

Do not steel our identities!

*Industry, Identity, and its Implications for a green steel transition
in Oxelösund, Sweden*

Sanne Malmberg

Master Thesis Series in Environmental Studies and Sustainability Science,
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A thesis submitted in partial fulfillment of the requirements of Lund University
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(30hp/credits)



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Lund University Centre for
Sustainability Studies



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Submitted May 13, 2024

Supervisor: Bregje van Veelen, LUCSUS, Lund University

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Abstract

To achieve established climate objectives, Sweden must effectively target its carbon-intensive steel industry. This study offers a social perspective on the Swedish steel industry's decarbonization, exploring how workers' identities shape their experience of the transition. Social identity theory is utilised to explore what elements shape steelworkers' collective and occupational identities in the context of Oxelösund's steel industry. Through semi-structured interviews with white- and blue-collar workers, retired and non-retired, the study investigates how structural changes have reshaped workers' identities and how identity shapes workers' perceptions of the transition. The study reveals blue-collar workers experiencing their collective and occupational identities diminishing, influencing their attitudes towards the transition and their ability to cope with change. This thesis proposes that workers' identities could have a dual role towards the green steel transition in either supporting or opposing it. Finally, the study highlights the need to further consider workers' identities in green steel transitions.

Keywords: Social identity, high-carbon communities, Steel industry, Decarbonization, Green steel transition, Social sustainability

Word count: 11904

Acknowledgements

Before proceeding with my acknowledgments, I would like to make a statement regarding Palestine:

This thesis was written during an ongoing genocide.

As of 8:59:59 am (CEST) on the morning of May 13th, 2024, 35,469 Palestinians have been murdered by the state of Israel in Gaza, including over 14,500 children. 78,614 have been injured, and at least 10,000 are currently missing.¹

Every university in Gaza have been destroyed.

Lund University remains silent and therefore complicit.

We join students across the world who are collectively amplifying the Palestinian struggle. We condemn the ongoing violence perpetrated by the state of Israel against Palestinian health, freedom, safety, culture, and academia.

We demand that Lund University openly recognizes these atrocities and cuts all ties with the state of Israel. Additionally, it must terminate all cooperation with weapons industry so as to ensure that Lund University will never again contribute to such violence and war crimes.²

We urge every reader to speak up for human rights and international law and against this genocide.

FROM THE RIVER TO THE SEA

PALESTINE WILL BE FREE

¹ See Al Jazeera Israel-Gaza war in maps and charts: Live tracker:
<https://www.aljazeera.com/news/longform/2023/10/9/israel-amas-war-in-maps-and-charts-live-tracker>

² Demands in alignment with Lund Students for Palestine. See: <https://linktr.ee/lundstudentsforpalestine>

This thesis represents the culmination of two years of enriching academic pursuit, delving into interdisciplinary studies and exploring complex sustainability issues within an international environment. I am grateful for the stimulating interactions and insightful discussions shared with my peers who have provided invaluable perspectives from their respective countries.

I would like to start by stating my sincere appreciation to all those who have participated in this research and contributed their valuable time, knowledge, and insights into the Oxelösund steel industry. A special thanks Oxelösund's historical society and the local union for their hospitality, providing me with valuable knowledge and fika. I would also like to share my gratitude to the library of Oxelösund for granting me access to the 'Oxelösund room' and to the archive at Sörmland's museum for their assistance with historical materials.

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Finally, I am grateful for my family and friends for their extensive support during this hectic time. For their trust in my ability and for their patience listening to my lengthy explanations about my thesis.

About the love for a steel mill

Can one love a foundry, a steelwork, a rolling mill

can one truly feel the vibrations

the pulsating life in a steel mill.

Feel it deep in the heart?

Or is it all these

people's vibrations

one feels.

All those before me

shaped the steel

toiled, sweated, laughed, and cried

always in the shadow of mighty forces

the fire, the smoke, the roar.

When I gently touch the wall of the rolling mill

decades of soot fall down and there is a tremor

as if I touched the umbilical cord of steel.

Swedish poem "Om kärleken till ett järnverk" by Gunnel W Johansson (Own translation)

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1 Introduction

The urgent need to address climate change means that it is becoming increasingly critical to phase out fossil fuels, particularly in the Global North, which has disproportionately contributed to the climate crisis. Sweden, as part of the global North, has a moral responsibility to effectively target climate change and to transition away from fossil fuels (Creutzig et al., 2014). Despite climate objectives to reach net zero carbon dioxide (CO₂) emissions by 2045 (Regeringskansliet, 2017), the Swedish economy is still largely based on fossil fuels with the carbon heavy process industry representing 20% of the economy (Ekonomifakta, 2024).

Meeting emission targets will be challenging without a significant transformation of the Swedish steel industry, which is the most carbon-intensive sector in the country (Naturvårdsverket, 2023). To address this issue, the Swedish government has financed a project named "Hydrogen Breakthrough Ironmaking Technology" (HYBRIT), initiated by Sweden's largest steel and most energy-intensive company, SSAB (Lundberg, 2023). The project is devoted to decarbonizing SSAB's steel production, replacing coal and coke driven processes with hydrogen and fossil-free energy sources (Hybrit, n.d.).

HYBRIT is part of Sweden's green steel transition³ and the country's endeavour to become a low-carbon economy (de Leeuw & Vogl, 2024). There has been criticism directed towards the proposed 'greenness' and the design of the green steel transition in Sweden. One such criticism comes from de Leeuw & Vogl (2024), who argue that the transition too heavily relies on the replacement of technology and the competitiveness of the industry, while largely ignoring social and ecological aspects of the transition. Vogl et al (2019), who has researched SSAB's decarbonization process and its social implications for workers, has identified a similar pattern. They argue that the company's assessment of the transition's potential social consequences, considering the likelihood of geographically uneven impacts across communities reliant on the steel industry, has been insufficient. One of the SSAB sites mentioned in their research is Oxelösund (Vogl et al., 2019), a small mill town situated in Södermanland region (Ekonomifakta, n.d.).

³ The notion of green steel is not necessarily green in an ecological sense. It is crucial to define the meaning of the terminology to avoid greenwashing (Muslemani et al., 2021).

Oxelösund is the first SSAB production site to decarbonize (SSAB, 2020). The transition of the Oxelösund steel industry will impose structural changes to the workplace, which could have implications for worker's identities (Vogl et al., 2019), which are largely connected to the industry (Karlsson, 2020). The exploration of identity within the green steel transition could provide important insights into the social embeddedness of the industry and how various groups of workers are impacted by this process. These insights could contribute to a more equitable transition process, aligning with the principles of a just transition perspective, as outlined by While & Eadson (2022). They suggest that a just transition process should examine whether negative impacts are disproportionately distributed within the workforce, assessing whether industrial restructuring will exacerbate or mitigate existing disparities within the labour market (While & Eadson, 2022).

Work holds a significant importance in many individuals' lives as it contributes to personal well-being, identity formation, and social status within society and within the labour market (Chamberlain, 2014). Numerous studies suggest that identity is particularly central within the high-carbon industry, as it is found that industrial workers often develop deep emotional ties to their workplaces, which becomes an integral aspect of their identities (Chamberlain, 2014; MacKenzie et al., 2006; Meier, 2013; Skorikov & Vondracek, 2011). Janssen et al (2022), who examines identity formation within the Dutch dairy sector, argues that studying identity expression in primary industries could provide insights into the challenges and opportunities of sustainability transitions, as well as the implications for workers. Moreover, they suggest that there is currently a lack of research studying the role of identity in sustainability transitions (Janssen et al., 2022).

In this thesis, I would like to start filling this suggested gap, by exploring the identity expressions of steel workers in the context of the green steel transition within Oxelösund steel industry. Through interviews with white- and blue-collar workers, currently or previously employed in the industry I strive to incorporate their neglected perspectives on the transition.

1.1 Study aims and research questions

The purpose of this study is threefold. Firstly, the study aims to explore the social embeddedness of Oxelösund steel industry by examining the key factors that shape workers' collective and occupational identities. Secondly, the study aims to investigate how previous structural changes have impacted workers' identities and how these experiences might influence their attitudes towards the industry's decarbonization process. Thirdly, the study seeks to initiate a discussion on the potential implications of identity in the green steel transition.

The research questions (RQs) below are designed to reach my research aims:

1. What are the key elements shaping steel workers' collective and occupational identities?
2. In what ways have previous structural change impacted on workers' identities?
3. A: What role does identity have in shaping workers' attitudes towards the green steel transition?
- B: What could be the implications of identity for the green steel transition?

This thesis is structured as follows: In the subsequent section I state how, this thesis contributes to sustainability science. The following chapter provides a brief introduction to the past and present steel industry of Oxelösund, including the green steel transition. Chapter 4 introduces the social identity theory, the theoretical underpinnings of this thesis. Chapter 5 presents the chosen methodology. Chapter 6 then delves into the results of my analysis, answering RQ1, RQ2 and RQ3A. In the following chapter, the discussion, I contextualise my results and engage with RQ3. Finally, I provide a conclusion.

