaction. For energy renovations or any improvement measures in a house, it is the contractors who moves to the house owners; it is the house owner who owns the setting where the service is planned to take place. It is thus difficult for a contractor to create 'alternative realities' (Kivisto & Pittman, 2007), as in a specific setting to create a need by a potential customer. The contractor can bring some symbolic props to underlie his performance and the expressions given, but it is still the house owner's setting and s/he controls it. The contractor can however use the house owner's setting to his advantage, by showing the house owner aspects in the house owner's own house s/he did not know existed. It is still the owner who owns and decides about the setting and thus owns control of it and decides about possible future actions regarding it. But the contractor can use the setting to show his professional competence, show that he knows the materiality of the house and maybe even, in some cases, more about the house owner's house than the house owner does, thus creating control over the interaction.

Goffman (1959) claims that when a house owner invites someone home, e.g. a contractor, s/he loses part of the control of the home setting. Instead, I claim that house owners seem mostly to be in control of their settings, but who owns control of the interaction is a different question. There were several occasions during the observed interactions, when a house owner invited a contractor to take the lead over the interaction by asking questions. This enabled the contractor to show his skills and expertise and take the lead by showing the house owner things in the house owner's own home. But the contractor also used his role to indicate to the house owner what he should do and what he wants to observe next. Thus, the one in control during the interactions could shift between the actors. One example of this shift was between the SME contractor Anders and house owner Olle, at Olle's house:

> *The two actors go through the upcoming renovation. During the conversation Olle informs Anders of how he wants things and what should be done. Anders tries to come up with suggestions, but Olle is not listening. He is very determined to have some things and about how other things should be. Olle starts to talk about ventilation and ventilation control and how he wants it. He sounds very assertive and opinionated and leans with his whole body towards Anders. Anders does not seem very affected but asks politely what type of ventilation Olle has chosen and why: "Are you going for a simple swivel or a FTX-type?" Olle then hesitates and looks at Anders and then at the wall where they are standing. After a brief moment, he says in a more neutral voice: "Well, I don't know…I don't know anything about ventilation really."*

The encounter between Anders and Olle illustrates the shift in control of the interaction. It also demonstrates how the two actors negotiate what should be done but also how the negotiation of the renovation creates opportunities for them to get a sense of each other's performances and roles. The focus of the interaction between the two actors was then not only on the renovation as such, but also on getting a feeling about the other actor and potential relationship building.

To get a feeling about the other actor was something both contractors and house owners expressed on various occasions to be important. To get a feeling about the other is not really highlighted in previous research about service interactions. Instead, the major purpose of performances in service interactions is argued to be to establish and define the service or product (Koslowsky & Pindeck, 2011). The social roles are then claimed to be performed in relation to the "rules" the situation and the interaction demand (Preves & Stephenson, 2009). But when it comes to interactions for improvement renovations, it also seemed to be about deciding whether or not one will have dealings with the other, based on e.g. the other actor's actions, their feelings about each other, and how the "audition" is perceived to go. So, how does a contractor get a feeling about a house owner? He has to look for and take in symbols and clues and analyze what is shown and what it means (Goffman, 1959; Grove & Fisk, 1992; Williams, 2013). Thus, a contractor analyzes a house owner's performance and his or her front. Through the interaction, the expressions given and the expressions given off the performances and the meaning of the situation are defined. But it is not only through the actors' actions; it is also through their roles and performances, as well as the materiality as in the actors' fronts. The actors make assumptions on the basis of what is seen and act accordingly.

The interactions can be seen to be based on a search for balance between the actors (e.g. through the usage of various scripts in the interactions). But I argue that it is not really a search for balance, but a search for perceived control of the situation and for one's own role. Goffman (1959; 1961) does not discuss control, power and balance in depth, and these aspects can thus not be really discussed on the basis of his work. So, to exemplify what I mean I use the metaphor of a dance. A dance builds on a synchronized movement between two actors. There is a need for listening and feeling, interpreting and acting in relation to the other actor's expressions and actions in order to create a synchronized movement, as in a dance. A contractor's and house owner's interaction can be seen as a dance with a new partner, as there is also a need to listen to and sense the other actor and interpret his or her expressions in order to act and create a joint movement, an interaction, just as if it were a dance. Thus, when both actors (house owner and contractor) search for control, it can seem that there is a search for balance, but balance does not make things move. And the interactions were movement and development, between the actors, together. Therefore, I claim that the interactions are not a search for balance but a dance in which both actors must move their joint interaction further.

There is however a limitation to the dance metaphor. In a dance, there is usually one actor who steers the whole time, whereas in interactions, one actor could be seen to control (steer) the whole time, but more often a shift occurs between them.

The two actors have various possibilities to control the dance. A house owner owns and controls the setting, which makes it difficult for a contractor to be in control of what to look at and how, and where to move in the setting. A house owner can also conceal whether s/he will hire a contractor or not throughout the interaction, even when s/he knows s/he will hire him, making the contractor perform his role without knowing. But a contractor can also use concealed control-aspects (such as time, money, tools, materials, knowledge etc.) to take the advantage in an interaction.

The actor in control is only in control of the dance as long as the other actor keeps dancing, thus keeping the interaction and joint play going by accepting the first actor's actions and performing on own assumptions and the other actors' expressions, given as well as given off. The two actors were not fighting or giving expressions or creating actions randomly with each other but were rather observed to be building on the other actor's expression. The two actors were thus not really performing *before* or *towards* each other, as Goffman (1959) and also others (e.g. Edgley, 2013; Leathers & Eaves, 2015; Lowe et al., 2012) claim. Instead, the actors were performing as well as interacting *with* each other. Just like in a dance. A seemingly quite small difference in wording but a huge difference when it comes to results of initial interactions between contractor and house owner in everyday life. *Before* or *towards* implies that an actor is performing on stage before an audience that is not on stage, and where the actor can perform his or her performance (nearly) regardless of the audiences' actions and responses. But *with* implies that both of actors are on stage, participating in the same social play, creating the play together.

Performing *before* the other actor only happened in the first seconds before the actual interaction began with expressions given that then transformed the two actors and their performances into the continuing dance in which they tried to control and influence each other's performances (Carlsson & Koch, 2014a). The actors' continuing performances were then a dance *with,* supporting each other's actions to establish and keep his chosen role through the interaction. However, even though the actors seemed to negotiate who was in control of the dance and their joint interaction, the interactions that ended in a future business relationship seemed to be those where control of the interaction shifted between the actors, creating a joint rhythm (Teeger, 2007). *With* can then further be connected to the way in which the actors tried to align their rhythms, as in scripts and performances, to reach a joint outcome (Teeger, 2007; Valdesolo et al., 2010).

It would be nice to be able to connect the actors' search for control with Darr and Pinch's (2013) and Miller's (1964) argument that actors create sales in stages and increase social obligations with a house owner to make a sale come about. However, none of the contractors were seen to use or create any social obligations during the interactions (except maybe through the horror stories that are highlighted further on in the discussion). No social obligations were even created through the usage of a contract; the contractors (except one) sent the tender (similar to a contract) to the house owners after the interactions were ended and the two actors were physically far apart. This means that the closing of deals was pushed into the future, allowing both contractors and house owners to have second thoughts about whether they wanted to choose each other as business partners or not. The only actor who was seen to act in order to put some pressure on the other was Simon, who used the argument of having contacted two other contractors before meeting with Martin. However, Simon was the house owner and thus the customer, which is not really in line with Darr and Pinch's (2013) or Miller's (1964) research. Performances by the contractors to create social obligations with the house owners were thus not common in the observed interactions between house owners and contractors.

The professional role as a contractor

The contractors' performances were argued to be grounded in how not to scare or worry house owners but rather show that a contractor is a professional who knows what he is doing and can be trusted. Goffman (1959) argues that most professionals put on a display to show professionalism. But there is a widespread public perception that contractors can pick and choose the jobs they prefer, cheat about the hours used as well as with their work and still be well paid. The contractors also expressed awareness of such an ideal conception of the role of professional contractor. But they also argued that they really focused on not performing in this way.

Instead, it was important to the contractors to be perceived as competent professionals, to show house owners they are credible and knowledgeable regarding what they say and do for a living. During an interview, a contractor expressed: "What I'm really selling is my own competence and my own credibility". It was even argued that sometimes contractors had to start a customer interaction by having to prove and defend their roles and competences to convince house owners that they are not dishonest. However, in contradiction to their arguments of working to decrease insecurity, some contractors seemed to use symbolic meaning by telling horror stories that actually created fear in house owners.

The use of horror stories can be seen as an attempt to create a certain picture of a potential situation for a customer (Kivisto and Pittman, 2007), e.g. through horror stories about molding houses and huge costs from renovations performed to save energy. Contractors (e.g. Martin, Johan, Roy, Mattias) told such stories to house owners, and they were also discussed in workshops and by house owners (e.g. Simon; Henrik; Anton). Thus, an insecure and/or scared house owner was maybe not the issue; the issue seemed to be the focus for the insecurity. If a house owner's insecurity was connected with the contractor in question and his competence and professionality, then the insecurity needed to be reduced. But if the insecurity concerned specific measures or technical solutions, it did not seem not to be as big problem. Horror stories could even be used to show a house owner that a contractor was aware of the potential problem, implicitly indicating that he would not do such work. Through the usage of horror stories, a contractor could build the role of being a professional and competent contractor whom a house owner could trust.

Being professional, however, can apparently be performed to various degrees; Niklas argued for example that: “The more professional one is, the better it is for the customer.” The various degrees of performing professionality can be connected to Leathers’ (1990) and Leathers and Eaves’ (2015) six important aspects (credibility and competence; interpersonal attractiveness; perception of truthfulness; likeability; interestingness; assertiveness), which are essential for service providers’ impression management in relation to potential customers. The six important aspects were all present during the three house owner interactions presented in this thesis, but to various degrees in each case. For example, the easiness to communicate (related to perception of truthfulness) was expressed to a greater extent when Johan talked to Henrik than when Niklas talked to Ove; or the likeability and interest performed by Martin and also by Johan, but to a slightly lesser degree. But even if the contractors performed actions to show house owners they were competent and trustworthy, the issue of how to create credibility and show competence towards house owners still seemed to create some challenges. The topics were raised repeatedly during the workshops. It was even claimed that when I came up with a model and/or a checklist of how to interact with house owners in order to show professionalism and competence to make them be on point in every job, then I did not have to do anything more. All contractors present agreed, which gives an indication of how difficult the contractors perceived the interactions with some house owners to be.

Expressing interactions to be difficult can be related to the contractors’ insecurity, but it was not always insecurity that lay behind their expressions. When discussing previous solutions and work done, their performances showed confidence and pride. Their earlier experiences were argued to create confidence and security with regard to their knowledge and competences, but also security about how to interact with and persuade a house owner when similar problems appeared that a house owner needed solved.

However, from interviews with house owners, it became clear that there were house owners who expressed other views of a contractor’s role than only to do what he is told.

> *When Anna and Anton were supposed to start contacting contractors, they talked about how they wanted the house to look and function, but then Anna asked her husband if it were not better to have a contractor come and explain the best way to renovate the house. Her husband then told her that it does not work like that; instead, they [house owners] need to know how they want it before bringing in a contractor. Anna said, “I didn’t believe him when he said that. I mean it even sounds stupid to say it, right? We, amateurs are supposed to make decisions about how to perform a job we barely know anything about?” However, with hindsight, she has realized that it was exactly like her husband said it would be. They have not received any suggestions of how things should be carried out or look, nor ideas, suggestions or thoughts about materials etc. “The contractors just do what they have been told, from our*

> *drawings and wishes, without any questions. "I have to say I am a bit disappointed about that…"*

Anna, the house owner, expressed really missing a dialogue with the contractors about different solutions and ideas. She assumed the contractors would tell her and her husband the best way to do what they wanted to have done. But the contractors had not done this, leading to expressed frustration and dissatisfaction with the contractors and their performances. Thus, the problem might not only be that house owners are not asking for energy renovations or similar measures, but that contractors are not ready to give suggestions or ideas and therefore not even noticing the chance when it comes, which can be further connected to the contractors' ideal conceptions of their professional role as a contractor.

Ideal conceptions of how a professional SME contractor is supposed to act were expressed by the contractors. It was argued to be important to create an impression with house owners of being a competent and professional contractor. Thus various performances and symbolic artifacts were used to support this impression. A big part of the professional role as a contractor is also about being a problem solver. When something is broken, it is the contractors' job to fix it, without creating any worries with the house owners. Status is something a contractor achieves through performing work in a good way with satisfied customers. Nevertheless, the contractors' professional roles also included how to act without being seen, which could be perceived as a tension within the role. But to act without being seen was argued to be important further on in the work process, when the job was accepted and going on.

The empirical material, however, shows other tensions between the contractors' various work tasks and the roles they imply, such as administrator, sales person and craftsman. One example is the expressed tension about what is considered the "real" job. To participate in workshops and to interact with house owners were not expressed to be "real" jobs. A real job is to interact with materials and tools, to perform craftsmanship, not to interact with people. To interact with house owners is necessary in order to perform the "real" job. This perception of what a real job is can be connected to a common expression of what the contractors' roles include, which is to do what they are told.

There were also tensions expressed with regard to the contractors' own professional role when interacting with house owners. For example, insecurity about their own role was expressed, but at the same time it was important not to show insecurity to house owners. Instead, it was necessary to show the competent professional who is strong in physics and knows how to do "everything" that has to do with a house. But for a contractor to know "everything" with regard to a house, its structure, function and materials, without showing insecurity, can be problematic, especially since they argued not to want to be put in situations where they were unable to know or conduct what was asked for. And when the professional role of a contractor includes knowing everything that has to do with a house, it might not be totally clear to some house owners that a house's different aspects require different forms of expertise. Thus, contractors could find themselves being asked to fix things not really within their area of expertise and therefore be faced with a dilemma: To say "no" and risk loss of face; or to perform the measures asked for even though they are not really within their area of expertise. In addition to this, it is important to note what one contractor said: "One only gets one chance with each customer". Thus, there is not only a risk to lose face but to lose the house owner as a customer, if the contractor does not do what the house owner asks for.

In addition, the empirical material shows that the contractors were not really aware of their performances in the sense that they consciously made a specific action and/or performance to make sure to influence a house owner to do something. Rather their actions and performances seemed to be sincere (Kivisto & Pittman, 2007) and to have developed during time, adapting to what worked and what did not. Thus, if a contractor felt he knew what he was talking about and had confidence in what he did, he showed confidence in his performance. He was able to argue for and convince a house owner through his performance, both through the expressions he gave and through the expressions he gave off.

However, to get to know new materials and/or solutions before selling them demands a contractors' time and energy, which he might not be interested in giving priority in an already busy work schedule. Even though some SME contractors took part in sustainability development programs and focused on environmental issues, several contractors also raised their voices to make defensive performances (Crane & Crane, 2002) about the negative aspects of new energy-efficient techniques and solutions. Defensive performances using excuses and arguments practiced to allow a busy contractor not to become engaged with these materials and/or solutions. The usage of excuses and negative comments with regard to new materials and solutions were recurring during the workshops, and also during interviews. A few of the contractors even expressed not really believing in some of the new materials and solutions – e.g. Per, who expressed insecurity about new windows; Johan, who meant that air-tightening a house was always problematic, because "no one can say what will happen if you do that or answer where to draw the line between air-tightness above ground or underground"; and another contractor argued that new materials and solutions do not deliver as promised. However, these expressions might then not be about the materials and solutions as such, but express a response to the demand for new knowledge and practices that go against their established and stabilized practices and everyday routines.

The usage of certain performances during interactions

Several aspects about role performances have been highlighted through the usage of various backstage and frontstage settings, e.g. the shifting of scripts between settings (e.g. from van to house, but also between interactions with house owners and interactions about house owners). One aspect highlighted through the settings is that an actor is not always an audience and an actor (participant) at the same time, as Goffman (1959) claims. Different roles and scripts imply various degrees of participation in an interaction and set a frame for whether the actor is participant and/or audience to the other actor(s).

Several scripts were observed to be in play during the process of the project and the work with the contractors. But even if there were different scripts the actors could choose from (Darr & Pinch, 2013), it does not seem to be endless variety of scripts but rather a few well-worn and repeated scripts, which were performed in various settings.

The scripts observed to come into play during the interactions were, for example, a *professional script*, as in the script of the busy and competent professional contractor, who does what a house owner asks for. The professional contractor also implies the competent craftsman who works with materials and tools and helps house owners with their problems in the house owners' homes. A *SME representative script* was also observed, performed by the contractors when acting in accordance with what was argued to be best for the enterprise, representing the enterprise as a SME owner. Not only SME owners performed this script however; also employed contractors performed and argued similar aspects. One example was Sam [a contractor], who expressed awareness of his professional role as a contractor and how his role and performances might affect others' perceptions of the enterprise he worked for. He saw himself to be the face of the enterprise and thus not only managed an impression of himself but also an impression of the enterprise, as a SME representative.

A few of the contractors performed a *sales script*, trying to influence house owners in what materials and/or technical solutions to choose. Although this script was rare during the interactions between house owners and contractors, it was discussed more during the workshops, when the contractors argued about performing in order to sell.

Private scripts were also in play. A private script is when an actor refers to his or her private setting. Darr and Pinch (2013) refer to the private script as an identity script; however, I choose to call it private script since the role of contractor is part of the contractor's identity as well. This became clear during the observations and workshops when they expressed themselves to be contractors also in private settings. There was an expressed pride in performing the profession of being a contractor, in doing something "real". The private script was used by contractors in professional settings, despite Goffman's (1959) claim that the audience demands realization of roles through performances and that not too much of the private self be shown, When using the private script frontstage with a house owner, a contractor created distance to his professional role as a contractor. The role as a contractor seemed sometimes not to be as "strong" in its performance with regard to competences and knowledge to influence a house owner about what to do. There was a usage of materiality which could be observed to strengthen arguments and performances, but there was also a shift in scripts (from professional contractor to private), enabling a contractor to show a private experience and meet with a house owner in his or her script. The two actors then met in their private scripts, regardless of roles, which was observed to have implications for how an interaction was carried out and its outcome. The usage of a private script was for example observed when a contractor tried to convince a house owner to use a specific product or solution, in the sense: "I have done this in my home"; or "I have a similar product at home" etc. The shift in scripts enabled a contractor to distance himself from his professional role and try to influence the house owner to make a change from the perspective of one house owner to another. The contractors' usage of private scripts can be a developed performance, learned by experience to create action. In a wider perspective, the contractors' distancing from their professional roles and usage of private scripts can also be connected with some house owners' lack of trust in the contractors' professional role. By creating distance to his professional role, a contractor is also creating distance to the profession. This might be a performance to distance himself from the professions' somewhat bad reputation.

The house owners also performed private scripts, since being a house owner is part of who the actors are in private settings. I also observed how contractors tried to meet house owners in their private scripts, even though they were not discussing anything regarding upcoming measures. Examples of meeting in a private script were when a contractor told a house owner, who was a father, that the contractor was also a father, or when a contractor discovered a common interest with a house owner in model planes. Regardless of the topics, the contractors shifted scripts from professional to private, showing they were not only professional contractors but also private persons with a life “beside” their professional roles.

There were also *host* and *guest scripts* in play. The host script was distanced from the actor’s private script – welcoming, showing around, owning the setting and showing this ownership, but not being private in the expressions given. But the host script and the private script shifted according to the topic of discussion (e.g. private script when discussing improvement measures) and actions (e.g. host script when showing around). Usage of the different scripts, e.g. host script and guest script, imply a kind of hierarchy among the scripts. Certain scripts enable certain actions to come into play, and certain scripts imply certain positions, where performance of a host script involves a higher position than a guest script in telling others what to do and requiring permission to perform certain actions or enter rooms or areas not part of the frontstage; or when a house owner performing a host script holds a higher position than a contractor in his professional script. However, when a contractor shift to his SME representative script, the positions shift, and the contractor owns the higher positioned script of the two actors. With the usage of the private script, a contractor is able to meet a house owner in an equal position. He is not giving a suggestion as a contractor, but an opinion, if this would have been his choice as a private person. He is not giving suggestions but trying to influence a change of mind with the house owner from an equal social position.

Scripts were not only happen in play when contractors’ and house owners interacted. The contractors’ vans were another example of a backstage space (relative to the frontstage of a house owner) where professional scripts, SME representative scripts and private scripts were common. Also during workshops and interviews, several scripts were in play – e.g. professional contractor scripts, private scripts, host scripts and guest scripts, SME representative scripts.

However, shifting scripts can create problems. Some of the scripts can even be in tension with other scripts, creating a challenge for a contractor to perform the “right” script on the “right” occasion with the “right” person. One example was with Sam:

> *Sam, a contractor, stands on what is going to be the porch to a single-family house, but so far it only constitutes random beams. He stands on one of the beams, working with a frame of one of the living room windows from the outside while we talk. He is explaining his education and how he enjoys working at the SME where he is employed. Suddenly, the porch door opens and a man steps out. When the man comes out onto the “beam-porch”, Sam stops his work of the window frame. He lowers his hands, smiles and changes his focus from me and his work with the windows, fully facing the man by turning his whole body toward him (and turning his back to me). He then gives the man a friendly greeting: “Hi, are you home! I’m measuring…” The man is the house owner. He looks upset, nods quickly to Sam and then turns to me, asks me who I am and what I am doing here. Sam immediately turns to his work and acts as we are not there.*

Sam used a private script with me, explaining his view of his work. He still worked while we talked, but he created distance to his contractor role by explaining how he saw it with regard to himself and his development, his previous experiences etc. When the house owner came out on the porch, Sam shifted scripts, using a professional script and greeting the house owner, his customer. By turning his back to me, he showed whose role was most important but also what his role was with that actor. However, his attention as a contractor was not appreciated by the house owner at that moment, who only nodded to Sam. Instead, the house owner had his focus on me. Sam then turned back to his work and expressed with his actions that he was giving us space by really putting his energy into his contractor role and performing to pretend not to be aware of our presence.

Private scripts can further be connected to backstage performances. Backstage allows for the actors to discuss their frontstage performances (Kivisto & Pittman, 2007; Lewin & Reeves, 2011). This was apparent through the actors' actions, e.g. the talk in the vans before and/or after each house owner interaction. But the contractors were also observed to plan and rehearse for future performances in backstage settings, e.g. sharing strategies and plans for how to perform frontstage with house owners during the workshops. The contractors warned each other about working with private customers, but also how to perform with them to decrease potential problems. Thus, even though the contractors were frontstage with each other in the group, respective to their enterprises, they were still working together as in a backstage setting to perform frontstage for house owners. Within the same setting, the contractors' professional roles implied that they were frontstage as well as backstage with each other, when collaborating about how to reach and interact with house owners.

Backstage spaces were also observed to be fluid, with backstage spaces in frontstage settings (Lewin & Reeves, 2011). However, separators were observed, physical as well as abstract – e.g. during an interaction, when a house owner stood a bit further off from the contractor and me; then, the contractor turned his body toward me and spoke to me "in private", explaining something which was not supposed to be for the house owner's ears. The same was observed with several of the house owners who spoke with me in a backstage setting about the contractors, turning away from the contractors and expressing experiences and opinions, even regarding the contractors I was there to observe. This backstage space could even occur in front of a contractor, when he was performing his frontstage role as the busy and professional contractor, measuring and writing notes and putting great effort into his performance of not having time to listen but showing respect for the performed bubble of backstage space in the frontstage setting. Thus, frontstage and backstage were both present at the same time in the same setting. However, the backstage and frontstage were not completely fluid; the performances of the actors (e.g. showing non-participation in the interaction through body language) and the space (between the ones in the frontstage setting and the ones in the backstage setting) created separators between the two stages. There were also physical separators, as in material, e.g. a wall separating Johan and his phone call from Henrik and me. Although we could hear him, we could not see him and his expressions given off. Backstage and frontstage can also thus be connected to the various topics the actors discuss in the interactions. One way to divide frontstage and backstage a bit more, in addition to physical and abstract separators, can be to say that there is a private frontstage and backstage, and a professional frontstage and backstage. This can be visualized by using Sinclair's (1997) model with some small modifications (figure 6.1):

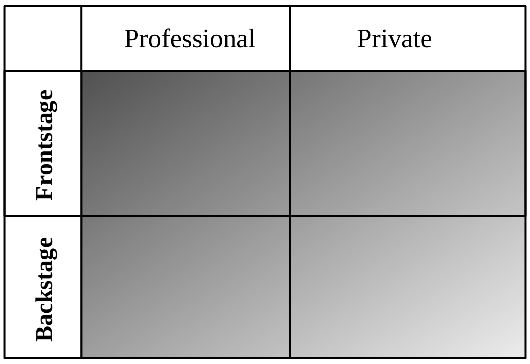


Figure 5.1: *My modification of Sinclair's (1997) front- and backstage model.*

Work in the workshops can be seen to be a professional backstage setting towards house owners, but at the same time a professional frontstage setting where contractors performing as SME representatives work together. But when they have a break, a private frontstage can be performed, showing a private self, but it may still not be as private as it would be in a private backstage setting with close family and friends.

The small modifications of Sinclair's (1997) model are that official is changed to professional and unofficial to private. Offstage is also removed and there is a shading of intensity in color that represents how the private backstage, as well as the other parts, can be performed in various degrees. Thus, offstage is a high degree of private backstage. The model is quite simplistic, but to say that frontstage and backstage are completely fluid is not of much help for further interpretation of the theory either. In addition, the original model does not highlight the separators, physical as well as abstract, between the various performances, which can be symbolized by the black lines creating separators – also in the model – between the four squares.

Summary of Analysis III

In this third analysis. I argue that the interactions can be seen as a dance, where both actors search for control of the situation and the interaction. Connected to the search for control was an expressed insecurity on the part of some house owners regarding contractors. But even though the contractors argued to perform and performed actions to show house owners they were trustworthy, the issue of how to create credibility and show competence towards house owners still seemed to create some challenges for the contractors. In addition, several tensions about the contractors' professional roles and role performances were highlighted, e.g. what was expressed to be "real" work and what was not.

Usage of several scripts was observed to be in play during the process of the project and the work with the contractors. Multiple scripts were observed to come into play during the interactions, e.g. a *professional script*, a *SME representative script,* and a *private script*. The analysis further shows that there is a hierarchy among scripts.

Frontstage and backstage can be seen in the same places and in the same situations by the same actors. Thus, frontstage and backstage were both present at the same time in the same setting, but there were also separators. Sinclair's (1997) model of frontstage and backstage was used and slightly modified to show how frontstage and backstage can be seen to be performed as private or professional front- or backstage, depending on the situation and the actors' intentions with their performances. I also conclude in the analysis that actors perform *with* each other and not *before* or *towards* each other, which previous research has claimed.

6 Discussion

The purpose of the discussion is to show how my research builds on, but also challenges, previous research in order to further our understanding regarding the thesis' aim. In this discussion chapter, the analyzed material from chapter 5 is discussed in the light of the thesis' contextual framework. The chapter starts with a clarification of the diversity among the contractors in the study to stress the various opinions and performances regarding their roles and interactions with house owners. Three themes are then used to develop the discussion. Each theme starts with a brief summary of the results, which are then discussed in relation to previous research relating to the thesis' aim and research questions, which will be answered in further detail in chapter 8, the conclusion.

The focus of this thesis is SME contractors within the construction and energy sector and their professional roles and performances when they meet and interact with house owners in the house owners' homes to decide about future improvement measures. In Sweden, house owners have been shown to prefer hiring SME contractors if they want home improvements (Doona & Jarlbro, 2009). A recent Danish study from 2017 (Dansk Byggeri, 2017) also showed 37% of single-family house owners would ask a SME contractor for advice relative to energy renovations of their homes (other alternatives were e.g. architects, energy labeling consultants, energy consultants, consulting engineers). Thus, a SME contractor can be said to be an important actor for a house owner, when s/he is going to make some home improvements, and also decide whether energy renovations should be initiated or not. The interaction between the two actors was therefore important to investigate. The results from this investigation are discussed in this chapter, but before starting the discussion, I need to stress the topic of diversity.

To claim that the contractors all made the same expressions in all they said and did would be to disregard the diversity among them. The SMEs participating in this study comprised a variety of sizes and individuals, different interests and areas of work focus. The differences between the SMEs, and also among the contractors, could be seen for example in how they worked with and wanted to work with house owners. Some contractors did not work with house owners but wanted to increase this area for their businesses; some worked a bit and wanted to scale up; some worked half-time with house owners and the other half with other enterprises; some worked almost only with house owners; some claimed only to work with house owners but when visited, they also expressed working with big and small companies, the municipality, churches etc.

During the process, these differences (and others as well) have emerged in heterogenic performances among the actors, especially during the contractor-house owner interactions but also during the initial interviews to gain information about the SMEs and their preferred focus for the project (e.g. opinions of energy solutions and what needs to or should be done, and how to "handle" house owners). In addition, just as Olsen et al. (2008) show, there were differences in expressions between workshops and observations. When performing in the workshops, the contractors' opinions were toned down, and instead of having diversified discussions, the contractors adapted to each other, performing uniformly and agreeing with each other. The group dynamic in the workshops, however, developed along with the process, and in the final workshops, the contractors seemed more relaxed in their performances and expressed more diversified opinions than in the initial workshops.

There were also contradictions in expressed performances, for example when the contractors discussed the work with house owners (in interviews), when I saw how they worked with house owners (in observations), and when they expressed how they work with house owners in a group (in workshops).

Due to these diversities, I need to stress further one of my initial arguments: that generalizations about the whole construction sector can be questioned. I claim rather that contractors tend to be a heterogeneous group of individuals with various practices.

This diversity could make it problematic to draw any conclusions, other than that all individuals and interactions differ. However, Goffman (1959) claims that on a more specific and detailed level, patterns can be found that seem to reoccur. And these patterns, when understood and clarified, can possibly be utilized to interpret similar interactions or to clarify role performances. They can even be connected to the lack of energy renovations conducted of single-family houses in Sweden.