2 The importance of studying identity within sustainability transitions

Sustainability transitions is a primary focus of sustainability science, which strives to grasp the complexities of interconnected systems, e.g. socio-technical systems⁴, and the mechanisms that could drive changes within these systems (de Leeuw & Vogl, 2024). According to a sub-field of transition literature, a sustainability transition requires significant, rapid, and multifaceted changes in traditional socio-technical systems reliant on fossil fuels. Oxelösund steel industry is an example of a coal-based socio-technical system, about to transition to a hydrogen-based system (de Leeuw & Vogl, 2024). When proceeding to change these systems it is crucial to incorporate perspectives on social sustainability. This is evident as socio-technical systems are deeply embedded into our societies and as these systems are produced and reproduced by people. The green steel transition will have direct consequences for people (de Leeuw & Vogl, 2024). To make the decarbonization of the steel industry more socially sustainable, the people within this industry have to be included into the process (Vogl et al., 2019). This study strives to contribute to sustainability science by employing the social identity theory to begin to comprehend the social embeddedness of the Swedish steel industry, the green steel transition's potential impacts on workers' identities, and the potential implications of identity for the green steel transition. With my study I want to highlight the necessity of adding a social perspective onto the decarbonization of the steel industry and underscore the importance of interdisciplinarity in sustainability transitions.

⁴ Socio-technical systems comprise various elements such as technology, cultural significance, knowledge and infrastructure (Geels, 2005).

3 Setting the scene

In this section I would like to give a brief historic background to the establishment of Oxelösund's steel industry as well as giving a short introduction to SSAB's decarbonization process. I start with a short introduction to the town Oxelösund.

Oxelösund is a small industrial town in Södermalm region with 12 106 inhabitants (Ekonomifakta, n.d.). SSAB has a central economic role in the region as the largest employer, providing 2500 jobs, as of 2024 (Oxelösunds kommun, 2022).



Figure 1. An aerial photograph of SSAB Oxelösunds (Ellgaard, 2012)

3.1 A brief historic background of Oxelösund's steel industry

The steel industry in Oxelösund, Oxelösund Ironworks, was established 1913 (Zetterström, 1999), with the instalment of Sweden's first blast furnace, in 1917 (SSAB, 2017), the technology which will be replaced with the HYBRIT technology. The ironworks in Oxelösund were regarded as a promising investment due to the railway connection to the ore-mining region of Bergslagen and the access to a port, facilitating the import of coal and coke (Zetterström, 1999). Gränges, a former owner of Oxelösund Ironworks, initiated what at the time was Sweden's largest industrial investment. The

investment included modernisation of the industry, which lasted between 1957 to 1961. This restructuring endeavour encompassed not only technological advancements but also significant investment in staff welfare to enhance the working environment. These changes contributed to the expansion and development of Oxelösund, attracting new residents who relocated to work in the steel industry (Gedin, 1998). During this period, there existed a close relationship between the industry and society, with the social democratic government utilising the industry to invest in both physical and social infrastructure (Isacson, 2007). A decade later, in the 1970s, Oxelösund was significantly impacted by the global steel crisis, leading to an extensive restructuring of the industry. In response to government intervention aimed at safeguarding steel companies during the crisis, Oxelösund Ironworks, along with other companies, was merged into a single nationalised entity. This marked the formation of the Swedish Steel Corporation (SSAB), the current owner of Oxelösund steel mill (Vogl et al., 2019).

3.2 A brief introduction to Oxelösund's green steel transition

The decarbonization of the steel company SSAB is crucial for decreasing industry emissions. Last year, the company emitted nearly 4.8 million tons of CO₂, mainly arising from the use of coal and coke in the blast furnaces. This accounts for approximately 13 percent of Sweden's territorial CO₂ emissions (Lundberg, 2023). HYBRIT is a joint collaboration between the steel company SSAB, the energy company Vattenfall and the mining enterprise LKAB, with the goal to substantially lowering the CO₂ emissions of the Swedish steel industry (Hybrit, n.d.). Oxelösund, is SSAB's largest production site and the first to decarbonize (SSAB, n.d.). The HYBRIT project entails the replacement of the blast furnace technology with hydrogen-based technology and electricity from fossil-free energy sources (Hybrit, n.d.). The investment in SSAB's transition process constitutes the so far largest industrial investment in Swedish history (de Leeuw & Vogl, 2024). While, the new production facilities are aimed to be open for production by 2025, the transition process has already started (SSAB, 2020). While this section provided a brief historical background to Oxelösund and the steel industry's transition, the following section presents the theoretical approach of this thesis, explaining how social identity is shaped within industries and providing tools for studying identity in high-carbon communities.

4 Theoretical approach and analytical framework

In this thesis, I employ the theoretical framework of social identity theory (SIT) to examine the meaning of the steel industry and occupation in the lives of individuals who have worked or who currently work in this sector as well as the implications of identity for the green steel transition. More specifically, I draw upon the theoretical concepts of collective and occupational identity, stemming from SIT, as these have been found to enhance our ability to adapt to structural changes in the workplace (McLachlan et al., 2019; Skorikov & Vondracek, 2011).

Below, I begin with a brief introduction to SIT, followed by a literature review concentrating on the conceptualisation of collective and occupational identity in the literature. I identify key aspects of identity, indicated in italics, which will form the basis of my analytical framework.

4.1 Social identity theory

Social identity theory, introduced by Tajfel 1987, defines identity formation as a dynamic process which is context-dependent and socially embedded – changing with our changing environment (Chamberlain, 2014). The theory emphasises the significance of group affiliations, proposing that individuals define themselves not solely by personal attributes, but rather by their membership in social groups (Chamberlain, 2014; Kirk et al., 2012). There are three key dimensions to group affiliations, a conscious awareness of the membership, certain values assigned to the group, and a feeling of emotional connection towards the group (Chamberlain, 2014). SIT suggests that individuals construct their identities across a spectrum of personal and social categories, including gender, ethnicity, and class e.g., and that the concept of identity can be understood as a combination of one's 'self', others' perceptions of the self and our reactions to these perceptions (Chamberlain, 2014; Lawler, 2015)

Studies indicate that the possession of a strong social identity related to ones work can positively influence various important aspects of life, including overall life satisfaction and self-esteem (Chamberlain, 2014). Considering the significant portion of our time that we commonly spend in the

workplace, work plays a pivotal role in providing meaning to our lives and in shaping our social identities (Ferns, 2019; Skorikov & Vondracek, 2011). Furthermore, Ferns suggests that individuals employed in high-carbon industries, including steelworkers, often exhibit a stronger sense of occupational identity compared to workers in other sectors, I will elaborate on how this takes shape in section 4.1.2, underscoring the importance of exploring the occupational identities of steelworkers.

As previously mentioned, I have selected the concepts of collective and occupational identity to identify how white- and blue-collar steelworkers' identities take shape. I have chosen these two concepts because they enable me to explore whether identity expression is directly associated with workers' specific occupations or with the broader steel industry. The distinction will also allow me to determine if there are any differences in the effects of structural change on the identities of blue-collar and white-collar workers linked to their different occupations. The concept occupational identity is commonly referred to in a broader sense, encompassing the collective identity of the entire industrial community (McLachlan et al., 2019). However, I opt for a narrower interpretation of occupational identity that is specific to one's job title, as utilised by Ulfsdotter Eriksson & Linde, (2014), in order to bring clarity to my data analysis.

4.1.1 Collective identity in industrial communities

A substantial body of research has employed social identity theory (SIT) to investigate the prevalence and importance of collective identity within high-carbon industrial communities, especially during periods of industrial restructuring. Several themes have emerged from the literature and there are three key themes that I would like to highlight. One of the themes encompass the specific ways in which industry becomes part of workers' sense of collective identity (Chamberlain, 2014), which can provide me with insights to how steelworker identities can take shape. The other two themes involve, the robust sense of occupational community serving as a protection against deindustrialisation (Ferns, 2019) and redundancies (MacKenzie et al., 2006) and the impact of collective experiences in navigating industrial change (McLachlan et al., 2019), which can help me understand the potential role and implications of identity for the green transition.

Previous studies have used SIT to identify specific ways in which industry becomes part of workers' collective identity. To understand the impact of industry and work on collective identity, Chamberlain, identified six key dimensions of identity expression. Based on research focused on coal

mining in Appalachia, the dimensions identified are: mining as *family*, mining as *survival/power*, mining as *self-determining*, mining as *social connection*, mining as *personal identity*, and mining as *cultural identity* (Chamberlain, 2014). These six dimensions will be crucial for my analysis as they serve as indicators for studying the prevalence of identity. I will revisit these dimensions in my analytical framework to further present their meaning and application to my study.

Whereas Chamberlain focused on the significance of coal mining for miners' identities, others (Ferns, 2019; MacKenzie et al., 2006; McLachlan et al., 2019) have highlighted the purpose identity serve in relation to industrial change. For instance, Ferns (2019) identifies a strong sense of collective identity when analysing the lasting effects of deindustrialisation of the Scottish steel industry. Employing SIT, Ferns uncovered the role of collective identity, acting as a protection against the profound impacts of deindustrialization. The findings suggest that industrial structural change and displacement from industrial workplaces can disrupt workers' sense of self by fundamentally disrupting their identities. The robust collective identity among steel workers is rooted in social bonds, which were broken due to the restructuring. According to the study, the social connections were largely facilitated through sports associations (Ferns, 2019).

Comparably to Ferns, MacKenzie et al (2006), provide interesting insights on the role of collective identity within industrial restructuring, identifying that the strong industrial community acted as a coping mechanism towards mass-redundancy. In contrast to the other studies, they emphasised the significance of class belonging for shaping the collective identity. Furthermore, McKenzie et al argue that historical and contemporary experiences of Welsh mass-redundancy have been internalised into the steelworker identity. McLachlan et al (2019) found a similar pattern, when examining the relationship between occupational community and restructuring at a UK steelwork. The findings suggest, similarly to McKenzie et al, that the restructuring has become internalised into the steel worker identity. Unlike the other studies, McLachlan et al (2019) found that the occupational community encompassed white- and blue-collar workers. The workers were unified by sharing memories of change and feelings of pride towards the steel products (McLachlan et al., 2019).