6.1 To get a feeling about and influence each other

The present study investigates SME contractors and their interactions with house owners when they meet at house owners' homes to discuss improvement measures that are wanted and/or need to be made. The main findings of this thesis are that both house owners and contractors seemed to search for control of the interactions, performing *with* each other. With the usage of various scripts and performances, they created a development of the interaction, a movement that in the analyses I refer to as a dance, where the actors try to get a feeling about each other.

Even though it was expressed that is important to get a feeling about a house owner, the interactions with house owners were not the contractors' main focus. The professional role of contractor was rather to carry out what was asked for, and the "real" job was to work with materials, to execute their skills. Thus, a tension existed between the need to interact with house owners in order to get a feeling about a potential customer and the potential job and, if the job was desirable, performing well enough to close the deal and be able to do their "real" job. Even if interactions were not expressed to be part of the contractors' real job, they were nevertheless very much needed. And the contractors were also seen to use different performances to gain, or try to gain, control of the interaction, creating an interactional dance with the house owner (Carlsson & Koch, 2014a).

The two actors had various possibilities to control the dance. A house owner owned and controlled the setting, which made it difficult for a contractor to be in control of what to look at and how and where to move in the setting. But, the results also show that house owners can be "forced" to let others into backstage areas, even though they might not want to. House owners can thus be seen to be in control of the setting, but not of where to move; that is negotiated by the two actors.

It can be questioned why it is important to know who owns control. The need for control can be linked to the actor wanting to make and sustain a certain impression and to define the situation – e.g. the competent professional is supposed to know everything. If the actor loses control, s/he may also lose the possibility to create the impression of the role s/he wants to play – e.g. the professional and competent contractor; and the definition of the situation and its outcome can change in an undesirable direction – e.g. loss of a desirable job.

Even though professionalism can be performed to various degrees, it is still important to show customers (house owners) that the contractor is professional and can be trusted. Egemen and Mohamed (2006) conclude that if the contractors' customers are satisfied with their work and the contractor's role, customers are willing to hire the same contractor again for more work. And even if the decision of who is going to work with whom may not be decided at the time of the first interaction, if a contractor is offered the job and accepts it, there is a chance for future jobs as well. Thus, a contractor's performances during the interaction, as in an audition for a job, can be important not only for the actual job but for the possibility of future work as well.

Since the aim for this thesis is to focus on interactions, and also the lack of energy renovations, this aspect is also covered in this discussion.

Solutions for energy efficiency were not perceived to sell themselves, as of yet. Instead, in order to sell new solutions, it was necessary to provide good arguments, and house owners needed to be convinced to buy them. But to sell and influence a house owner to choose something s/he was not asking for, did not seem to be a common performance for these contractors. SME contractors within the construction sector, in their interactions with house owners, have not been shown to have great influence on their decisions (Nair et al., 2010).

In the workshops, the discussion of how to convince and influence house owners reoccurred often – e.g. what to push and argue for when trying to interest house owners in their new concept. But the observed cases showed that there was a lack of expressed sales pitches when interacting with house owners. When selling a product or a service, the salesman often acts to try to convince the potential customer of his or his products superiority (Darr & Pinch, 2013). But in the interactions between the contractors and the house owners, the contractors focused on the house owners' expression of their needs. The house owners' wanted implementations were sometimes questioned, but otherwise the contractors acted as if they were there to do what they were told (if they wanted the job). Only in one case (contractor Johan, who showed house owner Henrik how his window barely hung together) did a contractor engage in something that was outside the house owner's focus for improvements. Thus, to sell and come with ideas of new solutions was a challenge to the majority of the contractors in the project. The lack of sales pitches can be connected to the aspect that interactions are not considered the real job, but something that needs to be done in order to get to do the real job. It can also be connected with the contractors' expressed insecurity, and their not wanting to risk their performed impression of being competent and professional and knowing what to do to solve each problem.

Although the majority of the contractors did not give suggestions for energy-efficient solutions, as in sales scripts and outspoken selling arguments, there were still various types of performances to influence house owners. One example is the use of materiality to meet and create joint understanding. But it is difficult to say whether a joint or similar understanding among the actors was created. Parnell and Popovic Larsen (2005) argue that contractors and house owners can have different perspectives on aspects – especially abstract aspects like energy. This can create difficulties when trying to find a joint understanding. Furthermore, Stieß and Dunkelberg (2012) claim that house owners need technical knowledge to be able to understand and evaluate the information available and decide what system to invest in and how it should be installed. But when considering that some contractors showed insecurity about new measures for improved energy efficiency and its possible implications for the house, it seems unrealistic to expect house owners to be more technically advanced than contractors who, it can be argued, have quite extensive technical knowledge about houses.

In addition to materiality, other performances were also used when trying to influence change with house owners – e.g. body movements, symbolic meanings through stories and various scripts were used by the contractors to strengthen their viewpoints and create impressions and possibly further actions by the house owners. The contractors were observed to use five different scripts during the interactions with house owners:

Professional script: the contractors performed professional scripts as a prolongation of their professional roles. The professional script implied helping house owners by doing what they ask without creating worries. The professional script was superior to the guest script, since it was through the professional script that contractors were able to negotiate entering other areas than the house owner intended to show. This script was the main script used during the interactions.

Sales script: used to influence from the perspective of a contractor's professional role, e.g. by use of sales pitch. The sales script was rarely observed to be put into play by the contractors, but when a contractor did use a sales script, it seemed to be due to the contractor perceiving something really important needed to be changed or that a solution needed to be initiated.

Private script: used to distance from the professional role and express private aspects. The private script was observed when a contractor met with a house owner in his or her private script. The private script was used in three different situations when a contractor: 1. tried to influence a decision; 2. found a mutual interest with a house owner; 3. tried to get a feeling about the house owner and also show his private self in the initial stages of an interaction. The use of private scripts was observed in almost all interactions, but only one or a few times in each interaction.

SME representative script: used when making decisions with regard to the business, especially used in the final stages of the interactions when deciding about upcoming actions. This script was also used when the contractor told the house owner about the enterprise, e.g. its focus, employees or years in business.

Guest script: contractors performed a guest script when house owners used a host script. The guest script implies that the contractor holds a position inferior to the house owner's and thus follows the house owner's (the host's) directions. Use of a guest script was a common performance in all interactions, especially when entering, leaving or shifting the space for the play in a house owner's home.

Similarities to the results of contractors' usage of scripts to try to handle a situation and influence action, were difficult to find. But it could be interpreted in line with Gluch's (2009) research, who found scripts in her study that showed that professionals develop alternative identities to deal with tensions relating to their professional roles. But scripts are interactional patterns that tend to be repeated. The contractors' usage of the private script in a professional context can instead be interpreted as a way to deal with the limitations of the professional role as a contractor.

If a contractor perceives his role to include doing what a house owner tells him to do, and if a contractor's role and competences sometimes even need to be argued for instead of taken for granted, then a contractor can easily end up in an inferior position when interacting with a house owner. Thus, to push for ideas and solutions is too far from the actions enabled by contractors' professional roles; however, by using various scripts, a contractor can distance himself from his professional contractor role with its limitations for action, and try to influence from another perspective. Using another script could also imply another position for him, while relating to a house owner, which also could enable another possibility for influence.

6.2 Tensions and insecurity underlying role performances

Another interesting finding, which relates to the third research question, is the differences between the contractors' expressed performances (in workshops) and the observed performances. These show how the professional roles of the SME contractors', when relating to house owners, involved performing professionalism and knowing *everything* related to a house and its materials, especially within the contractor's own area of expertise. But due to the tension generated by the importance of creating the impression of being a competent professional, there was an insecurity that was important to conceal for the house owners.

A contractor's insecurity can impact on the interaction between contractor and house owner and a house owner's decisions. A contractor's insecurity can even cost him the job, if he cannot conceal it and convince the house owner that he knows enough. Thus, even if a contractor is insecure in his performance, he needs to perform competence and search for control of the situation in order to perform and be accepted in his professional role and be able to own the decision of accepting the job or not.

But also house owners can be insecure when interacting with contractors. The results indicate insecurity on the part of some house owners, when they have to "deal with" contractors (as in the third case with Simon and Martin). House owners' insecurity can be connected to Killip's (2013) and Straub and Mlecnik's (2014) research, which highlights that some house owners choose a contractor on the basis of cost. They link this to the house owner's lack of knowledge about contractor's qualifications, which leads to uncertainties about which contractor to choose for their project. The cases in this study, however, indicate that more aspects than costs were important for these house owners. It was more about getting a positive feeling about the contractor, that he would do a good job and not cheat them.

The contractors expressed the need to be perceived as competent professionals by house owners who were potential customers; but they argued that it was a challenge and expressed insecurity in their professional roles. Brown and Phua (2011) argue that contractors' actions are grounded in how they see themselves. Previous research about the professional role as a contractor has drawn a picture showing a skilled and competent man, secure in his role and performance and physically strong (Agapiou, 2002; Datta, 2009; Watts, 2009). The role includes sweat and hard work and also a secure conviction of owning the professional knowledge and ability to carry out what he thinks is right, regardless of what anyone else says (Thiel, 2012). Maybe there is a difference between contractors' performances in larger construction enterprises and contractors in SMEs. Or maybe contractors' professional role as competent and sure in their actions is so well and convincingly performed and established that other aspects have been missed, because these results show insecurities, tensions and ambiguities about role performances when interacting with house owners. However, the contractors did not want to show insecurity or lose face, not among themselves and not with a house owner as potential customer, which can explain why their insecurity has been missed.

The expressed insecurity in this study also implies that tension exists in relation to the professional role of contractor. Of all the construction SMEs in the project, only one specialized a bit on roofs. Otherwise, the tendency was, especially on their websites, to profile their SMEs and employees as experts in *everything* regarding construction (Buser & Carlsson, 2014). When the role of professional contractor involves showing that he is professional, competent in everything and secure in his actions, this generates tension with the contractors' expressed insecurity, which they were unable to show. To be insecure in one's role and unable to show it can be problematic for a contractor, since his role involves performing the competent contractor who knows everything.

The results thus show how the majority of these SME contractors were insecure in their roles and about how to perform with house owners as potential customers, even though they performed to conceal this from the house owners. The contractors also expressed insecurity regarding some new materials and technology. Mlecnik et al. (2012) show in their study that contractors question whether house owners are ready to gamble with something as important as their homes by investing in energy renovations. But the gamble and thus the risk is also the contractors', since it was the contractors who would most likely have to take the blame if something connected with the work they have done does not turn out as it was supposed to.

During the workshops, a few of the contractors expressed not really believing in some of the new materials and solutions, and several voices were raised that expressed insecurity that new materials could create mold in houses and get the contractors into trouble. As the process developed, however, those who expressed insecurity seemed to gain confidence from collaborating with a group, but the insecurity lingered still in the background and was expressed in some of their arguments.

During the study, the contractors expressed insecurity mainly in relation to new materials, but also to lack of knowledge, not only about new materials as such, but also about how new materials would interact with other materials in houses, how it would affect a house and in the long run the contractor's business. The insecurity expressed can in some respects be connected to Killip's (2013) research. Killip writes for example that SME contractors within the construction sector, who work with renovations of single family houses, focus mainly on solutions and materials that have been tried out before and have a history of not creating any new technical problems or problems that can be hazardous to the health of the houses. Killip further argues that contractors often need to trust suppliers, earlier experience and common sense. He means that lack of knowledge about new technology and materials might make a contractor insecure.

In addition, during the study there was recurring use of excuses, negative comments and even horror stories regarding new materials and solutions. Such horror stories of wrongly implemented materials or implementation of materials that had gone wrong are not likely to create increased security in relation to how to conduct the work. Topouzi and Killip (2017) acknowledge the use of horror stories in construction as stories about something failing in practice. They mean it is important to pay attention to and explore these stories and the fears they are based on in order to find the learning stories within them. They argue that if these learning stories were shared instead of the horror stories, the stories could help increase implementation of new solutions. In this study, however, there were no learning stories; instead, horror stories were shared and with them an insecurity to do the "wrong" thing, which would create problems.

New techniques, materials and practices, for some contractors (and also some house owners), were solutions considered with skepticism and insecurity, but also materials and solutions considered to be traditional and accepted practice, have been shown not to function in the long run. One example is how standard practices for building wet-rooms have developed and changed significantly during the last decade, since earlier practices proved to create moisture damage.

The SME contractors can thus be seen to be caught between traditional and new practices. Regardless of which practice a contractor decides to follow, it may result in a performance that can create problems. As a result, the contractor can lose face, leaving the contractor in a dilemma of what practices he should use and when (see figure 6.1).

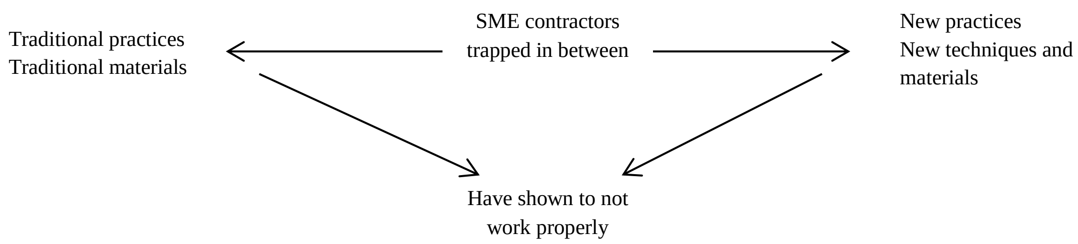


Figure 6.1: *SME contractors trapped between traditional and new practices*

When taught to work in a certain way that has been practiced for many years, it can also be difficult to challenge that way of working and try something new. The construction sector has been argued to be a conservative sector (see e.g. Holt et al., 2000). Mlecnik et al. (2012) concluded in their research that it will probably be difficult to find interested SMEs who want to try new methods, e.g. working together with others in a joint concept regarding energy renovations. Nevertheless, 24% of the SMEs contacted showed interest in the project from the beginning. For being claimed to be a conservative sector comprising individuals who do not want to try or learn new things, I find 24% to be a quite high percentage. And the contractors taking part in the project were curious to try and learn new things. Even though the established actions are grounded in traditions, the contractors in the project showed that a tension exists between pride in being able to rely on traditions and the wish to learn something new and gain new techniques, tools and materials to work with. But just as Killip (2013) argues in his study, learning and implementing new knowledge was only a risk contractors were willing to take if there was plenty of money and they were given completely free hands to do what they wanted to do.

Thus, this study, like Killip's (2013) study, shows that it is not only the enterprises that are concerned about risks, but that insecurity and risk assessment of innovative practices and business development are the concern of and among the individuals involved.

If a contractor has an ideal conception of his professional role as one who knows everything in his area of expertise and is knowledgeable about everything in his professional trade, it can be safer to use and work with known materials and solutions. And as the results show, it was better to wait until house owners asked for new things (or for retailers to give discounts), and then learn about what the house owners asked for, than to learn first and then try to implement the new knowledge. To learn something new that was not particularly asked for was not the contractors' first priority in their everyday work.

Lack of knowledge and resources have also shown to be a reason why trying new techniques and/or innovative practices has not happened; instead, business is as usual (Kim & Mauborgne, 2005). To get to know and learn about new materials and/or solutions before selling them demands a contractor's time and energy, which might not be an interesting priority in an already busy work schedule. In addition, there are a lot of new materials and concepts entering the market on a regular basis. There is thus a resource aspect here: efficient utilization of the resources available and not doing things that are not needed. To learn is an investment, and like most investments it is relevant to look at how long the investment would take to realize. Since energy renovations were claimed not to be trendy enough or sought after yet, learning could wait.

Previous research (e.g. Barrett & Sexton, 2006) also argues that SME contractors focus on their everyday actions and businesses. It is claimed that it is not perceived to be important for contractors to become experts. To learn new practices happens when the job demands it. Their expertise thus develops in everyday practices, situations and interactions. It is not part of their role to become an expert (Chan, 2016). However, the customers who were referred to as 'good customers' in Killip's (2013) study were the ones who showed respect for the contractors, their skills and competences. Also the contractors in this study expressed the importance of seeming competent and creating an impression with house owners of their professionality. There is thus a tension between contractors' expressions of not being experts when discussing their professional areas of expertise, but nevertheless preferring to be seen as experts. But it can also be that professionalism and expertise are perceived as two different aspects, e.g. in relation to roles and performances: professionalism can be connected to the contractors' vivid expressions of the importance of performing as an honest professional who takes his craftsmanship seriously, a role which includes doing what one is asked to do; whereas an expert can be linked to the contractors' expressing that they ask experts for advice regarding how to perform energy renovations This latter role includes giving advice within a limited, special area and telling others what to do, and as such is not part of a contractor's role.

6.3 Segmentation relating to ideal conceptions and visibility

The results show that the contractors had ideal conceptions of the house owners, due to their fronts and performances, and it also highlights the importance of visibility.

Although this is the first study to my knowledge to examine SME contractors, their roles and performances when relating to house owners, some of the results are broadly consistent with other researchers' results. For example, a tendency was found to select jobs due to the contractors' ideal conceptions of the house owners, their performances and fronts, which can be connected to Killip's (2013) research's finding that contractors tend to select jobs they find fun, and the contractors in his study held ideal conceptions of house owners. Even though these results show similarities, there was also the feeling about a house owner that was an important factor in influencing a contractor's decision of whether he would be interested to do the work asked for or not. My results also show how ideal conceptions not only related to costs but also to the house owners' performances and their fronts. In addition, fronts were not only created by social attributes such as clothing, hair and jewelry, which Goffman (1959) argues for, but also included other visible aspects that might be connected to a house owner, e.g. car, house, front yard. interior design. These visible aspects, together with previous experiences of house owners' actions, created a segmentation of house owners, where some aspects implied certain actions more often than others.

Contractors' ideal conceptions, as in stereotyping, have been argued to be common within construction (Loosemore, 2000) and found in previous research regarding energy renovations (e.g. Stieß & Dunkelberg, 2012; Straub & Mlecnik, 2014). The contractors in Killip's (2013) study divided their customers into segments of good and demanding. Similar segmentation of house owners was heard during this study's process, but instead of good and demanding, it was knowledgeable or not. Knowledgeable house owners were expressed to be more fun to work with; they knew what they wanted and they would not argue about costs. However, since contractors tend not to advertise or present prices for their services anywhere, their reasoning about some house owners' lack of knowledge of costs and further argumentation when they find out can be questioned. The contractors in this study also expressed ideal conceptions of house owners' lack of knowledge of costs for craftsmanship; there were also ideal conceptions regarding other aspects – e.g. financial constraints, age, gender, and moving into or out of a house, which created segmentation of house owners and their potential interest to invest in improvement actions for their homes, e.g. energy renovations.

That contractors have ideal conceptions of house owners' lack of knowledge is not a new finding. Also previous research, e.g. Risholt and Berker (2013) and Weiss et al. (2012), found a lack of knowledge on the part of house owners regarding their houses and the houses' specific problems, and that house owners do not have sufficient information and/or knowledge about energy efficiency and potential benefits with regard to their homes (Banfi et al., 2008; Mahapatra et al., 2013). Similar arguments are found in the results regarding how some house owners lack awareness that the condition of their house is not up to date. Also, the lack of responses can indicate that they are unaware of their houses' need for renovations and that the life span of materials can expire and in many cases already has (according to the building years of these houses and life expectancy of common building materials, as well as according to the two experts used in the study).

Through both observations and workshops, the contractors expressed that they acted in relation to their ideal conceptions about house owners, their actions and their fronts. In prolongation of Goffman's (1959) argument for fronts, I claim that also other symbolic artifacts than social attributes connected to a persons' body can be part of a persons' front, e.g. a house. Organ et al. (2013) and Sirgy et al. (2005) argue that house owners want their homes to reflect and be consistent with their values, attitudes, beliefs, ideal and social self-image.

Although there were house owners who were argued to be aware of solutions needed in their respective houses, there was a perceived problem among the contractors in convincing house owners to invest in materials that were not visible after the work was complete, i.e. would not possible for a house owner to use for his or her front.

Just like Gram-Hanssen argues (2014b) materials' visibility was argued to be important for house owners. Many house owners expressed using money for things visible to others. Materials and solutions were argued to be more about showing off to others than about environmental concerns and/or saving money. Thus, a solution that does not perform visually did not seem as interesting an investment than a solution that helped to create the sought impression. There was thus not only a segmentation of house owners, but also a segmentation of measures to carried out, in relation to visibility and coolness. There were: *the "invisible" and un-cool measures* (e.g. drainage of a house's foundation; added insulation); *the visible but still un-cool measures* (e.g. new windows; new roof); and *the visible, cool measures*, additions to the house owners' fronts to impress others (e.g. giant porch, new kitchen).

Although previous research has found multiple motivational aspects for investing in energy renovations (see e.g. Organ et al., 2013; Risholt, Time et al., 2013; Straub & Mlecnik, 2014; Straub et al., 2014), there are also barriers that prevent energy renovations (see e.g. Banfi et al., 2008; Weiss et al., 2012). From the results of this study, and in accordance with Gram-Hanssen's (2014b) results, I would like to add to the list of investment barriers the lack of visibility and cool-factor for the majority of energy-efficient measures. Energy renovations and/or improving a house on a "deeper" level were argued not to be flashy or cool enough; yet, as one contractor said: "The 'bragging factor' is still quite low". Nor were similar measures considered to be mainstream actions. To implement energy-efficient solutions or to perform an energy renovation were argued to lack visibility and thus were not interesting for house owners to invest in. To keep the house visually up to standard or to improve the house to create an impression on others – e.g. re-paint or change wallpapers, floors, kitchen countertops and cabinets, bathroom tiles etc. – was however mainstream.

When a house is seen as a prolongation of the self, creating a person's front, energy-efficient solutions' lack of visibility can hinder house owners in making investments in such measures, and thus add to the challenges for contractors' influence towards implementations of energy-efficient solutions in single-family houses.

7 Reflections of roles and performances

Since the methodological frame is action research, it is interesting to reflect over the process. Since the chapter's focus is on reflections about the process with the contractors, the reader who prefers to read the thesis as a narrative may skip this chapter and instead read it last. The chapter discusses the SME contractors' roles, performances and interactions and provides further insight into the researcher's role and some of her reflections. The chapter ends with a brief discussion of the business model tool used during the process with the contractors to develop their businesses.

A thesis using action research (AR) requires reflections about the AR-process, its advantages, challenges and tensions. Reflections are important in order to clarify the change process – if there were changes and developments – and also highlight aspects for future improvements.

Although a concept was developed with the SME contractors in the south group, the concept did not succeed with house owners, and the participants now see the project as completed. Martins and Solé (2013) argue that an AR project's success is mostly about limiting the tensions in the collaboration, and Olsen et al. (2008) mean it is about creating good relations between the enterprises in the project. If the success of a project is largely measured by good relations, this project should be considered a success.

AR is a creative process of trials and failures (McNiff & Whitehead, 2009). When attempts for change "fail", however, it is important to acknowledge, describe and highlight these failures. These experiences can develop the current understanding of the challenges and complexity of social change processes (Herr & Anderson, 2005). Thus, reflection about the process, roles and performances is important to show pros and cons and what could be done differently.

7.1 Changes and challenges while working with the contractors

Even though all three groups that participated in the project and workshops were finally dissolved, it would not be accurate to say that the change process was a complete failure. Nor would it be fair to all actors who participated in the process, or to all the work and effort put into the collaboration process, or to the changes that the project enabled.

The professional role of contractor was clearly expressed to involve doing what was asked for and not marketing or selling, especially not new things the market was not ready for. If house owners do not ask for something, there is no need to market it. Despite this, the contractors did try to market a concept regarding energy renovations – something house owners did not ask for. There were also other changes towards an increased focus on energy, not in all SMEs but with six of the enterprises which now can be seen as having an increased focus on energy and environmental issues when interacting with house owners.

It was considered a challenge however to work with house owners. And although one of the SMEs increased its focus on house owners after participating in the project, five SMEs closed down their businesses, starting other businesses in other areas (e.g. digging and transport;

renting and property management; technical solutions). Four SMEs stopped doing business with house owners and now focus only on business to business.

Another challenge was connected with the contractors' initial wish to participate in the project in order to get ahead of competitors and be in the forefront with something new. Despite this, it was difficult get most of them to push the project forward and do something "extra". The focus was explicitly on their main business, and this project was only added to their everyday work. Their focus can be connected to their view that craftsmanship is their "real" job.

Reason and Bradbury (2008) emphasize that AR constitutes research *with* practitioners – not for or about, but in collaboration with – to create social change. In order to work for and further enable change to occur, however, participants need to work actively for and be interested in changing (Mortati & Cruickshank, 2012; Rowe, Graf, Agger-Gupta, Piggot-Irvine & Harris, 2013). The project work was carried out in addition to the contractors' everyday work, if extra time was available during the day – except for one contractor who invested a lot in the project. When Olsen et al. (2008) argue for the importance of spending in order to gain, they are not only referring to financial spending but also time and effort; but all contractors, with two exceptions, clearly preferred to be served and not use their own SMEs' resources for the project. It was thus difficult to move some of them from passive receivers to influencers (McNiff & Whitehead, 2009). There were however some exceptions who assumed the role of influencers right from the start.

The fact that the contractors tried to carry out this project on top of their already busy everyday work caused tensions between the contractors with regard to attendance. If a contractor did not attend two meetings in a row, the other contractors expressed suspicions that he let his ordinary work come first - not giving priority to their work as a group. Greenwood and Levin (2007) highlight the concept *pseudo-constraints.* When people do not really want to change, they can use excuses (e.g. about administrative limitations, resource constraints etc.) that will cause the attempts for social change to fail. However, all the SME contractors loudly claimed to have overfull agendas. In the end, only one contractor could be claimed to use pseudo-constraints, since he gave more excuses than anything else. If they were pseudo-constraints or "only" excuses is difficult to say, however, and I will probably never know for sure.

Another tension and challenge during the process was to keep the balance between my focus and interest in the project and the participating SME contractors' focus and interests. Challenges have been experienced in earlier studies, when initiating collaborations between enterprises (e.g. Mlecnik et al., 2012). In this project, the challenges discussed were for example: ambivalence about defining what we were there to discuss (energy renovations). Instead, other barriers regarding contractors' work were discussed, such as foreign workforce/moonlighting etc. The focus on energy renovations had to be re-established several times, but as we came further in the process, other topics became less frequent.

Greenwood and Levin (2007) argue that AR is an evolving process – as the research progresses, the various parts fall into place and a clear path and defined goal emerge. However, even though there was a joint and defined goal, there were also differences in our perspectives and focus areas, and rightly so, since we have different frames to answer to in the end. For me, it was mostly about increased understanding and theoretical development. For the contractors, it was mainly economic and practical development as an extension of increased understanding and new knowledge. The two frames were not completely different, however. In some areas, the frames could even seen to be intertwined, as for example the focus on house owners' and contractors' interactions. Acknowledging their roles and the importance of their interactions with house owners can improve the contractors' sale-processes.

Regarding the SME contractors' roles and performances, it is interesting to highlight frontstage and backstage behaviors during my work with them. When the contractors were participating in a workshop, the discussions were formal and the actors used SME representative scripts to interact, e.g. about how to develop the concept. When we had a break, all participants relaxed and showed signs of informality in their performances, using humor and private scripts. The same change in their performance could also be observed in interviews with the contractors. It was apparent that the contractors were performing frontstage with me, using a SME representative script because they were representing their enterprises. When the interviews were "over" (I would say explicitly that the interview was over and thanked the contractor for his time, or I turned off the tape recorder or put away my notes), the contractors' tone and focus became less formal, and their performances changed from SME representatives in a frontstage setting, to relaxed backstage performances with jokes, private anecdotes and questions regarding my research's content and structure. It was thus not only the space or the materiality that was impacting the actors' actions, as the research of Darr and Pinch (2013) and Lowe et al. (2012) indicates. It also seemed to be the actors' focus and intentions for action. If the intention was the workshop and the focus was business, professional actions and scripts were used. If the intention was to have a break and the focus was sandwich and coffee, private scripts with opinions, humor, etc. were allowed to take place. Thus, instead of claiming that only space and materiality impact actors' performances, it can also be claimed that they are connected to intentions for actions and topics for discussion.

Backstage performances were also performed when we were in the contractors' vans, on the way to and from visits with house owners and before entering the stage at a house owner's home, and also while performing frontstage with a house owner. It should however be considered whether the contractors' backstage performances with me in their vans really were backstage, due to my presence and my role; but the contractors' actions indicated that I was not part of the house owner's frontstage setting. Most contractors told me what would happen during the upcoming visits, and after the visits, on their own initiative, they chose to discuss what happened during the visit; nevertheless, since my role was to follow the contractors and observe them performing their contractor roles and interacting with house owners, I was not part of the backstage either. The contractors might have felt obliged to discuss these aspects with me, performing the role of the professional contractor for me with my role as a PhD student. Even though some of the contractors discussed private matters with me, it was still in an in-between area where you do not discuss private matters too deeply. It was more about positive experiences, professional roles and thoughts around this.

In addition to discussing the contractors' roles, it can be of interest to acknowledge my own shifting roles during the process, partly because it was an AR project where the researcher's role is important to discuss (Greenwood & Levin, 2007; McNiff & Whitehead, 2009; Reason

& Bradbury, 2008); and also partly because I have used Goffman's (1959; 1961) dramaturgical theory, which highlights aspects of individuals' roles.