In summary, previous literature has uncovered robust collective identities within several high-carbon industrial communities. Chamberlain (2014) offered insights into ways in which industry can become part of workers' collective identity and MacKenzie et al (2006), Ferns (2019) and McLachlan et al

(2019) offered compelling insights into how a strong collective identity can aid workers in navigating structural change. Below, I discuss elements which contribute to the construction of workers occupational identities.

4.1.2 The occupational identity of the industrial worker

In this section, I have compiled literature segments that explore the connection between occupation and social identity. While collective identity pertains the broader workplace community, occupational identity specifically concerns one's occupation, as outlined in this thesis. According to Ulfsdotter Eriksson & Linde (2014), an occupation constitutes a significant social category defined by a specific title, delineated by its position in the social division of labour. Skorikov & Vondracek (2011) describe occupational identity as an individual's perception of themselves in relation to their profession.

Strong occupational identities are frequently manifested in high-carbon industries, where members perceive themselves as sharing similar attributes fostering a sense of solidarity that sets them apart from the rest of society. Previous studies have identified key elements that can be used to assess the prevalence of occupational identity. Occupational identities are often shaped by a *strong camaraderie* that extends beyond the workplace (MacKenzie et al., 2006). This camaraderie is often fostered by *shared values, skills or attitudes* among co-workers or by having a shared understanding of the *labour process* (MacKenzie et al., 2006; McLachlan et al., 2019; Skorikov & Vondracek, 2011). Furthermore, MacKenzie et al argue that the occupational identity tends to strengthen when workers share the same *unique work hours*, often related to shift work. For individuals employed in workplaces where work is *demanding* the emotional attachment to work is often strengthened as well as the sense of occupational identity. These aspects are often tied to blue-collar work (MacKenzie et al., 2006; McLachlan et al., 2019).

Furthermore, it is worth mentioning that our occupational identities are intertwined with the different social categories that we hold, workplaces are for example often structured according to gender norms (Chamberlain, 2014). The gender division is particularly evident in the steel industry, as the industry is male dominated (Weeks, 2011).

4.2 Analytical framework

My analytical framework is based of Chamberlain’s six dimensions of collective identity, combined with insights from MacKenzie et al (2006), McLachlan et al (2019) and Skorikov & Vondracek (2011) presenting elements that can be used to study occupational identity. The framework will be utilised to investigate the prevalence of a collective identity within the Oxelösund steel community and to investigate the occupational identities of white- and blue-collar workers. Before introducing my analytical framework, depicted in *Figure 2*, I will revisit Chamberlain’s six dimensions to describe their meaning as well as their application to my case, presented in *Table 1*, as well as come back to the key elements for occupational identity in *Table 2*.

Table 1. Chamberlain’s six dimensions of collective identity (Chamberlain, 2014).

Chamberlain’s six dimensions	Chamberlain’s definition	Application to case
Mining as family	Mining as <i>family</i> relates to the strong emotional connections forged among individuals working within the industry.	Exploring workers' emotional attachment to the steel industry and to understand the meaning of their work. Referred to as <i>industry as a family</i> in my framework.
Mining as survival/power	Mining as <i>survival</i> refers to the industry fulfilling essential needs such as providing employment, while <i>power</i> relates to the industry instilling sentiments of pride, status, or access to resources like education.	Applying the dimension similarly to how Chamberlain applies it. Expanding education to also include internal education within the company. I subdivide it into two categories, <i>industry as survival</i> and <i>industry as power</i> .
Mining as self-determining	Mining as <i>self-determining</i> encompasses the notion that work offers individuals with fulfillment, identity expression and a means of reaching occupational goals.	Examining the role of the industry providing workers with occupational fulfillment. Referred to as <i>industry as self-determining</i>
Mining as social connection	Mining as <i>social connection</i> encompass how the industry provides individuals with friendships as well as social capital, including workplace benefits.	Exploring the social value of the industry, encompassing both interpersonal relationships and social capital. Referred to as <i>industry as social connection</i> .
Mining as personal identity	Mining as <i>personal identity</i> involves the alignment of one's personality with the occupation - becoming unified with the profession	Examining to what extent workers personally align with the industry. Referred to as <i>industry as personal identity</i> .
Mining as cultural identity	Mining as <i>cultural identity</i> pertains the association between coal mining and the regional culture.	Cultural identity will be employed to examine how the industry's collective identity manifests in Oxelösund, analysing its alignment with the regional identity. Referred to as <i>industry as cultural identity</i> .

I now describe the key elements, adapted from previous literature, that could be used to identify the prevalence of workers' occupational identities. Their meaning and application are explained in *table 2* below. It is worth mentioning that the description of occupational identity elements will not be as thorough as for Chamberlain's six dimensions. This simply has to do with the literature providing a limited explanation of these elements.

Table 2. Elements to study prevalence of occupational identity (MacKenzie et al., 2006; McLachlan et al., 2019; Skorikov & Vondracek, 2011)

Elements of occupational identity	Application to case	Adapted from
Shared values, skills or attitudes	This pertains to the sense of attachment to colleagues based on shared values, skills, and attitudes related to the work. I will apply it accordingly.	(MacKenzie et al., 2006).
Shared unique work hours	This element specifically applies to blue-collar workers due to their shift work. I will apply it accordingly but remain open to its potential relevance to white-collar work.	(MacKenzie et al., 2006).
Shared understanding of labour process	This element concerns the shared knowledge among workers within the same occupation. I will apply it accordingly.	(Skorikov & Vondracek, 2011)
Strong camaraderie	This refers to the strong social bonds formed between colleagues, often extending beyond the workplace. I will apply it accordingly.	(MacKenzie et al., 2006).
Shared demanding work	This element is specifically tied to blue-collar work. I will apply it accordingly but remain open to its potential relevance to white-collar work.	(McLachlan et al., 2019)

Drawing from Chamberlain's six dimensions and occupational identity elements, I have developed my own analytical framework. The analytical framework is presented on the following page, in *Figure 2*.

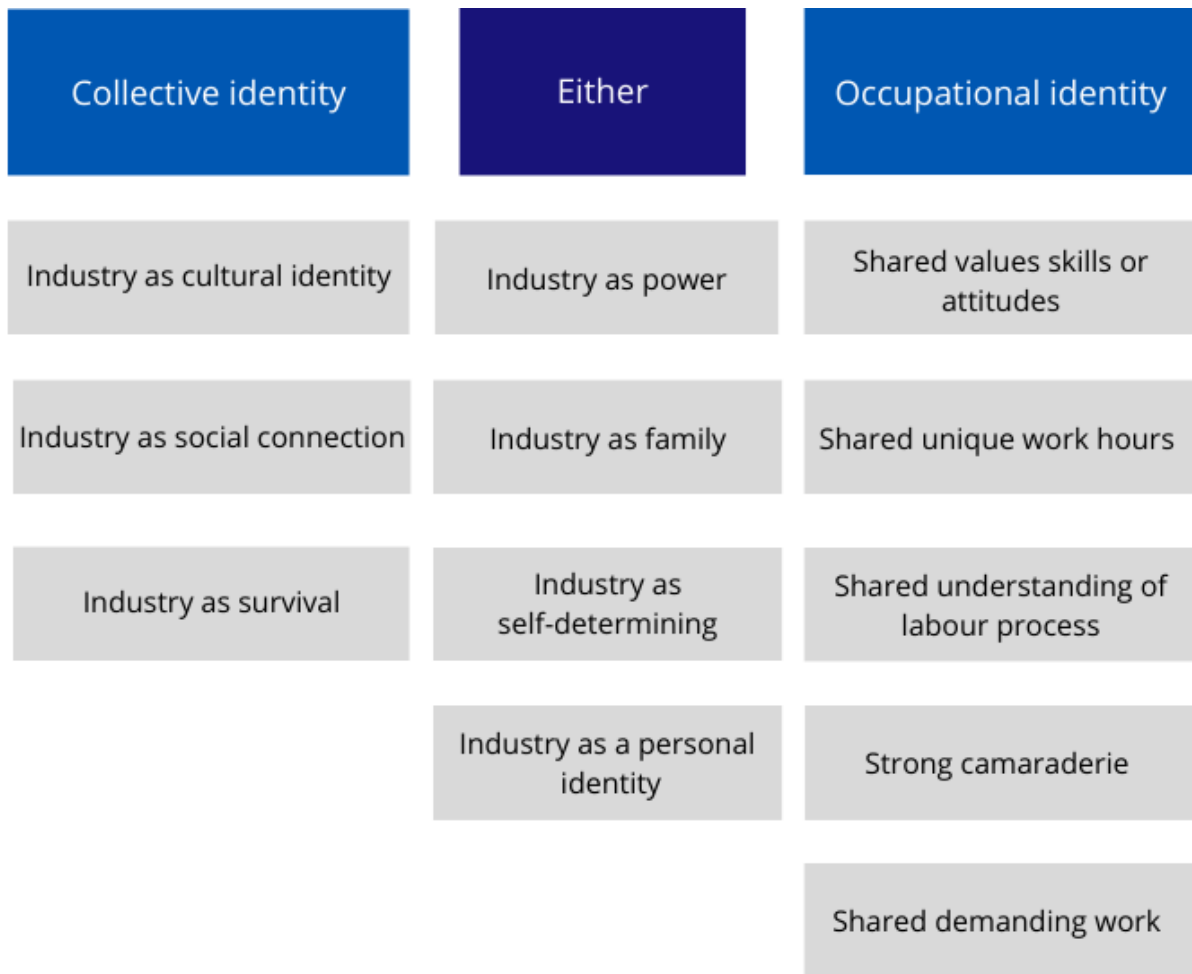


Figure 2. Analytical framework. Adapted from: (Chamberlain, 2014), (MacKenzie et al., 2006), (McLachlan et al., 2019) and (Skorikov & Vondracek, 2011).