The dramaturgical approach is argued to work particularly well when the actors perform well-defined social roles (Darr & Pinch, 2013; Grove & Fisk, 1992); however, to hold a well-defined role does not necessarily mean that the role will be static and not change. On the contrary, during the workshop process, I perceived my role to change in accordance with the situation, and also in accordance with the contractors' actions. In the method chapter (chapter 4), I claim that my role in the workshops was multi-dimensional. It was also multidimensional in other situations, but not always due to my own intentions. I was very well aware of my own role and reflected on how it affected the other actors during both my meetings with them in one-on-one situations (e.g. visits, interviews) and in other situations (e.g. observations, workshops). I tried to work with my role in various ways. One aspect I was repeatedly concerned about was to not let my role get "too strong" in the workshops (Greenwood & Levin, 2007), but rather allow the contractors to steer the process. This should however be seen in relationship to my awareness of features that awarded me a subordinate role (younger, student, and woman). In the first workshop in all three groups, I felt the need to use various aspects of my previous experience (work in the waste industry and as a fire fighter) to legitimize my role and my presence and show the contractors that I was not only a theoretical academic but also had practical experience. My attempts to broaden my role was however not accepted by the contractors. This was especially clear during the interviews. During the first interviews, I initially talked and joked as I was used to do in my previous practice. But when I saw the contractors' reactions – that my actions made them uncomfortable, I changed my performance to that of the serious professional in order to enable a relaxed interaction. It is an ambivalent feeling when, as a woman, you want to be taken seriously, but you also want to joke and be able to act the way in which you are most comfortable; however, the role of PhD student limited my expressions.

My role was also interpreted differently during the observations of the interactions between house owners and SME contractors. For example, when I introduced my presence and my role to Simon, he interpreted my role as a person who was inspecting and monitoring contractors and their work. Henrik interpreted my role in a different way than Simon. He saw me as a representative of the university; he showed signs of an ideal conception of the university, and in an extension of that, also about me and my knowledge.

Thus, to decide what role I should have and how I wanted to perform it was not always up to me. It was rather a decision negotiated with the actors with whom I was currently interacting.

7.2 Self-reflections

At risk of seeming too much of a navel-gazing researcher in discussing the researcher's role, some self-reflection is necessary when performing AR (Eikeland, 2007; Herr & Anderson, 2005; Greenwood & Levin, 2007; McNiff & Whitehead, 2009; Reason & Bradbury, 2008). Therefore, reflection has been given priority during the process, in order to clarify my own as well as the contractors' actions. Self-reflection was addressed, for example, by continually writing down thoughts during the process. These thoughts served as a tool to support my self-reflections: in making decisions, clarifying the process and making me aware of my implicit thoughts and preconceptions as well as expectations and assumptions of former and future events and actions.

These self-reflections have not just been “the self” – I – reflecting on my own. My self-reflections also went on together with the contractors, as well as with my supervisors. My supervisors played the role of “critical friends” (McNiff & Whitehead, 2009, p.61) who explicitly discussed my actions and thoughts as well as the contractors’ actions. To reflect together with my supervisors helped me to distance myself from the project and see my own actions from an outside perspective, which is a challenge (just as Nielsen and Nielsen, 2006, explain it to be) but also a huge learning experience.

During the final phases of the project, I reflected that I would like to do the same project again, from scratch, with the increased understanding and knowledge I have gained through this project. To travel back in time is however impossible, but I have some learning points I will bring with me for future projects:

1. *Do not try to do everything yourself.* Get help and/or divide tasks among participants. Bill and Olaison (2009) suggest having a moderator to facilitate the process; this would be nice to try. Also to bring in another researcher to observe actions, or make sure some of the other participants take notes or lead the process so that I can focus on the interactions.

2. *Clarify roles and intentions.* Make sure the role of “head of the meeting” is clarified and discussed. It could formally circulate among the participants, if that is what they prefer. Martins and Solé (2013) conclude that roles are dynamic; it might be good to adopt one role in the beginning, and then let new roles emerge during the process. It is important to be even clearer in the initial phases of a project. It is the participants’ project; I am not there to make decisions but to support them to run it. Therefore, create discussions about roles and workshop rules, ethics and other details, which all participants find important, e.g. how to make the agenda; who makes the agenda and takes notes; how to use technology during workshops; how the workshops should be run etc.

3. *Trust in the process.* In order to perform and gain understanding, I did trust and invest in the process. With hindsight, however, I can see that there was room for more trust in the process.

4. *Keep to a few aspects in each project.* More is not always better. While it has been a great experience to work with and learn about so many different aspects and use different perspectives in one project, it has also been a great challenge. For the next project, I would prefer to not have so many perspectives and methods.

However, there is no one way that is the right way. Instead, it is important to learn and find the right way for me as a researcher, as well as for the specific project and its participants.

7.3 Business development and change

One aspect, or rather one tool used during this process was the business model development tool: the business model canvas (BMC) created by Osterwalder and Pigneur (2010). It was used on various occasions (e.g. in the workshops, but also with individual SMEs). The tool was somewhat helpful: it helped visualize the businesses. It also enabled the contractors to create new ideas regarding the focus of their concept.

Through the workshops and collaboration opportunities, the SME contractors were able to share information (Herazo & Lizarralde, 2015; Schönström, 2005) regarding how to renovate single-family houses to decrease energy usage. In addition, new business opportunities for energy renovations were developed, not only in the groups, also in four SMEs and among six SMEs on the side of the project's aim.

Through working with this tool, however, I perceived that some aspects are missing. When trying to develop a business, these aspects can be quite important. For example, by asking the question: "What is it that we want to offer?", it was quite easy to decide what the value proposition should be. But then: how to work, what to do, who should do what when, and how to structure work, costs and revenues etc.? These aspects proved to be more difficult. The work with these aspects was not supported by the BMC, which only focuses on "what", not "how". When developing new business models, it is relevant to consider "how".

Moreover, when an enterprise is analyzed using the BMC, it is analyzed as a little bubble; unrelated to the context, the competitors or the surroundings it is or is supposed to be performing in. You can change and improve a business, but without having an understanding of the context that you are trying to succeed in, the chances are you will fail (Björnfot & Torjussen, 2011).

There are also several other aspects missing in the tool. I list five here that may be fruitful to highlight and discuss:

1. *Who is manager and how to manage?* Who is the manager or owner of the business model? Is it the manager of the business or someone else? How will the business model be managed and maintained? The BMC lacks process thinking. How will the value proposition actually be carried out? How do you perform the value proposition? In-house vs. outsource performance? How do you make a BM "fit" into or work with a business process thinking/acting? How do you make a BM fit into project-based organizations, which is what the construction field mainly consists of?

2. *Evaluation.* How do you know if the customers actually value the proposition (product/service/work) carried out? How do you make the value proposition work and/or improve it?

3. *Personal relationships.* To make and change a business model in accordance with a business model canvas dismisses the value and importance of personal relationships! What are businesses, if not personal relationships? And where are the employees? It is often the employees who create personal relationships with the customers, especially in sales interactions. Related to the business' employees, what is needed in order to implement the business model?

4. *Drivers for the business model.* What is driving the business model? Is the model cost-driven, customer-driven or value-driven or even context-driven, culture-driven or competition-driven? What requirements and conditions, as well as risks and limitations, are there for making the BM work?

5. *Pricing and costs.* What would customers be willing to pay for, and how much? What are the "costs" of using the product/service (not just economic).

In addition to these five aspects, there is one more that the results clearly highlight: How to find, reach and convince customers of the product's or service's excellence? The model implicitly assumes customers to "be there", but if they are not, what to do then?

Summary of Reflections of roles and performances

This chapter highlights some advantages and challenges that occurred during the process. The topic of roles is given space, in line with both Goffman's dramaturgical theory and AR. The roles of contractors' as well as researcher are reflected upon. Furthermore, the importance of self-reflection in an AR project is discussed and improvements of future role performances are presented. The chapter concludes with a brief reflection on the business development tool used on a few occasions during the process. The tool was somewhat helpful, but it also lacks the aspects listed above.

8 Conclusion

The final chapter of this thesis is the conclusion which is divided in three parts. The first part is presenting the answers to the thesis' research questions and aim; the second part contains the thesis' contributions; while the third part highlights practical implications regarding energy renovations, drawn from the results. The conclusion ends with some final words.

The focus of this thesis is on SME contractors, their roles and interactions with house owners. Since earlier research with the same or similar focus within the field of construction management is scarce, I wish to address this knowledge gap with this thesis and explore SME contractors and how they relate to and interact with single-family house owners. In addition, I wish to show how an increased understanding of these interactions can bring further light to the lack of implementations of energy-efficient solutions in single-family houses.

To make my focus a bit more specific, I pose four research questions:

The first research question concerns how SME contractors and house owners interact when they meet to discuss improvement measures in house owners' homes. The first research question also contains two sub-questions.

The first sub-question covers how SME contractors relate to house owners during these interactions, and it is addressed as part of the first research question. The interaction between the two actors can be seen as an audition for two roles in an upcoming play that sets the conditions for the two actors' performances. The audition, where the two actors meet in a house owner's home, provides the actors with the opportunity to get a feeling about each other, their performances and roles. It is important for the contractors to give house owners, as potential customers, the impression that they are professionally competent and can perform everything related to their area of expertise; they thus need to conceal any insecurities. At the same time, the contractor assesses the house, the house owner and the job to be carried out. Through the audition, the two actors can decide whether they want to have further dealings with each other or not. But regardless of the decision, they would have performed their roles in the audition to the end.

The contractors' feel about a house owner and the decision about an eventual job are related to the contractors' ideal conceptions. Through the SME contractors' backstage performances (e.g. in contractors' vans) and frontstage performances with house owners, the contractors showed that they have ideal conceptions about house owners. These ideal conceptions were created on the basis of house owners' own fronts and their frontstage performances. The results show that the interactions, as in the actors' performances, and also the outcome of the interactions, can be influenced by these ideal conceptions.

Tensions and ambiguities and also insecurities about the contractors' role in the performances, emerged however during these interactions. Through the use of various performances and symbolic artifacts, the contractors created and performed their professional roles as SME contractors. But even though a professional role was performed in the expressions given off, the performed role implied tensions and there were occasions when the expressions given did not match the expressions given off, e.g. by the contractors' usage of scripts.

The results show how an actor's role can imply limitations of actions, and an actor can be "locked into" his or her own role with its associated actions. But through usage of scripts, the actor can enable a temporary "bending" of those limitations and interact in another role and with another perspective. For example, several contractors were observed to meet the house owners in their private scripts, aligning their scripts with the house owners', distancing themselves from their professional roles and connecting with house owners through aspects not connected to their professional roles.

An actor's usage of various scripts can also imply various hierarchical positions in relation to another actor. Usage of some scripts can create alignment of positions and performances; others can imply inferiority or superiority in relation to other actors.

The contractors performed an inferior position in the beginning of an interaction with a house owner – they were there to do what they were told if they wanted the job and to have it offered to them. But as the interactions progressed, the contractors as well as the house owners expressed that they were seeking control of the interaction by using different performances. Tensions were thus apparent in the contractors' performances, showing inferiority in role performance but still seeking control of the interactions and their outcomes.

Even though none of the contractors took the overall lead of the interactions from beginning to end, they were still able to be in control at times, and the actor in control shifted between the two. The contractors also showed that they were in control of their part of the upcoming business decisions. But what the business decisions should include was mainly up to the house owners to decide, even though occasionally there were negotiations on details. The contractors carried out what was asked for, with minor alterations.

In addition, tensions were expressed about performing interactions with house owners and what was considered to be the contractors' "real" job, the performance of their skills. These tensions and ambiguities about role performances and work underlie the contractors' and house owners' interactions. Here, SME contractors exhibit inferiority but still search for control, concealing some aspects and performing to highlight others. The roles imply limitations of actions, where the two actors influence and are influenced and thus perform *with* each other and build on the other's performances, creating an interactional dance.

The second sub-question to the first research question was about which theory could support increased understanding of interactions between SME contractors and house owners. Goffman's (1959) dramaturgical theory was chosen as the thesis' theoretical lens through which to interpret the empirical material. As stated earlier, Brown and Phua (2011) argued for using this theory, but when exploring contractors' interactions and roles and previous work in construction management, the use of Goffman was found to be scarce. But the choice of Goffman's dramaturgical theory was not only due to Brown and Phua's claim. The theory was chosen due to its focus on micro-sociology, social roles and performances in face-to-face interactions. The theory has also been argued to work well on sales interactions (Darr & Pinch, 2013; Grove & Fisk, 1992).

In addition, I found it interesting to explore how a social theory focusing on stabilized actions and performances would work with a methodology focusing on change. Would the theory and methodology completely clash and create contradictions and tensions that would disturb the research, or would the two perspectives cross-fertilize and enable further insight into their respective focus areas? There were others who had used dramaturgical theory in change-processes before, for example Mirvis (2005) and Green (2006). But both Mirvis' and Green's studies were argued to be dramas with prepared scripts determining how to act and what the ending should be. In this thesis, the methodology is action research, and the actors were SME contractors. The contractors in this study created their own drama, and worked collaboratively to develop a plot and then create an ending. Thus, this change-process was a bit different.

There have been some tensions between the two perspectives, at least while writing this thesis. But above all I find that using the two perspectives has enabled further insight into the contractors' roles and interactions with house owners. (The usage of social theory in an action research project is elaborated further under research question five.)

With *the second research question,* I wanted to investigate the challenges posed by a social change process that focused on developing SME contractors' businesses collaboratively towards energy renovations.

Challenges emerged during the process within various aspects of the project. There were challenges regarding project execution, e.g. the project was added on top of the contractors' everyday business, which was also related to the tension of what was considered to be the contractors' "real" job. When a contractor carried out his everyday job without investing in the joint work, this created friction among the contractors who did invest.

There were also challenges due to roles and performances, for the contractors as well as the researcher. Even though specific roles were important for carrying out the project, the same roles also created challenges. For example, related to current knowledge and moving beyond stated areas of expertise and roles. Performances of certain roles could create hindrances for certain actions, and a role could also be given to an actor regardless of the actor's preferences for the specific role, thus creating challenges with regard to how to act if the actor did not want the given role.

Challenges occurred when discussing how to divide potential revenue streams and also about who should be the front figure for their joint concept. Tension occurred about wanting to be a front figure and get something out of the project and not wanting to do the initial inspection. This tension was solved by sharing the initial contact with potential customers and not emphasizing any of the enterprises, while one contractor volunteered to make inspections. Not wanting to make inspections can be related to what they considered their real jobs, but the contractors also expressed insecurities about house owner interactions as well as new materials and solutions.

The contractors' insecurities about materials and solutions posed some challenges for development of their practices. New materials and solutions that had not been tried before were considered with skepticism and insecurity. Some solutions had been tried, but had resulted in unsatisfying outcomes and problems for the contractors who tried them, and plenty of horror stories were circulating. To avoid problems, loss of face or challenges to the professional role, it was safer to conduct work with solutions and materials tried previously. Nevertheless, trials and implementation of new practices were still carried out, thus overcoming insecurities. One contractor invested in a test-version of solar panels on his enterprise's roof, while two contractors invested in educating themselves as well as all their employees about roofs, new materials and techniques. And regardless of the expressed insecurities, the contractors in the

South Group developed a new concept regarding energy renovations in single-family houses. When trying to implement the concept with house owners, however, the participants experienced challenges that created insecurities about the actions performed and their developed concept. Instead of pushing for their concept, the group dissolved and their joint concept was not implemented in any houses.