The elements depicted in *Figure 2* will form the foundation for analysing Oxelösund steel workers' collective and occupational identities and answering RQ1. I have incorporated some of the identity elements into the middle of *Figure 2*, recognising that certain elements describing identity could be applied to both collective and occupational identity. In the following section, I provide a detailed explanation of the methodology employed in this thesis.

5 Methodology

In this section I will start by establishing my onto-epistemological stance followed by a thorough explanation of each methodological step of this thesis. Before doing so, I would like to mention how I decided on my case. The selection of my case stemmed from an extensive literature review, including academic and grey literature on the decarbonization of the Swedish steel industry. Through this review, a significant gap became apparent regarding research on SSAB's green steel transition in Oxelösund, especially from a social perspective incorporating worker's identities.

5.1 Constructivist onto-epistemology

This thesis adopts a constructivist onto-epistemic approach, which emphasises the importance of interviews and personal narratives when discovering subjective and collective meanings (Chamberlain, 2014) and regards reality as socially constructed. Consequently, a person's reality is not interpreted as an objective reflection, but rather a result of their subjective interpretations of that reality (Berzonsky, 2011). In line with the constructivist approach, the narratives presented in the interview data, will be interpreted as subjective and value-laden, shaped by social structures and norms existing within society (Meadow, 2013).

5.2 Semi-structured interview method

To achieve my research aims, of uncovering steel workers' collective and occupational identities, I believe semi-structured interviews is the most appropriate method. This approach is commonly employed in qualitative research which seeks to understand individuals' perspectives on complex phenomena challenging to quantify, such as identity (Walton et al., 2022). The semi-structured interview format provides interviewees with greater flexibility to discuss topics they deem important, while still maintaining a basic structure for the interview (Knott et al., 2022).

5.2.1 Purposive sampling

I employed purposive sampling to specifically target individuals with connection to the Oxelösund steel industry, as I am interested in in-depth information rather than reaching generalisability for statistical representation. This sampling method was accompanied with snowball sampling, where I utilised word of mouth to identify further participants (Trochim et al., 2015). My sample included white- and blue-collar workers who are currently employed at SSAB, representing the present, or that have previously worked in Oxelösund steel industry, representing the past. The variety of workers included in my sample, allowed me to explore if there are any differences in identity expressions.

In this thesis, I adopt the definition of white-collar and blue-collar work as outlined by Lips-Wiersma et al (2016). Blue-collar workers are defined as individuals engaged in production activities, such as operating or maintaining systems, typically involving manual labour. White-collar workers, on the other hand, are those involved in administrative or managerial tasks, typically conducted in an office setting (Lips-Wiersma et al., 2016). I recognise that the categorisation based on white- and blue-collar work is a simplification. However, given the limited scope of this study, I have chosen not to explore the specific work carried out by individual workers within these categories. Nonetheless, I maintain that by distinguishing between white-collar and blue-collar workers, I can uncover valuable insights into how individuals engaged in production activities, as opposed to those in office roles, perceive identity and the green steel transition.

5.2.2 Sampling process and challenges

Throughout the sampling process, I encountered challenges that prompted adjustments to my sample. Prior to contacting steel workers, I conducted research to determine which group of workers would be most affected by the green steel transition. In October 2023, I contacted the local unions associated with SSAB Oxelösund, specifically the white-collar union “Unionen” and the blue-collar union “IF Metall”. In a conversation with a union representative, it was indicated that blue-collar metallurgy workers would be the most directly impacted by the restructuring brought by the transition. Drawing from insights obtained from the union and my previous literature review, I selected blue-collar metallurgy workers as my sample.

Obstacles arose when attempting to reach out to the intended study sample, making the process challenging and time-consuming. None of my established contacts were able to assist, and communication with the company proved difficult as all correspondence had to be routed through the communications office. Upon finally contacting a manager, I was advised against reaching out to my intended group, as it was deemed too sensitive. Given my time constraints, I reassessed my sample and opted to broaden it to include retired and non-retired workers from blue- and white-collar jobs.

5.2.3 Interviews

Utilising snowball sampling, I reached out to various connections in Oxelösund and managed to recruit fourteen individuals to participate in my research. I conducted fieldwork in Oxelösund over a two-week period in March 2024. The purpose of the fieldwork was to plan and conduct semi-structured interviews, as well as to visit the site of my study.

To categorise my interviewees, I divided them into retired and non-retired workers, as well as white-collar and blue-collar workers, allowing me to explore any variations in the narratives offered by these groups. I refrained from any additional categorisations, considering it unnecessary for the thesis's objectives. The retired workers, representing the past, had been employed in the industry from around 1960s to the early 2000s. The current workers, representing the present, had, at the earliest, been employed since 1970s to the present day. To answer my RQ1, I will turn to narratives provided by both retired and non-retired workers, in order to understand how workers' identities have been influenced by structural changes. RQ2 and RQ3 will primarily draw on insights from the present narratives, as workers currently employed are more directly involved in the decarbonization process. Additionally, the interviewees represented different ages, genders, and professions. The interviewees are listed on the following page in *Table 3*. I have given the interviewees a pseudonym, which will be used in the result section, and enough traits to ensure anonymity, while still provide a bit of context.

Table 3. Presentation of interviewees.

Retired/Non-retired	Blue-/White-collar	Occupation	Pseudonym	Interviewee code
Retired	White-collar	Division manager	Mats	4
Retired	White-collar	Economist	Lars	2
Retired	Blue-collar	Rolling mill worker	Lilja	5
Retired	Blue-collar	Rolling mill worker	Bo	6
Retried	Blue-collar	Bricklayer	Hans	11
Non-retired	White-collar	HR	Fredrik	7
Non-retired	White-collar	Manager	Viktoria	9
Non-retired	White-collar	Union representative	Peter	1
Non-retired	White-collar	Union representative	Anders	3
Non-retired	White-collar	Division manager	Johan	10
Non-retired	Blue-collar	Rolling mill worker	Maria	14
Non-retired	Blue-collar	Technician	Thomas	7
Non-retired	Blue-collar	Rolling mill worker	Fillip	8
Non-retired	Blue-collar	Technician	Henrik	12

Prior to conducting the interviews, I prepared an interview guide (see *Appendix 1*). The guide was structured around the past, present and future and involved key themes, including identity, structural change, and the green steel transition, each containing sub-questions. While the topic guide helped to structure the conversation, the interviewees were also encouraged to delve into topics they deemed important. The interviews varied in duration from 20 to 75 minutes. All interviews were recorded and transcribed, and participants were informed of this practice. The interviews were conducted in Swedish. The quotes presented in the results section are my own translations.

5.2.4 Thematic data analysis

To analyse the interview data and uncover themes in relation to workers' identities, structural change and the green steel transition, I utilised thematic data analysis, following the six-step approach outlined by Braun & Clarke (2006). In *table 4* below I describe how I approached these steps.

Table 4. The six steps of thematic data analysis (Braun & Clarke, 2006)

Thematic data analysis	Application to case
Step 1 Familiarising myself with the data	I transcribed the data using Sonix transcription software and read through the transcripts multiple times, while writing down initial ideas. I collected everything of interest, going beyond my pre-considered ideas from my analytical framework.
Step 2 Generating initial codes	I systematically coded interesting features of the data across the entire dataset, collecting data relevant to each code and categorising it into general themes. This step was conducted manually by highlighting codes in Word.
Step 3 Searching for themes	I began organising my codes into themes, checking if my predetermined themes based on my analytical framework aligned with the coded extracts. I created new themes for the extracts that did not fit into the identified theoretical themes.
Step 4 Reviewing themes	I refined the themes, striving to make them more specific. I focused on the most prevalent aspects in my dataset and on those connected to identity.
Step 5 Defining and naming themes	I continued to refine and define my themes by narrowing down the scope to the themes most relevant for my research aims.
Step 6 Producing the report	The summary of my thematic data analysis will be presented in the results section, categorised based of identified themes.

I employed an abductive approach to my data analysis, as I combined predetermined categories and assumptions based on my theoretical framework with categories identified within the dataset (Alvesson & Sköldbberg, 2017). The themes, identified through my thematic analysis, will form the structure of the results section. For an excerpt of my codebook, see the *Appendix 2*.

5.3 Ethical considerations

As this thesis is based on interview data, most of my ethical considerations revolve around the respect and integrity of my research participants. Each participant was provided with a consent form (see *Appendix 3*) stating the research process, research objectives and outlining data handling procedures. Given the personal nature of the information shared, particularly concerning critical narratives about the company, safeguarding anonymity was paramount to prevent any potential repercussions for the participants. Adhering to the ethical guidelines outlined by the Swedish Research Council, I strived to ensure the legitimacy and credibility of my research through transparency and rigorous research practices (Vetenskapsrådet, 2017).