The second research question also contained a sub-question that addressed to find out what such a process to create social change with regard to energy renovations could show about the SME contractors' roles and their social interactions with house owners regarding new materials and solutions to create energy efficiency in single-family houses. In order to answer this question, the empirical material from the workshops had to be related to the material from observations of SME contractors' and house owners' interactions.

One of the themes to emerge from my analysis of the workshops, and also from the observed interactions, was how to perform competence and professionalism with a house owner. But even when the contractors performed actions to prove to house owners that they were competent and trustworthy, the issue of how to create credibility and show competence still seemed to create some challenges. One reason could be an ambivalence related to the roles the contractors expressed and the expressions given off.

During the observed interactions, the contractors' roles expressed professionalism and the competence to meet the house owner's demands. In addition, the contractors' performances were sometimes based on how they thought they should perform in order not to worry or scare house owners. It was important to show house owners that a contractor is a professional who knows what he is doing and can be trusted. And as shown in the discussion, earlier research about contractors' professional roles indicates similar aspects. But using action research and working with the contractors to develop their businesses allowed me to gain insight into the insecurity and ambivalence they expressed concerning performances of their professional roles and interactions with house owners, as well as the importance of concealing any insecurity when interacting with potential customers. One might wonder whether the contractors' expressed need to conceal their insecurity in interactions and instead perform the professional who is secure in his role is one reason why earlier research has not highlighted this before.

Thus, usage of the two methods has helped me achieve a more nuanced view of the contractors' performances when interacting with house owners and of how they express their role as professional contractor.

In addition, the two methods revealed other diversities. During the observed interactions, there were very few discussions regarding energy efficiency or various types of solutions to create energy efficiency. But this occurred much more during the workshops. The contractors' ideal conceptions of house owners also emerged in a segmentation of house owners according to who would or would not be interested in energy-efficient solutions and why. This segmentation of house owners was connected with house owners' visible aspects, such as their fronts (social attributes), but fronts also include a house owner's connecting objects (e.g. car, house, garden), and also with more abstract aspects (e.g. lack of knowledge; time for a change of ownership). But there was also a segmentation of energy-efficient solutions. Through the dramaturgical theory, it became clear that there is a visible aspect as well as "cool-factor", which are lacking with the majority of energy-efficient solutions. Visibility aspects were argued to be motivational for house owners. A visible aspect could then be used to support the individual's front, to give others an impression of who s/he wants to be. However, one can also reflect on the importance of visible solutions, also for the contractors. Visible solutions conducted in a way that impresses others were important for showing their work to other house owners, as well as contractors, as a way to get more business. When energy-efficient solutions are not considered cool or are not visible so others can be shown what has been done, other solutions can be perceived to be more interesting.

Also when new materials and techniques are constantly introduced on the market, it can be difficult to be on top of them all and perform the role of the competent and knowledgeable contractor who is supposed to know everything. If solutions are not working as intended, a contractor risks losing face, but there is also a risk that the professional and competent role he was performing with the house owner can be challenged, risking not only the business at hand but also future business.

Nevertheless, curiosity about new solutions and materials was high. And several, if not all, contractors wanted to work with new solutions and expressed the need for new solutions to improve energy efficiency in single-family houses. One solution to satisfy curiosity, overcome insecurity, perform the professional role, and minimize risk of losing face was to invest in knowledge about some specific measures they believed in. New experiences with specific solutions created confidence and security with regard to the contractors' knowledge and competences, which increased their confidence in how to argue for similar solutions with house owners. This also can be an explanation of their claim that knowledge sells.

The third research question asked whether implementations of energy-efficient solutions were discussed during the observed interactions, and if not, why were not the contractors using the space opened up by the interaction to argue for these kinds of implementations?

The observed interactions between house owners and contractors showed that space was created for a contractor to sell energy-efficient solutions but despite the contractors' ideal conceptions of house owners' lack of knowledge, and also despite the argument that knowledge sells, it was not common for the SME contractors to make suggestions or challenge the house owner's ideas. Several aspects, but also tensions, were shown to be underlying.

As the analyses demonstrate, it can be problematic for a contractor to advise or offer new suggestions during the first meeting with a house owner. The role of house owner can be argued to be just as important as the role of contractor, and the two roles with their various perspectives are equally necessary to conduct an energy renovation that satisfies both actors; nevertheless, even though the two roles are equally necessary, the results from this research show that it is the actors' roles that prevent them from giving suggestions and inputs. Lack of suggestions can depend on the current situation and the contractor's feeling about the house owner and influence the amount of effort the contractor wants to exert. But the analyses also show that a contractor and house owner interaction can be seen as an audition for roles in an upcoming play. And if one actor is more interested in performing in the play, his interest can put him in an inferior position to the other actor. If a house owner asks for something specific and a contractor wants the job, it can be difficult for the contractor to come with contradictory suggestions and ideas.

Another interesting aspect of this is the tension between the two roles and their implications for improvements. A contractor is a professional who makes a living based on his skills. The results show that the contractor's role implicitly involves implementing what the house owner, who is an amateur in relation to such skills, expresses to be important. But if house owners lack knowledge about their houses, how can they be expected to know what their houses need to keep them and their residents healthy? Thus, when the contractor's role is to "help house owners with what they want", this does not necessarily imply helping them with what their houses might need improved. It was even considered to be new and innovative in this field to develop a concept to help house owners become aware of areas in their houses that were in need of improvements. When the role as a professional contractor implies to only focus on what the house owner wants, this creates a barrier in the contractor's role to making suggestions beyond what is asked for, even if it would be the best for the house and its owner.

Not arguing for something the house owner is not asking for and "just" doing what the house owner wants results in a lack of energy renovations. With only the help of his performance and legitimized role, a SME contractor is supposed to change a house owner's mindset on an issue s/he might have been thinking about for months. And such a change of mindset has to be created through a brief first interaction where the contractor might even have to start his performance by proving his competence.

Even when contractors wanted to give suggestions and come with ideas, their expressions were restrained due to the need to try to show professionality and competence. To give suggestions and ideas beyond what a house owner asks (which might not even be in the contractor's area of expertise) can create a loss of face and also a loss of potential business. It can be challenging to claim things not believed to be a certainty, when a contractor is insecure in his role and about the solutions.

But the space the interactions open up for suggestions was not completely neglected. Even though the roles imply that a house owner tells and a contractor gets it done, the contractors were able to influence some aspects through the use of various performances. For example, through the use of private scripts, the contractor can create distance to his role and try to influence the house owner and create action and change. What is central here is that when a contractor makes suggestions, a role distance is performed, implying that his private script has more leeway to make suggestions than his professional role, which further strengthens my argument that contractors' professional role hinders proposals of new ideas.

As concluded in research question one, some contractors were not even perceiving the interactions to be their "real" job; the real job was to use their skills to do what they were told in order to help house owners accomplish what they wanted and expressed to be needed. If a contractor understands the house owner's role as telling a contractor what should be done. and the real job is perceived to be conducting craftsmanship, then the roles in the play an interaction creates can prevent suggestions for other solutions than what is asked for.

A contractor will also have to take responsibility if his suggestions do not turn out to be what the house owner wants. This can cause the risk of losing face and also challenge the professional role and probably the chance for more time for interactions. The risk of offering ideas and new thoughts is also that the house owner would need to respond to them. S/he might even want extra time to think about and/or argue for or against the suggestions, which would result in even more time for house owner-contractor interactions and less time to do the job. Thus, to do only what a house owner asks for saves a contractor time that can then be used to do his job.

It is necessary however to acknowledge limitations regarding these results. The challenge of joining the contractors in their encounters with house owners meant that I was not able to observe all contractors that were taking part in the South Group. Thus, the comparison between the actors, through observed interactions and workshops, needs to be strengthened by further studies.

The fourth and final research question relates to the thesis methodology and theory and how the use of action research, with its focus on processes, could be used with a social theory – in this case the dramaturgical theory, where the focus is on routinized actions.

The material to answer this research question is found in the presentation of the two perspectives and is also strengthened through the analyzed empirical material. The dramaturgical theory and action research are related through the activity that occurs when actors interact with one another to establish joint meaning of the interaction and potentially for future interactions. Even though it can be argued that the two actors (a contractor and a house owner) can be locked into routinized roles and performances in their interactions, actions are still performed (e.g. usage of scripts) to influence and/or enable change. Also, during the interactions, ongoing change and adaptation performances take place between the two actors, who move and act to get a feeling about the other, thus creating change and developing the interaction. Thus, even though the roles are stabilized with routinized actions, changes still occur, and the changes and stabilized actions come together in the actors' performances. In addition, there is also stability in change. Even though there was continual change during the interaction, there were also stability, as in roles performed, but the change was stabilized in periods (a script was for example used for a while and not changed the whole time). What the results show is thus that meaning is interpreted and created socially; the actors create the social reality of which they are part, and their interpretations of the social reality create further actions. Thus, they also show that the social world is both fluid and stable at the same time.

With this thesis, I also argue that action research is not such a special methodology as it is sometimes claimed to be; rather, it can and should be complemented and lifted by social theory, for example Goffman's (1959) dramaturgical theory. It was with the help of the lens of stabilized roles and routinized actions that I was able to clarify how development and change can be hindered among the actors, while action research's focus on change created clarity regarding the SME contractors' established practices and thus provided understanding of how to create change.

The aim of the thesis is to extend our understanding of SME contractors within the construction and energy sector and their interactions with single-family house owners, and to explore further whether increased understanding of SME contractors developing their businesses towards energy renovations of single-family houses could bring more light to their interactions with house owners as potential customers and the lack of energy renovations of single-family houses in Sweden. The aim of the thesis is supposed to be met through the four research questions.

Through the theoretical lens of Goffman's dramaturgical theory to analyse SME contractor and house owner interactions, and also with the help of action research to work for change, I have been able to show that one reason why energy renovations in Sweden are still lacking can be SME contractors' and house owners' established roles and connecting performances while interacting. The contractors expressed acting in relation to their ideal conceptions about their own roles, house owners and house owners' fronts and connected actions. Thus, contractors' ideal conceptions of house owners, mixed with their understanding of their own professional role may act to hinder a contractor to act outside the frame of their professional role.

Because contractors' ideal conceptions, insecurity, established roles and performances create challenges to new inputs, implementation of energy renovations are suppressed due to the actors' role performances during their interactions. But this also happens because contractors and house owners can have knowledge differences as well as different perspectives on what is important when renovations are carried out.

The contractors' expressed that house owners lack knowledge, which can be connected with why they argue that knowledge sells and that through testing and new learning, confidence is gained. But it is quite discouraging to think that contractors have to learn for each object, making mistakes along the way and using house owners' homes as "test objects" if they do not have the possibility to try out innovations on their own businesses. And even if a contractor has knowledge about new materials and solutions, he might still not be aware of the specific house and its functions with its specific owners at the present time. Thus, it might be important to know the house in order to know what specific solutions to suggest, what solutions will work with the specific house and the specific owner; therefore, it might take a contractor some time to consider what solutions to suggest. Thus, a dilemma exists regarding limitations of roles, insecurity in professional roles, materials and solutions, the need for interactions to audition the performance of the real work, but also to get to know the house. It may be that several occasions for interactions are to be preferred and needed to create a good solution for a house owner, where a contractor can feel secure to make suggestions without losing face.

The lack of cool-factor and visibility can also influence contractors' possibilities to influence a development towards something different than what the house owner asks for. One contractor expressed that the best-selling argument was to use group pressure through other house owners. But energy renovation is not a hype, as of yet; thus, to claim that others have done it can be problematic, especially when the concept and the majority of the solutions lack cool-factor and visibility. It was therefore difficult to create an interest through others' actions. Instead, these sorts of solutions were perceived to be felt and/or talked about and given space in other forums and media, to create the visibility these measures were argued to lack. The contractors claimed that it was necessary to wait for house owners to take initiatives for new and innovative measures. Trends were argued to be "created" through media, and the contractors could only follow up on what the media suggested. The need for visibility and cool-factor in order to create house-owners demand can be connected to an individual's needs to show others who s/he is and what s/he stands for, i.e. the front the individual has created to show others his or her identity.

As of today (summer 2017), measures and solutions for energy efficiency are not yet perceived to be easily sold. But one can also reflect: It can be difficult for a contractor to sell something that he does not know is needed or at least not until it is seen, and even if it is needed in a house, the house owner might be unaware of this need. If a house owner is unaware of the house's condition and potential problems (e.g. when the lifespans of the house's building materials expire), s/he might not consider there to be any issues, until, as was argued at the workshop, there is a visible or felt issue (e.g. a leaking roof). A house owner might also question why s/he should invest in something expensive like energy renovations, which are not cool enough or not even possible to show off to the neighbors. So the question is then: How to create a need for something that is not visible or cool, nor underperforming enough to create awareness until it is really bad (e.g. mold or health issues). Furthermore, how should a house owner be able to know what needs to be done and what the measures required would cost, if the information is not highlighted anywhere? The dilemma of energy renovations' lack of visibility and some house owners' lack of awareness creates space for future research, but also for practical implications (see 9.2 Practical implications).

A final point drawn from the project behind this thesis is the aspect of change, even though the construction sector has been claimed to be conservative, traditional, rigid and unwilling to change or develop new approaches (e.g. Holt et al., 2000). It can be a difficult task to create change in the construction sector (Björnfot & Torjussen, 2011), but changes were created through the project. The results show that there can be change and that there are SME contractors willing to change. When I sent out the project proposal to the SME contractors, almost ¼ of the SME contractors I asked showed interest in change and new learning. Although this thesis focuses on plenty of challenges for innovation, there were contractors who took part in developing programs and were curious about testing new materials and solutions. Thus, there are contractors who are interested in trying new things, learning and working for change. The results show there are various individuals, with various intentions and beliefs and performances. These variations and diversity should be highlighted instead of lumping a whole sector together and claiming, with all its variations of individuals, that it acts in certain ways.

This project shows a small slice of this diversity among SME contractors in the southwest area of Sweden. Even while the contractors were aiming towards the joint goal of collaborating to develop a new concept together, their expressions, performances and perspectives when interacting with each other were still diverse, also when interacting with house owners as potential customers.

8.1 Contributions

Through the present study, I contribute to the ongoing debate about the lack of energy-saving initiatives, when single-family house owners decide to initiate measures to improve their homes and call in contractors to define the content and costs of the measures chosen. Through application of AR and Goffman's dramaturgical theory and the results of earlier research, an increased understanding of SME contractors and their interactions with house owners has been gained. I would therefore like to highlight seven contributions to construction management, which is the field I want to contribute to.

First. The interaction, with its established roles and performances, is "locking up" the actors in their roles, which blocks change, such as new inputs. However, through the usage of scripts, there is still a possibility for a contractor to influence the process. There is also a hierarchy among scripts used by the actors. Certain scripts imply certain positions – for example, host and guest – which come with a hierarchical order for the actors to adapt to, enabling or constraining their performances with each other.

Second. There are more tensions behind a contractor's professional roles than stated in previous research. Insecurity and ambiguities exist in relation to contractors' professional roles and performances. Performing, together with a house owner, the role of competent, secure professional who knows everything can be a challenge. Insecurity can influence the performances and the outcome of the interactions. In addition, interactions are not considered to be the real job, but to perform physically and practice their crafts are the actions that define a contractor's professional role.