5.4 Reflexivity and positionality

In sustainability research, it is essential for researchers to engage in self-reflection, particularly regarding the normativity of the research as well as my own positionality. This practice aligns with my constructivist research approach. Reflexivity is crucial when conducting interviews as it involves the acknowledgment of how the researcher's characteristics shape the portrayal of the research subject and the interactions between the researcher and the participants (Walton et al., 2022). It pertains to maintaining reflexivity throughout the research process and ensuring transparency regarding the decisions and actions taken, which are informed by research as well as by my own subjectivity (Wittmayer & Schöpke, 2014). This was regarded in the collection of my data, the analysis of data as well as in the presentation of my data, where I tried to give as much of an accurate representation of the data as I possibly could. Throughout the research process I have acknowledged and tried to be mindful of my own positionality as a white, middle-class, urban university student and an outsider to the steel industry in Oxelösund. I have brought this awareness into the meetings with research participants and highlighted the value of their respective voices. By adding reflexivity and making my onto-epistemic stance as well as my positionality visible (Diefenbach, 2009) the research becomes more rigorous (Doucet & Mauthner, 2007).

6 Results

In this section, I outline the predominant themes derived from the thematic data analysis.

Firstly, I outline the key elements that influence workers' collective and occupational identities (RQ1), tracing their development from the past to the present. Subsequently, I examine how certain structural changes in the workplace have shaped or reshaped workers' identities (RQ2). Finally, I investigate the role that identity is suggested to play in relation to workers' attitudes toward the green steel transition (RQ3A). This enables me to examine how worker's identities have previously been shaped by structural change and examine the potential implications for the green steel transition.

6.1 Workers' collective identity in the past and present

The three most prominent expressions of collective identity identified in the interviews were: industry as *social connection* – forming friendships and gaining social capital, industry as *power* - highlighted by feelings of pride, status and educational access and industry as *survival* – referring to the industry providing work for the region. Although these elements can be identified in narratives from both the past and present, they were more strongly emphasised in the past. This is likely attributed to the industry playing a more active role in the community around the 1960s to 1980s.

Lars, the first retired worker I interviewed, introduced the term 'Oxelösundsandan' (the spirit of Oxelösund), describing it as the essence of Oxelösund, merging the industry with the community culture. I decided to revisit this concept in subsequent interviews as it appeared to encapsulate what Chamberlain (2014) describes as *cultural identity*, the fusion of the collective identity with the town culture. The concept of Oxelösundsandan proved to be relevant in discussions about collective identity with retired as well as with non-retired workers. While Oxelösundsandan served as a conversation starter for discussing collective identity, participants shared mixed sentiments regarding how this collective identity manifested and whether they felt connected to it. Additionally, some participants were unfamiliar with the concept.

6.1.1 The industry as social connection

All of the retired workers emphasised the significance of the industry providing social connections, encompassing friendships and social networks, forged through community activities and work interactions. Social connections played a less significant role in shaping the collective identity of the present and sentiments varied regarding its importance. In the quote below the white-collar worker Mats underscores the significance of acquainting oneself with both staff and management when forming a shared identity:

"I believe identity is very essential. Everyone in a place like this knows each other, everyone identifies themselves. If I were the manager of the rolling mill or heavy plate, they would know who I was. If I walked around in the operation, people could come up and talk to me and they felt acknowledged. And that was perhaps the strength, I think, of a decentralised organization." (Mats. Own translation⁵)

Mats suggests how a decentralised organisation was an important aspect in forming social connections and for shaping a collective identity. I will come back to this point in section 6.3.2. The social connections extended beyond work to the community's association life, which was vibrant in the 1960s to 1980s, partly due company sponsorship. Both Mats and Hans experienced how sport clubs served as a platform for social integration between white- and blue-collar workers. It suggests that sports associations played a role in bolstering the collective identity of the community. While most retired workers expressed a strong connection to Oxelösundsandan, this connection was less evident for Lilja:

"I, who have come here and am not native. It was a bit cramped at first because. But I am so verbal that it is impossible to stop me. But I have seen [other nationalities] who have had a very hard time connecting with the Swedes. Ah, the people of Oxelösund say. It's a community spirit, that's us Oxelösund residents." (Lilja)

⁵ I have translated the quote from Swedish to English. This applies to all following quotes.

The quote illustrates how the collective identity of Oxelösund was not necessarily inclusive of everyone. Lilja is suggesting how she had to work harder to fit into the identity, due to her non-Swedish origin. Furthermore, Lilja conveyed to me how the strong gender divide in the workplace made it harder for women to be included. These aspects suggest that ethnicity and gender influenced the collective identity of Oxelösund.

The present narratives reveal a diminished social connection provided by the industry, indicating a shift in the collective identity. Fewer current workers exhibited a connection to the concept Oxelösundsandan. This disparity was particularly pronounced among blue-collar workers, as a majority were unfamiliar with the term. This is suggesting a weakened sense of collective identity among blue-collar workers. While all white-collar workers were acquainted with Oxelösundsandan, it was suggested that the identity primarily referred to company culture rather than the culture of Oxelösund. Many interviewees suggested that the decline in community associations and company sponsorship resulted in a reshaped collective identity. Anders went further and suggested that the diminished social connection was the end for Oxelösundsandan:

“But it's like the spirit of the mill town. It's dead and buried... ..But whether it's the spirit of Oxelösund or the involvement with the community where they sponsored the football teams and bandy teams and made sure that the gym and swimming pool and things like that were renovated and good. That doesn't exist today.” (Anders)

In the quote, Anders suggests that the social connection of the industry was central for the collective identity Oxelösundsandan.

6.1.2 The industry as power

This facet of the collective identity emerged mainly from interviewees expressing *pride* over the steel products. In the past, the pride workers felt in connection to the product, was suggested to bridge the collective identity between white- and blue-collar workers, all sharing this sentiment. In the present narratives the pride was directed both to the products and to the company. These sentiments were mainly expressed by white-collar workers.

The sentiments of pride became evident when the retired white-collar worker Lars stated, "Ah, this about the quality of steel, and we'll come back to that. It's actually one of the really important reasons why Oxelösund is doing so well today." (Lars). The shared sense of pride over the quality of the steel products, felt by white- and blue-collar workers, becomes integrated into a shared sense of collective identity

The majority of current blue-collar workers who expressed pride did so in connection to their occupation. Henrik stood out as the sole current blue-collar worker exhibiting strong sentiments of pride towards his company, adding to his sense of collective identity:

"I have always been meticulous and proud to explain why SSAB is good and what products they produce, and what kind of products we can see around the city. I usually mention the Högakustenbron, built with our steel, the Öresundsbron, built with our steel. It's those kinds of things that you can connect, feel proud of, and point to. Oh, look there, that's ours!" (Henrik)

In contrast to Henrik, Maria is expressing a different view:

There used to be a pride in working inside SSAB. Unfortunately, this feeling has disappeared. It's no longer there. Perhaps it's because we operators are no longer listened to. Like, we no longer know the management. They toss us around as they please. They decide over us, and we can't do much about it. (Maria)

The quote suggests that blue-collar workers are experiencing a diminished sense of pride towards the company, which in turn is seen to diminish their status and collective identity. I will come back to this in section 6.3.

6.1.3 The industry as survival

Common for the past and present narratives was the description of the industry as the lifeblood of the region, portraying it as essential for *survival*. The retired white-collar workers, Lars and Mats contended that Oxelösund would not exist without the industry. Below, Mats describes the industry's vital role for the region's survival:

“Yes, you realize how significant the plant is and... If the plant were to disappear, what would become of Oxelösund? There's nothing left.” (Mats)

The significance of the industry's survival contributes to bolstering the collective identity. Furthermore, Mats and Lars both elaborate on how the collective identity becomes prevalent when the survival of the industry is jeopardized. In the quote below, Mats portrays the collective identity as a unifying force protecting the industry's survival. The quote refers to a time when Oxelösund steel mill was facing the threat of closure:

“It was so turbulent that there were discussions about Oxelösund being shut down... ..So, it was entirely an initiative of private individuals who worked at the ironworks and these banners. They sold very well because everyone wanted to participate. And then you saw the total unity.” (Mats)

The quote highlights the significance of the industry as well as the role of identity in protecting the industry's survival. It is indicated that the current white-collar worker Peter is referring to the same event as Mats, when underscoring the role of identity in safeguarding the industry's survival:

“Back when there were threats of closure. Then the whole town was like rolling up their sleeves and really took hold of this, we must do this to survive. And it lives on in the walls.” (Peter)

By repeating a similar narrative to Mats', Peter is adding to a shared memory. Through this shared memory the collective identity is indicated to strengthen.

6.2 Workers' occupational identities in the past and present

Occupational identities were articulated through three key dimensions: *industry as a family* - highlighting the family-like bonds formed within one's shift crew often through *strong camaraderie*, *industry as power*, demonstrated through status and pride, and *industry as self-determining*, regarding work as meaningful. In my interviews, retired blue-collar workers tended to demonstrate stronger occupational identities, whereas white-collar counterparts exhibited stronger collective identities. In the present narratives, white-collar workers continue to display strong collective identities, while the collective and occupational identities of blue-collar workers are not as pronounced.

6.2.1 The industry as family

Blue-collar workers in both past and present expressed how they developed family-like bonds and strong camaraderie, due to the nature of their work and working hours. Several now-retired blue-collar workers suggested that the strong camaraderie that was formed within one's crew reinforces their occupational identities. While the physical environment could be hard, the camaraderie made up for a lot:

"And there are women who start walking like this [with hunched backs] because they were so destroyed. But the camaraderie did so much. It was. It was very good" (Lilja).

This suggests that the camaraderie was an important aspect of the occupational identity of women like Lilja too. The downside of these strong bonds is what happens when a worker retires. For example, Mats recounted a story of a retired worker:

"The social aspect was there at the workplace. That's how it goes. Yes, that's how you end up, being bid farewell. Then I see him sitting here on some bench maybe. A few years pass, then they're gone."
(Mats)

What this quote thus highlights, is the difficulty of retirement when this social connection is lost. Workers who are currently employed in the industry highlighted that camaraderie continues to play an important role. Filip, a blue-collar worker, was one of the interviewees who suggested that part of his occupational identity is derived from identifying with his colleagues:

"Yes, it's probably not about the job itself. It's about the people you work with. So, you kind of absorb their... what should I say? Their personalities a bit, you know. It's like, you spend eight hours with them, so they will influence you and you will influence them. The more you work together, the more you almost blend together personally." (Filip)

It is indicated that for interviewees both in the past and present, the aspect of camaraderie plays an important role in reinforcing occupational identities.

6.2.2 The industry as power

In the interviews, a majority of retired white-collar and blue-collar workers highlighted how their roles within the industry provided them with access to power. In the present narratives it was mainly blue-collar workers expressing this element of the occupational identity. The sense of power was primarily expressed in relation to status, pride, and education. These elements were closely intertwined and contributed to shaping their occupational identities. This is highlighted by the retired blue-collar worker Bo:

“A development agreement came in 1983 which regulated that we had to invest in new technology, computers and automation, work organization, and above all education. There was a lot of education in this. We had to learn a hell of a lot of things. Yes, we got into economics and these kinds of things and planning and qualities, and it was damn developing.” (Bo)

It is suggested in the quote that internal education played a role in shaping both Bo’s occupational and collective identity. Blue-collar workers, currently employed in the industry, also emphasised the interconnected role of status, pride and education in shaping occupational identity. Maria is one of those interviewees:

“I haven't been in one place the whole time, because I could learn quite quickly in different jobs and absorb information and knowledge in a quite broad way. So, they wanted help from me at many different stations and to inspect plates according to quality.” (Maria)

In the quote Maria proudly express how her knowledge gives her status within the organisation, empowering her with more responsibilities at work. Additionally, Maria experienced that men tend to have higher status within the company, particularly in the steel mill, which remains predominantly male-dominated. Maria states, “It doesn't matter if these male individuals have much less knowledge, they are more valued and given more opportunities than women.” (Maria). It is suggested that gender plays a role in the formation of an occupational identity and that the gender divide remain within the industry.

6.2.3 The industry as self-determining

The data indicated that all retired workers, along with non-retired white-collar workers, generally found their work meaningful. This is suggesting that work was an intrinsic aspect of their identity expression. Among the currently employed interviewees, Henrik was the only blue-collar suggested to perceive his work as meaningful.

The retired white-collar worker Lars stated that his career in the steel industry provided him with significant personal growth. He said, "I do not dare to think about what I would have been if I hadn't gotten this development, actually" (Lars). It is suggested that Lars's work was a significant part of both his occupational and personal identity. The sense of meaning provided by work was echoed primarily by white-collar workers in the present narratives. Victoria, who is currently employed, described her work as follows, "What I like about SSAB that is. That it is big, it is structured. There is kind of a world company in a small town, so I feel. I think it is interesting and stimulating." (Viktoria).

6.2.4 Summary of RQ1

RQ1: *What are the key elements shaping steel workers' collective and occupational identities?*

In summary, the interview data, encompassing narratives from the past and present, is suggesting there to be presence of a shared collective identity as well as expressions of occupational identity. Although workers' identities are intricate and multifaceted, certain key elements emerged, illustrating how these identities manifest. Collective identity formation mainly stemmed from the industry providing *social connections* and sentiments of *power*, primarily related to pride, and by the industry safeguarding the *survival* of the region. Occupational identities, on the other hand, were largely shaped by the *strong camaraderie* and *family-like* bonds formed within one's shift crew, the access to power, linked to pride, status, and education, and self-determining, providing work with meaning.

While expressions of identity were evident in both past and present narratives, there were differences in how these identities manifested. In the past, the collective identity of Oxelösundsandan encompassed a shared cultural identity between the industry and the town of Oxelösund. However, in the present, it was suggested that the collective identity was more closely

associated with the company culture. Moreover, the data indicates that current blue-collar workers perceive to have a weaker sense of collective identity, with some also expressing a diminishing occupational identity. In the following sections, I delve into the influence of past structural workplace changes on workers' identities (RQ2). With this discussion, I strive to comprehend how prior experiences of change may affect workers' attitudes toward the green transition.

6.3 Structural change and its impact on workers' identities

There is a noticeable shift in how collective and occupational identity is expressed in the present narratives. These findings offer two significant insights relevant to the examination of identity within the context of the green steel transition. Firstly, the data indicates there has been a persistent pattern of structural changes within the industry, reshaping workers' identities. Workers' remaining identities could be viewed as adaptable and thus capable of withstanding structural changes induced by the green steel transition. The second finding, which I deem most important, suggests that there is a notable disparity in identity expressions between white-collar and blue-collar workers, with the latter displaying a reduced sense collective and occupational identity.

In the upcoming discussion, I outline the three primary structural changes most commonly mentioned by workers, thought to have influenced their identities: technological advancements, organisational centralisation, and the adoption of lean production. The data suggests that these structural changes have disproportionately affected blue-collar workers, a point I want to emphasise.

6.3.1 Technological advancement

The data indicated that technological advancement had both positive and negative impacts on workers' identities, expressed through either an increased or decreased sense of *pride*. White-collar workers generally expressed positive sentiments towards the technological advancement, adding to their sense of collective identity. A few of the blue-collar workers, who directly experienced the new technology in the production, shared negative sentiments towards the technological advancement. This was suggested to be related to a diminished sense of occupational identity. Fredrik is one of the white-collar workers expressing a sense of pride: "And over the past 50 years, investments in technological development have been very forward-leaning." (Fredrik). On the contrary, Maria is expressing negative sentiments toward the technological advancements in the rolling mill, which are linked to the company's green steel transition process.

"And they removed old things. Instead of trying one new machine. And they can set it up. As we need to be able to perform our job. No, they removed everything and then they came with new machines, and we cannot perform our work as we need to do." (Maria)

It is suggested that blue-collar workers' occupational identities are more affected by technological advancements due to their direct involvement in working with these technologies on a daily basis.

6.3.2 Organisational centralisation

The centralisation of the company organisation was frequently mentioned in the interviews, by both retired and non-retired workers. According to Mats, the centralisation refers to early 2000s when SSAB moved their headquarter to Stockholm and started to introduce a top-down organisation. The narratives suggest that the centralisation impacted on Oxelösundsandan as well as on the occupational identities of blue-collar workers, by breaking the social connection between the company and Oxelösund. As stated by Mats earlier, in section 6.1.1, the decentralised organisation brought a local connection between the company and Oxelösund and facilitated an integration between employees and management. It was mainly blue-collar workers sharing negative sentiments towards the centralisation, suggesting that this structural change decreased their sense of occupational identity. The few white-collar workers who mentioned this shift expressed positive sentiments. The data indicated that the centralisation broke the local connection, transforming Oxelösund into a mere production site. Furthermore, the introduction of a top-down organisation, was suggested to lowering the *status* of workers as they indicated to experience that they were no longer seen or heard by management. This was indicated by Thomas who suggests that a lot has changed at work since 2006. He experience that the managers higher up do not have the same trust in blue-collar workers after the company centralisation.

6.3.3 Introduction of lean production

It was in the past and present narratives mentioned how the changing organisational structure of the company have had an impact on blue-collar workers' occupational identities in relation to access to

power and education. While lean production⁶ was only explicitly mentioned by the retired blue-collar workers Bo and Lilja, a few of the blue-collar workers currently employed negatively referred to workplace changes which can be linked to the introduction of lean production. The workplace changes referred to, included internal education being replaced by static and standardised processes, and the workforce decreasing. Henrik was one of the blue-collar workers sharing negative sentiments towards decreased opportunities for internal education:

"Back then, we had training departments and all that at SSAB. But it's gone now. Now the boss is supposed to handle everything. Without support. It has become much, much worse.". (Henrik).

The blue-collar worker Thomas highlighted changes, possibly connected to the introduction of lean production. He indicated how the increased efficiency within the organisation had resulted in a reduced workforce. According to Thomas, the decrease in personnel has increased his workload, as the same amount of work is now distributed among fewer people. The shifts mentioned by Henrik and Thomas are suggested to have negatively impacted their occupational identities.