Third. The SME contractors created segmentation of house owners, according to whether they were potential customers and in relation to the probabilities of their investing in energy renovations or not. The SME contractors' ideal conceptions of house owners were based on whether, for example, they were well-informed or not; but also other aspects like age, gender and money were used to segment house owners into for example potential customers or not. There was also a segmentation of improvement measures.

Fourth. The two actors (contractor and house owner) search for control (not balance) through the interaction. Thus, an interaction leading to a potential business relationship can be interpreted as a dance, where both actors are trying to make the interaction move further toward a decision. Through the usage of scripts and the actors' adaptation to each other, the contractor and house owner are able to create movement and a rhythmic aspect in the interaction. With the help of AR, it became clear that a rhythmic element in the interactions supports the dance' development, and it revealed that a house owner and a SME contractor perform *with* each other when interacting and not *towards* each other, as has been claimed previously.

Fifth. Goffman's frontstage and backstage can be divided into four different versions, with private and professional backstage as well as frontstage. The four stages can be performed in various degrees and with the help of separators (physical as well as abstract); the actors can perform on various stages with various actors, even though they are in the same space, close to each other.

Sixth. The merging of Goffman's dramaturgical theory and AR: The dramaturgical theory and AR are related through the activity that occurs when actors interact with one another. Even in stabilized actions, there is change, and there is a need for both perspectives in order to explore and understand the interactions. The results strengthen the need for both perspectives in order to understand the interactions between SME contractors and house owners.

Seventh. The development of the AR model and the importance of perceiving that AR processes occur within a context; also that the non-linearity of the process is important to highlight and clarify. This is also mentioned by Herr and Anderson (2005) and also Chisholm (2008), but it needs to be stressed even further in order to correct the potential view that AR is a simple process and easy to steer. That an AR process should be easy to steer is even rather contradictory, since it is the participants who should steer, both the process and its outcome. As the researcher is involved as one of the participants, s/he is only able to push from the side and not from the top (as in telling others what to do).

8.2 Practical implications regarding energy renovations

The results should also be connected to practice, and a final aspect in the thesis is to make suggestions for practical implications drawn from the results.

In line with Björnfot and Torjussen (2011), the results show that creating change in the construction sector can be a difficult task, since it is a context driven sector. Seven years ago, Mokhlesian and Holmén (2010) highlighted four important reasons for contractors in construction SMEs to engage in energy renovations (i.e. resource scarcity, which may affect resource prices; house owners' awareness of environmental issues might create a push; government rules and regulations might enforce changes in methods and materials; green reputation – if green becomes prestigious, house owners might be willing to pay for it). However, even though the four aspects still seem relevant, the results show that none of these aspects have come in active play as yet – e.g. some rules and regulations have been initiated, but they are only vague and frame-like and incentives are lacking (Koch et al., 2014).

Just like the process in the AR project, implementations of energy-efficient solutions and increases in energy renovations in single-family houses seem to need an active push of some kind in order to create movement. Energy renovations are clearly not driven by the SME contractors at the moment, nor by the public. The necessary push could thus come from another side and create increased awareness, and maybe create a need for house owners. However, an urgent need to decrease energy usage exists, and the current lack of energy renovations is a complex problem; thus, a variety of "pushes" from different sources that both enable and regulate actions might be a good way to create awareness and urgency:

Regulating

Make it important to maintain the house. Abrahamsen et al. (2005) mean general information about energy savings is not a very effective strategy to increase change; instead, tailored measures and actions have showed to be more effective. A way to increase awareness with house owners and use tailored actions could be to implement regular inspections of houses by an independent party, preferably initiated by the state to ensure that the same regulations are used nationwide. The conditions of the house could thus be inspected and suggestions made for improvements, and even recommendations to follow in order for the house to be approved to live in. Initiation of regular inspections could be connected to the Swedish incitement ROT, which then could support a decrease in energy consumption, if the focus could be changed from general renovations to only work related to energy renovations. The inspections could also be connected to the already existing energy declarations.

In addition, Sachs (2015) and Stavins (1997) argue for firmer legislation regarding energy usage, to force new practices on society. Firmer regulations can also enable contractors to find support for their claims, if they try to influence a house owner to choose an energy-efficient solution. Another example where regulations would support contractors' claims concerns the need to strengthen the contractor's professional role, e.g. by regulating for diplomas and/or certificates for specific competences. It is strange that anyone who wants to can buy some tools and claim to be a contractor within construction without any formal education at all.

Enabling

Creation of financial opportunities, such as various kinds of energy loans (offered by banks), seems to be in the making, which could be a way to enable house owners to invest in energy renovations if they lack the necessary financial capital. Thus, they could take a mortgage on the increased value of their house when they have invested in an energy renovation. However, this might only be possible in some areas of the country, or for some solutions, due to property values etc.; in other areas, other solutions might be more fruitful. Thus, more research is needed within this area to explore possible opportunities.

It is argued that there is lack of visibility and coolness in many of the solutions offered, which creates barriers for house owners’ investments which also previous research has shown (e.g. Gram-Hanssen, 2014b). However, measures’ visibility can be created in other ways, even though the actual measures do not show. Owens and Driffill (2008) argue that e.g. cultural, political, social aspects can influence individuals’ actions. One way to use other aspects in order to influence individuals to act can be through expressions by individuals that others identify or want to identify with. Green et al. (1998) argue that information itself becomes credible due to the trustworthiness of the source. Information that individuals can trust and validate on the basis of their own present knowledge tends to be believed to a greater extent (Harrison et al. 1996). And then family, friends and neighbors have been highlighted as valuable sources (Doona & Jarlbro, 2009; Parnell & Popovic Larsen, 2005). But, as Stieß and Dunkelberg (2012) show, many discussions with neighbors or relatives only lead to standard renovations and not energy renovations. Instead, there is a need for tailored measures and actions (Abrahamse et al., 2005). Thus, to increase energy renovations and the usage of solutions that are not visible, one possibility could be to highlight various kinds of celebrities in various areas in society whom the general public look up to (in sports, politics, culture etc.) and who use and implement energy-saving solutions in their homes. This could help create new trends and needs.

There are also things to do for the SME contractors, who already now want to help house owners but feel restrained by their role and responsibilities. One suggestion could be to create and send the house owner a questionnaire before the first meeting. S/he could then fill in needs and desires as well as specific features in relation to the house that the house owner is aware of. This could be a tool for discussing the house and its drawbacks and potentials.

Another area for future study can be related to that buildings are becoming active players in today’s transforming energy market. In Sweden, houses today are sources of energy consumption, but in the future, they can become sources of energy production. However, energy renovations are still not implemented as much as they could be, and to see single-family houses as sources of energy production on a general level is still lingering in the future. Thus, one path for future research would be to create projects with house owners living in single-family houses in smaller clusters, and try to initiate implementation of one joint energy-efficient solution (e.g. using wind-power), where the house owners together own and share the solution and its effect. To create understanding about such enablers, which could bring Swedish house owners together in an effort to decrease energy consumption, could be another way for SMEs to work with and use the current context to find new ways to make money and further initiate change in social practices (Björnfot & Torjussen, 2011).

8.3 Final words

Through this thesis, I have been able to show that SME contractors are insecure regarding their role performances and also in relation to some materials and solutions, and these insecurities shape and structure their interactions with house owners as potential customers.

I have also shown that the interactions between SME contractors and house owners is a key aspect of the lack of energy renovations of single-family houses. The performances of established roles and ideal conceptions of roles and role performances create barriers to proposals to implement new solutions. Interaction, with its established roles and performances, locks the two actors into a routinized play, which is difficult to change and thus creates a hindrance for new inputs. As the results demonstrate, there are multiple reasons why contractors do not use their interaction with house owners to push for new materials and solutions. But to make SME contractors on stage responsible for the lack of energy renovations, i.e. to blame contractors for not changing house owners' views and/or feelings about energy and energy renovations, is to disregard the constraints of the contractor's professional role, which is created through the interaction with a house owner at the house owner's home.

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Appendices

The following five presented appendices will be found below as additional and more detailed information to the thesis and the methods behind it:

Appendix 1.	Presentation chart of the 21 participating SMEs
Appendix 2.	Tables of performed workshops in each group
Appendix 3.	Topics and questions for interviews SME contractors
Appendix 4.	Topics and questions for interviews with house owners
Appendix 5.	Topics and questions for interviews with SME contractors regarding observations
Appendix 6.	The south group’s process

Appendix 1 – Presentation chart of the participating SMEs

SME	Corporate form	Owners	Est.	Participants	Employees	Focus for work	Municipality	State	Business and community	PC	Energy focus	Other
E1	LC	1	1992	2	25	Electrical safety, lighting, renovation, data, control systems for real estate automation, KNX, boilers / heat pumps / heat-automation and industrial electricity	X	X	X	X	X	Family business in transformation, internal manager taking on the role of CEO
E2	LC	5	2008	1	13	Lighting, smart houses, KNX, design and environment	X		X	X		Established by four close friends. Focus on community and having fun together.
BC1	LC	1	1990	1	22	Bricklaying, plastering, chimney, stove, tile, wood, carpentry, building, Architecture	X	X	X	X	x	Hired a quality manager last fall to enhance their own quality of work performed. Believes that quality pays off in the long run
EH1	LC	1	1997	1	3	Energy advice, installing solar panels, heat pumps, pellet boilers, wood boilers, storage tanks, conversions of existing heating systems				X	X	Started the business himself, hired his dad when overwhelmed with work. Has an additional employee today.
EH2	LC	1	2001	1	9	Replacement of heating systems, bathrooms or drains when constructing new or renovating				X	X	Compete on service not products. Estimates that 60% are reference customers the rest are new customers
C1	LC	1	2004	1	30	Construction maintenance, refurbishment, repair jobs, turnkey, bathroom / wet rooms	X		X	X		Started all alone, amazed at the incredible development company had.
C2	LC	2	2011	2	9 (+2)	Roofs, new construction, renovations	X		X	X		Established by schoolmates. Finds it difficult to find "good" people to hire.
C3	LC	1	1941	1	72	Building service, partnering, facility management service, construction management,						Bigger business, interested to participate in project but owner do not really want to invest own time.
C4	LC	1	1998	2	9	New construction, conversions, renovations, kitchens, woodwork			X	X		Perceive insecurity in air-tightening houses – one does not know what happens in next step.
C5	LC	2	1995	1	14	New construction, reconstruction and expansion, renovation, bricklaying and plaster work, etc.			X	X		Their main focus is private customers and renovation and refurbishment of old houses and villas. This started mainly in 2008 when the tax deduction was introduced
C6	LC	4	1930	1	40	Everything from the roof and window replacements to complete newly built villas. Construction, injuries, project development, service	X		X	X		Builds houses and properties…and trust and relations
C7	LC	4	1980	1	35	Turnkey contracts in various sizes to renovation and building services			X	X	X	The economy is very important for private customers when they renovate their homes, in many cases crucial. Talking about the needs and desires versus the economics of the customer.
C8	Sole trader	1	2011	1	3	Renovation of old houses			X	X	X	Well-informed and eager to learn. Entrepreneurship and innovator

C9	LC	2	1977	1	5	New builds, renovations and reconstructions. Even smaller apartment building. Special details			X	X		Family business split between brothers into two separate businesses: construction and woodwork.
C10	LC	1	1992	1	27	New build and repairs. Specialties include the repair and refurbishment during ongoing production	X	X	X	X		No energy focus but focus on work environment for employees and quality work with satisfied customers
C11	LC	1	1991	1	13	Most existing construction works, from new build to conversions and renovations. Everything from the shuttering to the woodwork, tiling and welding etc.			X	X		Trying to focus on environmental issues from a business perspective and reduce waste etc.
CPS1	LC		1984	1	9	Construction (new buildings, conversions, renovations, tenant improvements, from itinerant construction services to major contracts), property services, snow removal, bathroom, kitchen & furnishings, custom installation (film sound, etc.)	X		X	X		Family business transferring into second generation. Having some hand-over problems.
CPS2	LC	1	1997	1	3	Construction, property service and transportation			X	X		In an ongoing process of transferring work focus from construction and property service to transport but is very interested and engaged in the project.
CPS3	LC	1	2004	1	4	Turnkey contracts, construction maintenance, alterations, extensions, performs blueprints and construction documentation, energy certification, property service and management			X	X	X	Performs energy declarations, have their own certified energy expert and is an accredited supervisory body. Perform energy certificates under the Swedish national board of housing’s requirements
CPS4	Sole trader	1	2000	1	8	Landscaping and earthwork, property service and management. Manage, serves and renovates properties			X	X		Have had some private problems so decided to drop the real estate service and focus on landscaping and earthwork with fewer employees.
CPS5	LC	1	1998	1	32	Perform construction services, repair and maintenance works on the existing housing stock, property service	X		X	X		Focus on a solid expertise to implement most types of projects. Belief in the importance of customer relationships and employee skills
CPS6	LC	1	2002	1	17	Perform all types of construction work, from repair of water damage to conversion and construction of residential and commercial facilities. Machinery and equipment rental, property service			X	X		Responsive to customer expectations. Focus on environmental issues from a business perspective as in reducing waste and manage existing resources in a long term perspective etc.
I1	LC	2	1978	2	21-13	Insulate newly built homes, refurbished homes, apartment buildings, schools, food halls, barns and industrial buildings. Lowers and optimize heating costs	X	X	X	X	X	Family business. Downsizing. Amount of employees had steadily decreased during the project.
I2	LC	3	1983	2	31	Insulate new and existing buildings			X	X		Conservative and stable business –things are good as they are, we have tried it before it does not work.

Appendix 2 – Tables of performed workshops per group

Table 5.7: North group

Enterprise	1st Workshop
EH1	
BC1	1
C9	1
CPS3	1
CPS4	
Total:	3

Table 5.8: East group

Enterprise	1st Workshop	2nd Workshop	3rd Workshop	4th Workshop
I2	2	1	1	1
C1				
C3				
C6	2	1	1	1
C7	1	1	1	1
C8				
CPS6	1		1	1
EH1			1	1
Total:	6	3	5	5

Table 5.9: South group

Enterp	1stws	2ndws	3rdws	4thws	5thws	6thws	7thws	8thws	9thws	10thws	11thws
E1	2	2	2	1	2	2	2	2	2	1	
E2	1	1	1	1	1	1		1	1	1	1
I1	2	2	1	2	2	2	2	2	1	1	
EH2											
C2	2										
C4	1										
C5											
CPS1		1			1	1				1	
CPS2	1	1	1								
Total:	9	7	5	4	6	6	4	5	4	4	1

Appendix 3 – Topics and questions for interviews with SME contractors

Background
Enjoying work? Best/Worst - Perception of work
Why this business?
Education (formal, informal)
Are there ordinary days? (describe and develop an ordinary day at work)

Suppliers
The process between one of your big suppliers and a customer
Is the process similar to all customers? Why, why not?
How is the role as a contractor between and towards suppliers and customers perceived?

Competitors and market
Updated about competitors and their businesses, dealings, movements?
What separates you and your business from other similar businesses?
Is it possible to increase advantages, knowledge, skills etc. compared to competitors, how?
Are there various ways to market one's business, better, worse, preferred?
Is the topic of various values (comfort, climate, air, environment, allergy, etc.) raised in customer interactions or marketing?

Customers
What is a customer and/or customer relation?
Examples of previous customer meetings
How do you perceive customers and customer meetings?
How do you perceive your role towards customers? Shifting? Similar?
Are there different customers – examples, stories
Are there ever any problems relative customers – examples, how are the problems and customers perceived and handled
Do you use your competence certificate and show it to your customers (maybe use it as a competitive advantage)?
Re-occurring customers (single-family house owners)?
What perception of your enterprise do you wish customers have?
What, how and why – an ideal customer (20 years ago, today, and in 20 years)?
What, how and why – an ideal contractor (20 years ago, today, and in 20 years)?

Management of enterprise
How are you and your employees keeping contact? Regularity?
Is the business working, are there parts that are better/worse, how and why?
How have you learnt to manage your enterprise (and deal with problems related to it)?
Why do you have a website and how is it used?
Do you know how customers use it? Preference for customer usage
What do you want the website to show and do for your enterprise?

There are rarely any prices or product information (materials) or the like to find at Swedish contractor websites, why?
What information are you often looking for at a website?
Do you use other enterprise’s websites in the business, how and why?

Contact
How to keep contact, suppliers, customers, competitors, collaboration partners etc.?
Contact to/with customer – how?
Is the bill used as a possible artifact for contact?
Who initiates contact with whom?
Are there any unnecessary phone calls?
How much time is spent in general on a customer phone call?
What customers do you prefer /not prefer, why?
Is it possible to work with the customers not preferred and make them more preferred? Or is it possible to position to decrease similar customers?

ROT 2008
What has it meant for you and your business (economic, work, customers etc.)?
Changed prices since introduction of ROT?

Remember to talk about
Contractor perspective
Customer perspective
Supplier perspective

Appendix 4 – Topics and questions for interviews with house owners

Ownership
Ownership of house, how long, why this etc?
How is the house to live in?
Investment in this/these improvement measure, how come, why now?
When did they start to think about these measures, why etc?
What results from this renovation are important?
Financial aspects

Perception of energy
Activities to energy save? What, how, why, how has it been
How come they decided to do that?

Future plans
Commercial about energy saving solutions? Perception, usage?
Education? / Feel to have enough knowledge

This SME
Why contact with this SME
How did they get to hear about it?
What are their current thoughts, how come?
Tell me about the interaction
Expectations of the meeting
Feeling about the meeting
All questions relative the improvement measure answered
Something that could have been better?

SME website
Perception
Usage
What could be better?

Appendix 5 – Topics and questions for interviews with SME contractors regarding observations

Customer meetings
What do you think about this meeting?
What happened, why?
Planning meetings? Did the meeting go as planned? Why, why not?
Something you like to change? What could have gone better?
What did you think of having me with you? Why?
What do you think about customer meetings?
Always thought the same, why different?
Who to turn to and how to know
How to know what to talk about and how to interact
Is there a feeling before entering, leaving?
How to get satisfied customers and what to do

Energy renovations
Premade topics for interactions?
Ever discussing energy renovations or different solutions? Why, when, how, why not?
Values
Competences
Expectations (Own / Customers)

Roles
How does he perceive his role towards the customer?
Clothes

Appendix 6 – The south group's process

1st workshop

The first workshop with the south group took place at an electrician enterprise (E2). The seating and room for the workshop was not ideal, there must have been a misunderstanding because they had a big meeting room with a large rectangular table which I saw at the initial visit with them and thus thought it would be good use which was also communicated when booking the first workshop with them over phone. However, when we arrived, the SME contractor at the electrician enterprise had arranged for us to sit around two smaller round tables in their show room where music was playing and where customers had to pass through to reach the other employees of the enterprise.

During the workshop there were some difficulties keeping to topics and at a couple of times there were some frustration leaking out through discussions, e.g. about moonlighting and the perceived increase of international workforce on the Swedish market with a negative price development. Several stories were shared and discussed. However, there was still a good dialogue throughout the workshop. Everybody managed to present themselves and their enterprises but right after all were done they started to talk *with* each other, exchange thoughts, experiences and reflections. After the initial hour it was a struggle for the researcher to make room for the topics on the agenda and even to take a break for coffee.

2nd workshop

Most if not all the contractors participating in the workshop and also at previous workshop expressed insecurity about technical measures regarding energy renovations. And it was decided to set up a workshop regarding technical solutions and how to perform energy renovations in a safe way (to not cause mold or other issues) in existing houses. Oskar expressed that "I am very keen on knowing more for example what problems can occur and so on…because one does not want to recommend anything that will create any problems in a year or two" and the rest of the group agreed. Names of organizations and/or professionals that they expressed confidence in were reviewed and two names that all seemed interested to listen to were agreed on, Veronica agreed to try and book one of them for an upcoming workshop.

3rd workshop

We concluded that there were contractors missing and Veronica agreed to call those afterwards to see what was going on. In addition to missing contractors there was a question raised of who else should be part of the project, e.g. ventilation and plumbing was perceived to be missed. For example Thomas asked if it was possible to contact someone that might want to join. Where Veronica answered that it was their project and if they all agreed in the feeling that certain roles were lacking they should and could do something about it. It was thus agreed Oskar would to try to find someone within plumbing and ventilation.

Before the closing of the workshop a preference was expressed from several contractors to have the workshops more frequent to be able to get started and get going which was agreed and decide on by all present.

4th workshop

To the fourth workshop an expert from Sweden's technical research institute was invited. After the technical part of the workshop with the expert it was initially agreed to continue with the work from last workshop. However, at first they all seemed to decide to not continue to work with the project since so many contractors were missing. But when Oskar asked about how the other group was doing and Veronica told them about how the east group was progressing also the contractors in the south group wanted to push and work to develop their concept. Thus, the work continued and some assignments were divided among the contractors for the next workshop, e.g. Mattias was going to put together a draft for an internal checklist; and Erik was going to list some things to put in a folder where they could present their concept relative energy renovations to hand out to house owners.

5th workshop

At the 5th workshop the ventilation contractor that Oskar had promised to contact was partaking. After a brief presentation round to make sure all knew who each was and to give all a chance to a raise of their voice with a new participant the assignments were gone through. While Mattias brought out a draft for a checklist he had made and Erik brought out a draft for a folder. Oskar and Niklas both gave excuses due to the lack of conducted work promised. Niklas: "I was not partaking last time so I do not know…" Veronica: "No you weren't but I told you over phone." Niklas: "Ah that you might have done…yes… Eh well, it has been a bit messy…" Oskar: "Yes, it is the same here, so I have botched the home assignment a bit as well unfortunately." The checklist was however reviewed and extended with new points which the contractors realized they had forgotten at previous workshop. Also a flow chart was created stating how to work with house owners from the first phone-call to the performance of the documentation from the inspection and what activities to include and in what order to make the concept work. Further it was decided that each professional group should send a brief explanation of what they thought was relevant to state in a folder to hand out to house owners in order to create interest for their concept. Erik volunteered to gather the explanations to create a draft for the folder. A deadline for when the explanations should be with Erik was pushed by Veronica and agreed on by all.

6th workshop

When the checklist and the folder were brought up to discuss the aspects and the progress since last workshop it was made clear that none of the contractors had sent any suggestions and/or explanations through email as decided. Thus, time was taken to discuss the two documents on the spot. A few things were added to the checklist before it was concluded to be enough comprehensive to start with and the focus were redirected towards the folder, its design and layout and what it should state in order to create interest in their concept: what they could do; what they would do; how it worked; costs; and house owners' gains.

Veronica clarified that she had been in contact with the ventilation contractor that did partake at last workshop however he had decided to cancel any future participation due to his enterprise decision of house owners not being a customer segment they wanted to focus on.

In the end of the workshop Thomas expressed frustration of the lack of progression "we need to reach the goal somehow." However, his concern was not really followed up by the others in that Oskar for example continued to discuss how to make the folder express towards house owner that they were a group working together making a joint effort and not individual SMEs. A suggestion was raised from Mattias to finish the folder over e-mail, but Niklas thought it would be difficult to complete the folder without meeting. After some discussion of how to finish it, Mattias volunteered to complete it on his own and have a finished draft till next workshop. His suggestion was appreciated and so it was decided.

7th workshop
Since the last workshop the folder had been developed by Mattias and a new suggestion had been printed. Comments and suggestions were added but it was also agreed that other people that were not ‘colored’ in their opinions should have a look at it. Thus, it was decided that everybody should ask family and friends about their opinions of the folder till next time.

In the beginning of the workshop one contractor from I1 and one from E1 clearly expressed their frustration of absence of participants and if one really wants to be part one should show engagement, put in effort and actually do something. That “some seem to have the project as a plan B compared to other things that they need to do and that is not ok”, to accept and double book; or just sit along and not do anything at the workshops; or to be sick several times in a row and not show enough engagement was not acceptable excuses. “We all have a lot and are fully booked, it is not ok to trade on others work” (contractor from E1). In the end they all discussed a solution to the two absence contractors and their potential future in the project. To check their interest but also to make sure they made some kind of contribution to the process it was decided that the two would get an assignment to distribute the folders as a check for their interest. However, despite that there was a visible and verbally outspoken frustration among three of the contractors the collaboration were one of the best since the south group’s first workshop. They spoke, listened to each other, had opinions, thoughts, reflections of what could happen if they did this or that as well as discussed questions in a way that everybody was participating and had opinions and agreed decisions, e.g. pricing of the concept.

8th workshop
The folder was gone through and changed in accordance with the family and friends ideas and opinions that seemed relevant by the contractors. It was then decided to print 1000 folders as a first trial. Thomas: “I think it is good to print a decent amount but not too many because it should be evaluated and maybe revised…” It was further agreed on to distribute the folders in two rounds to make sure to get house owners’ attention, if they threw the first one out they might read the second one. The flow-chart of what to do was updated and agreed on. Mattias emailed the checklist so all had it and a date for an evaluation workshop of the result of the distributed folders was set.

9th workshop
A bit of expressed annoyance over a lacking contractor started off the workshop but it quickly disappeared when the results of the distributed folders were shown as it was concluded that none had called. This fact created lots of surprised faces and comments but it all led further to the realization that not many folders had been distributed and instead of two distribution rounds only one had been conducted. However, instead of discussing the amount distributed (even though the researcher tried to push for it) it was discussed that it might have been the wrong

areas. Finally it was decided to distribute in more areas, each and every one would distribute at least 100 in different areas that would have the type of houses that the project focused on. It was perceived to be important to get the folders out as quick as possible.

The contractor that was "left" from the east group after all others had decided to not continue in the project had expressed his interest to the researcher to participate in the south group. The researcher lifted therefore this proposal with the south group to listen for opinions since they previously had expressed a wish of having contractors in plumbing and ventilation in the group. Two contractors immediately asked about his website and what his business focus was. The researcher gave them his website and they took their mobile phones and checked it. A discussion took place whether he should be invited to partake or not. One contractor expressed that they wanted to be more participants in the group, but the one suggested was not good because it meant potential increase of competition in the group. However, at the same time another contractor admitted that they needed someone like this contractor that had the knowledge about plumbing and ventilation. However, they claimed it should be a bit bigger SME to make sure that "it" had a wider knowledge within the area. The researcher decided to challenge these comments and demands and asked if they could characterize in detail what they needed but no one seemed to be up for the challenge. Thus, despite there was potential interest from the group to invite him they wanted to postpone a decision due to that they perceived themselves to be a team now, they knew each other and that the printed folder had their four SMEs brands on it.

At the ninth workshop with the south group a visual business model exercise was performed with the business model development tool (see method for further explanation) to map what the group were trying to create to both clarify and challenge their developed concept. The researcher had drawn it ahead of the workshop and explained it during the coffee break with the expectation that they would fill in the model on their own, however, it ended up in the researcher "leading" them through it. All participants were participating in the exercise and everybody was engaged and active and the result exceeded the researcher's expectations. The work created clarity within the different building blocks since they had to discuss and agree of what to write on the post-its. It also created new ideas for channels to put energy towards (e.g. enterprises within insurance or inspection; party-tent outside a DIY market). Thus, it was well worth time and effort. In the end they all seemed to be satisfied with the result and their work with the model. Two of the contractors (E1 and I1) took pictures of it.

10th workshop

The 10th workshop was performed at the university and contractors from all four remaining SMEs were present. All participants were active and engaged. However, once again it was brought to the researcher's attention that the folders had not been distributed by anyone as agreed. For example one contractor (E1) expressed that they have not had time to distribute any folders. However, later that workshop he expressed that they had a similar project going on at their enterprise that he had put a lot of time towards. But still, even though no one had distributed any folder all contractors showed surprise and thought it was strange that no house owner had even tried to initiate contact. In the end a mutual decision was taken to postpone further actions till after the summer. Thus, the next workshop was booked to the 2nd of

September, however, this workshop was postponed twice and the next workshop ended up to be 29th of September.

11th workshop

For the 11th and final workshop 6 participants had accepted to come from the invitation, however, only two came. Thus, the last workshop was more of an informal meeting with discussions of the information that the researcher had prepared beforehand, e.g. a news headline that fewer Swedes raise their mortgages for renovation measures; and Pernick and Wilder's (2008) discussion about the clean tech revolution and sustainable products; as well as questions regarding how the project's future should be handled. A decision was made that the project should be put on a pause until the colder months of the year to see if more interest from the other participants would grow again.

Final actions

After the eleventh workshops the researcher called the other contractors to hear their opinion and all wanted to continue, preferably in January or February. Niklas volunteered to develop the folder with a friend in the marketing business. However, when the researcher tried to make contact with him from middle of January he did not answer the phone. For over three weeks the researcher tried to make connection without luck. But then she received an email from him where he wrote:

> *"I have seen that you have called but been unable to answer. As usual there is a lot going on in my life. I have had very bad luck with an injured knee which has been an issue for me since November. And for the last five weeks I have had very bad pain in my shoulders. A continuously aching tennis elbow and I have not slept a whole night in two months. In addition to this I got lumbago this Sunday! Lots of pain-killers make me sleep all the wrong time of day. Sigh! I guess you want to talk about our project but in all honesty I have no energy for that now. I hope you will manage without me."*

Thus, the folder was not developed. The researcher got a bit tired of all excuses and needed to regain some energy and advice from the supervisors of what to do now. A decision was made to call the rest of the SME contractors and see if someone might want to drive it otherwise to gather them and present the results of the project and the performances made. The calls were made to the four contractor SMEs that were left in the south group to follow up and see if they were interested to push through and continue the process or not, they all answered similar as the contractor from E2 that "it has not generated anything in terms of economic earnings or interests from house owners" and thus they did not see any reasons to continue. However, all four claimed that they had learnt new things throughout the process, through the workshop with the expert but also from each other when they shared practices, knowledge, questions, experiences and stories.