6.3.4 Summary of RQ2

RQ2: *In what ways have previous structural change impacted on workers' identities?*

In summary, the data suggests that previous structural changes have influenced workers' identities, with blue-collar workers disproportionately experiencing negative effects on their occupational identities. These negative impacts on identity were attributed to three key structural changes, including technological advancements, reducing the quality of the work, centralisation, impacting on the social connections and creating a top-down organisation, and lean production reducing the workforce as well as internal education opportunities. The impact on identity is in the narratives reflected through the reduced access to *power*, expressed through elements such as *pride*, *status*, and *education*. A majority of the blue-collar workers interviewed shared negative sentiments on how their diminished occupational identity has worsened the work environment, connecting to their experiences of being undervalued, in relation to their practical knowledge, as well as not feeling listened to by management. These findings indicate how the green steel transition may affect blue-

⁶ Lean production is a manufacturing strategy designed to optimise business efficiency. This is for example achieved by reducing the workforce and introducing standardised processes, which are often associated with repetitive tasks (Johansson & Abrahamsson, 2009).

and white-collar workers differently by potentially impacting blue-collar workers the most due to their lowered status. I will now shift to RQ3A and explore the potential role of identity in shaping workers' attitudes towards the green steel transition.

6.4 The role of identity in the green steel transition

The data indicates a link between workers' attitudes towards the green steel transition and their identity expression. White-collar workers expressing strong occupational or collective identities typically showed positive attitudes towards the transition. Conversely, blue-collar workers who felt their identities were compromised by past structural changes tended to express negative sentiments. *Pride*, *status*, and *survival* were the key identity elements frequently cited by workers when discussing their attitudes towards the transition. Below, I provide a few examples illustrating this connection.

6.4.1 The role of pride

The interview data indicated that a majority of the white-collar workers sense that the transition will increase their sentiments of pride towards the company. On the other hand, blue-collar workers who expressed negative sentiments towards the transition, expressed worry that the transition will decrease their occupational pride, due to changes in the production. The white-collar worker Fredrik express that the transition is improving the company

It's cool. It's futureproofing. It's efficient. Of course, if I list a number of workplaces. So many 100 works in the factories today. In the new one that will be ready in a number of years, there will not be nearly as many working. (Fredrik)

Contrastingly, Maria expresses, as mentioned earlier, in section 6.3.1, worry about how the technological advancement, brought by the transition, might further decrease her occupational identity, linking to a sense of pride towards her craftsmanship.

6.4.2 The role of status

During the interviews, white-collar workers generally suggested that the transition would enhance both the company's *status* and, potentially, their own. In contrast, blue-collar workers, who

expressed a decreased sense of occupational identity, highlighted how the transition underscored their reduced status. The white-collar worker Anders discusses how the company will be improved, "If we have a HYBRIT plant that can produce enough pellets for us to use in production, so we don't have to use as much scrap. Then this will be a very reputable company." (Anders).

Conversely, blue-collar workers expressed worry for how the transition might further reduce their status. Thomas, who had already experienced changes brought by the transition, indicated that these shifts reinforced blue-collar workers' lower status. This was highlighted through Thomas explaining how him and his colleagues were invited to provide ideas for workplace improvement but were ultimately ignored by management.

6.4.3 The role of survival

The identity element of *survival* was brought up in the interviews by most of the white- and blue-collar workers in the context of the green steel transition. White-collar workers generally expressed optimism about how the transition would secure the industry's survival. In contrast, blue-collar workers voiced concerns about how it might endanger both the industry's continuity and their own employment. Initially, the white-collar worker Peter echoed this sentiment:

"It was a threat once upon a time that we would shut down the entire metallurgy, and it came from higher authorities, so to speak. It was based on completely incorrect data. So naturally, when we got this, the first reactions instinctively for most, at least for the bigger changes. It was never in life. Now this is here, and this we must fight against." (Peter)

The quote indicates how the collective identity can be used as a defence mechanism. Protecting the industry's survival against external threats.

6.4.4 Summary of RQ3A

RQ3A: *What role does identity have in shaping workers' attitudes towards the green steel transition?*

The results revealed that a robust expression of collective identity tends to correlate with more positive attitudes toward the green steel transition, whereas a weaker expression of occupational identity tends to result in more negative sentiments. Many blue-collar workers express concern

about how the transition might negatively impact their occupational identities, leading to diminished *pride, status*, and the perceived risk of the industry's *survival*.

6.5 Summary of results

In summary, the research findings underscore the enduring presence of a robust collective identity within Oxelösund's steel industry, alongside steelworkers' continuous expressions of occupational identities. While workers' identities are complex and multifaceted, the data suggest there to be several key factors shaping these identities. Collective identity primarily emerges from the industry's role as a source of *social connection, power, and survival*. Similarly, occupational identities mainly stemmed from the shift crew resembling a *family*, as well as a sense of *power* and *self-determination*.

The two most significant findings suggest that structural changes have already influenced workers' identities and that blue-collar workers' identities have been the most affected. The most frequently referred to structural shifts, indicating to reshape worker's identities, include technological advancement, organisational centralisation, and the introduction of lean production. It is suggested that the centralisation, in particular, has reshaped the collective identity, resulting in the company taking less of an active role in the community and the identity changing to encapsulate company culture rather than the culture of Oxelösund.

Moreover, the data indicates that these structural changes have had a more significant impact on blue-collar workers, who showed little or no sense of collective identity and a diminished sense of occupational identity. I find these findings compelling in the context of the green steel transition, as identity expression appeared to influence workers' attitudes toward it. The aspects of identity expression most commonly referenced when workers discussed their attitudes toward the transition were a sense of pride, status, and concerns about the industry's survival. The data indicated that white-collar workers, who had positive experiences with previous structural changes and demonstrated a sense of collective and occupational identity, expressed positive sentiments toward the transition. In contrast, blue-collar workers, who had negative experiences with previous structural changes and demonstrated less of a sense of collective and occupational identity, generally expressed negative sentiments toward the transition. In the discussion below, I contextualise my findings and further explore the potential implications of identity for the green steel transition.

7 Discussion

In this section, I primarily highlight RQ3B, examining the potential implications of identity for the green steel transition. Before delving into this, I revisit the key findings from RQ1 and RQ2, framing them within the context of existing literature. I particularly emphasise significant findings such as blue-collar workers' decreased sense of identity and the impact of identity on workers' attitudes toward the green steel transition. These findings are noteworthy as they underscore the social ramifications of transitions and highlight the pivotal role of identity in adapting to structural shifts.

The main results from RQ1 and RQ2 highlight how the expression of collective and occupational identity vary from the past and the present and from white- to blue-collar workers due to impacts from structural change within the industry. It is indicated by the data that previous experiences of structural change as well as the sense of identity plays a role in workers' attitudes towards the green steel transition.

7.1 Contextualisation of findings in reference to the literature

The examination of the identities of white-collar and blue-collar workers, as manifested in the past and present narratives in relation to the steel industry in Oxelösund, has yielded crucial insights into the pivotal role of identity in coping with and reacting to structural change. The interview narratives indicate how structural changes have diminished blue-collar workers' identities and made it more challenging for them to adapt to changes brought by the green steel transition. This specific aspect of the findings cannot be explained with the established literature. Before exploring which parts of my findings align with previous literature and which are unaddressed, I will share a reflection on the usefulness of my analytical framework.

My analytical framework proved to be valuable in discerning the key elements influencing steelworkers' collective and occupational identities. While there were resemblances in how white- and blue-collar workers expressed their identities, there were also distinctions that would have gone unnoticed without differentiating between occupational and collective identity. Chamberlain's six dimensions emerged as particularly insightful, offering a comprehensive framework to elucidate identity expression, in regard to both collective and occupational identity.

7.1.1 Workers' Identity expression in the past

I observed recurring themes suggesting that the steel industry and occupation have become integral to the social identities of steelworkers in Oxelösund. The strong expression of collective- and occupational identity, which especially occurred in the past narratives, align with results from previous studies, which identified robust identity expressions of high-carbon workers (Chamberlain, 2014; Ferns, 2019; MacKenzie et al., 2006; McLachlan et al., 2019). Similarly to (Chamberlain, 2014), I identified how the collective identity in the past, Oxelösundsandan, was a reflection of the merged culture of the steel industry and Oxelösund, what Chamberlain refers to as cultural identity. Oxelösundsandan was strengthened by the vibrant association life in Oxelösund at the time, relating to what has been found by Ferns (2019). Moreover, specific for the identity expression in the past industry was the shared sense of collective identity between white- and blue-collar workers. McLachlan et al (2019), found that white- and blue-collar workers collective identities got united over their shared sense of pride over the steel products. This was found in the past narratives.

The strong sense of identity among the retired workers became even more prevalent in the narratives referring to structural change and hardships experienced in the workplace, with workers sharing similar memories. In the context of turbulent times, when the steel mill was threatened to close Mats expressed, "...then you saw the total unity" (Mats). Suggesting how the collective identity unifying workers worked as a coping mechanism to deal with structural change, or even a defence mechanism against threats towards the steel industry. These findings align with previous literature highlighting the role of identity as a coping mechanism for industrial change (Ferns, 2019; MacKenzie et al., 2006) and that the collective experiences of change also helped workers in navigating (McLachlan et al., 2019). Another similarity with the literature involves the findings suggesting that a significant portion of blue-collar workers' identities stemmed from their shared understanding of the labour process, particularly in production-related tasks, and their strong camaraderie among colleagues. This observation was particularly evident in the past narratives and aligns with the findings of MacKenzie et al (2006) and McLachlan et al (2019).

7.1.2 The diminishing identities of blue-collar workers

While previous literature predominantly focused on how the strength of industrial workers' collective identities led to positive outcomes (Chamberlain, 2014; MacKenzie et al., 2006; McLachlan et al., 2019), particularly in the context of industrial change, Ferns (2019) proposed that the deindustrialisation of the Scottish steel industry had significant impacts on blue-collar workers, rupturing their social connections and fracturing the community. Although these findings differ from mine, my interview data suggested how structural changes within the workplace have negatively affected blue-collar workers' identities.

The weakened identities of blue-collar workers have been indicated to reduce their abilities to adapt to structural change. A majority of the interviewed blue-collar workers expressed how their diminished sense of identity also translated into a deteriorated work environment. This was evident by their perceived lack of connection to the company, reduced status, and feelings of being unheard and undervalued for their practical knowledge. Ferns suggests that the treatment of workers within a company organisation corresponds to their relative power in relation to management. Thus, it could be argued that structural changes have diminished the power of blue-collar workers within the labour organisation, as evident by repeated narratives suggesting their perceived decrease in status. It is suggested that the management's perception of blue-collar workers impact their identities. This underscores a key aspect of social identity theory, which suggests that other people's perceptions of us play a crucial role in shaping our sense of identity (Chamberlain, 2014; Lawler, 2015).

It is proposed by Allan & Robinson (2022) that the organisational structure of a company significantly influences the development of collective identity. They suggest that a strong collective identity is more likely to emerge when workers feel empowered by the organisation. Conversely, hierarchical structures within an organisation tend to diminish collective identity, as they prioritise other aspects over the organisational collective identity (Allan & Robinson, 2022). With reference to Allan & Robinson (2022), it can be inferred that the hierarchical structure of SSAB and the diminished regard for the perspectives of blue-collar workers may influence their sense of identity. This highlights the significance of fostering a positive work environment in shaping one's sense of identity.

7.2 Exploring the potential implications of identity for the green steel transition

RQ3B: What could be the implications of identity for the green steel transition?

Now, I address RQ3B, discussing the potential implications of identity for the green steel transition, in the context of the decarbonization of SSAB Oxelösund. I propose that collective and occupational identities might have a dual role in the context of the green steel transition, either facilitating support or fostering opposition to it.

Studies indicate that individuals who strongly identify with a specific group, such as a community or industry, are more inclined to support initiatives that align with the values and objectives of that group (McLachlan et al., 2019). Consequently, if such a group holds a positive view of the green steel transition, it is likely to increase support for it. This is evident among white-collar workers in Oxelösund, who share a collective identity and exhibit positive attitudes towards the transition. Conversely, the articulation of collective identity, known as Oxelösundsandan, may also function as a defence mechanism against structural changes within the industry. This was particularly evident when the white-collar worker Peter described his initial reaction to the green steel transition, namely as a threat that “we must fight against.” A majority of white- and blue-collar interviewees, regarded the survival of the industry as the most significant aspect of the transition. According to Allan & Robinson (2022) a strong collective identity within one organisation can foster a “us versus them” mentality, which could be used in opposition towards a green transition. This mentality can be spotted through Oxelösundsandan. The above insights suggest that the collective identity of SSAB could either function as a coping mechanism for dealing with structural change induced by the transition or as a defence mechanism against change which could threatened the industry.

While previous research on identity in industrial restructuring emphasises the benefits of a strong sense of identity for navigating structural changes, a strong sense of identity may not always facilitate change. According to Janssen et al (2022), a strong collective identity could lead to resistance towards the green transition, particularly among groups whose identities are closely associated with industries or practices undergoing transformation or phase-out. The narratives encompassing blue-collar workers suggest that their occupational identities are deeply intertwined with the production technologies, rendering them more sensitive to changes affecting the industry. This sentiment was evident in Maria’s concern that the transition could pose a threat to her occupational identity by jeopardising her ability to maintain product quality.

In summary, it is suggested that both the collective and occupational identities of workers may play dual roles in the context of the green transition. For white-collar workers, their collective identity serves as both a defence mechanism, protecting the industry from threats, and a coping mechanism, enabling them to adapt to change through feelings of pride. Similarly, the occupational identity of blue-collar workers may contribute to resistance against changes that could compromise their occupational identity closely tied to the production. However, the sense of occupational identity can also facilitate adaptation by fostering a favourable work environment that promotes a sense of connection to the workplace, inclusion in the transition process, and recognition of blue-collar status within the organisation.

According to While & Eadson (2022), a just transition process highlights how the negative impacts of the transition process could be disproportionately distributed within the workforce and assesses if industrial restructuring will exacerbate or mitigate existing disparities within the labour market. This study has highlighted the need for greater attention towards blue-collar workers within the green steel transition, ensuring that the transition becomes more equitable, providing a favourable work environment and meaningful employment. Such insights are essential for developing and implementing policy to support workers in adapting to these changes, specifically targeting those most affected, thereby ensuring a fairer transition process.

7.3 Theoretical limitations

While the exploration of steelworkers' changing identities offered intriguing insights into the potential implications for the green steel transition, it's important to acknowledge certain limitations. Although social identity theory proved to be valuable for my study, there are constraints associated with my decision to delineate identity into collective and occupational, as this approach is not commonly employed in existing literature. However, this division enabled a more in-depth examination of the differing expressions of identity among white- and blue-collar workers. While it was noticeable how there is a rich field of research regarding the role of high-carbon workers' identities when dealing with industrial restructuring, I identified a lack of research encompassing the role of identity of high-carbon communities in the context of the green steel transition. According to Janssen et al (2022), scholarly discussions regarding the role of identity in transitions are still emerging. Further emphasising the necessity of incorporating identity into research on sustainability transitions.

8 Conclusion

The decarbonization of the Swedish steel industry is essential for meeting climate objectives and addressing the climate crisis. However, a transition focused solely on technology and growth risks overlooking not only ecological aspects, but also the social dimensions of the green steel transition. Drawing on social identity theory, this thesis investigates the factors shaping steel worker's collective and occupational identities, including past and present perspectives on the Oxelösund steel industry's decarbonization process. The findings yield two significant insights for Oxelösund's green steel transition. Firstly, the data indicates a consistent pattern of structural changes within the industry, reshaping workers' collective and occupational identities. The persistence of the industry's collective identity reveals its adaptability to change. Secondly, the research reveals that past structural changes have disproportionately impacted blue-collar workers, leading to a decline in their sense of collective and occupational identity. This may affect their ability to navigate the changes imposed by the green steel transition. The thesis suggests that identity could play a dual role in the transition, either facilitating support or fostering opposition to it. Moreover, it emphasises the importance of fostering a positive work environment and incorporating workers' perspectives into the transition process to ensure a more just transition process.

Additionally, the study highlights how social factors such as gender and ethnicity influence identity formation. While the scope of this study limits definitive conclusions in this regard, it underscores the need for further exploration of how social positions impact identity expression within high-carbon communities and amid the green steel transition.

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10 Appendices

10.1 Appendix 1: Interview guide

Interview guide

Inledande frågor:

Börja gärna med att berätta lite om dig själv.

- Vad har du för koppling till Oxelösund och SSAB? Hur länge har du arbetat på SSAB och vad innebär din roll där?
- Hur kommer det sig att du började jobba på inom stålindustrin?
- o Har du någon i familjen som också jobbat inom stålindustrin?
- Vad är din roll på SSAB Oxelösund? Hur ser en typisk arbetsdag ut?

Dåtid

- Vad har stålindustrin bidragit med för värden i ditt liv, utöver ekonomiskt värde? T.ex. socialt umgänge?
- Har du varit med om större strukturella förändringar på din arbetsplats tidigare? I så fall hur påverkade dessa dig?

Nutid

- Trivs du på ditt jobb? Vad gillar du med ditt jobb?
- Vilken betydelse tror du stålindustrin har haft och har för dig?
- Känner du tillhörighet till din arbetsplats? Kan du i så fall beskriva på vilka sätt? Gäller detta alla kollegor eller främst det team du jobbar i?
- Hur tror du att ditt jobb bidrar till vem du är som person?
- Vad uppskattar du med ditt jobb? Och vad tycker du mindre bra om?
- Känner du dig uppskattad på ditt jobb?

Omställningen

- Vad var din första reaktion när du fick höra om omställningen?
- Vad känner du inför omställningen nu?
- Hur tror du omställningen påverka dig personligen? Kommer den ha någon effekt på din självbild? På dina kollegor? Eller på din familj?
- Vilken roll ser du dig själv ha i omställningen? Vilken typ av inverkan har du på vad som sker?
- Vad skulle du vilja ha för roll i omställningen?

Framtid

Nu närmar vi oss slutet av intervjun. Skulle gärna vilja få höra lite om dina tankar på framtiden, med tanke på SSAB:s omställning.

- Hur ser du på framtiden i förhållande till omställningen?
- Hur skulle framtidens gröna arbetsplats kunna se ut?

Avslutning

Innan vi avslutar, är det något du vill tillägga eller har det dykt upp några frågor under vårt samtal?

Avslutningsvis, har du någon på SSAB som du rekommendera att jag pratar med härnäst?

10.2 Appendix 2: Codebook excerpt

Themes	Sub-themes	Codes	Sub-codes	Quotes									
Collective identity	Feeling belonging to the Oxelösundsandan as a collective identity	Oxelösundsandan as a collective identity	Oxelösundsandan							Deductive			
			There was a Oxelösundsandan							Inductive			
			Oxelösundsandan										
			Oxelösundsandan										
			Oxelösundsandan	Ah, det finns nog									
			Oxelösundsandan	Samhörighet. Stäm									
			When there are	Och SSAB andan									
			Oxelösundsandan	Oxelösunds andan									
			Oxelösundsandan	Jag vet inte vad det									
			Oxelösundsandan										
			Never heard about	Tyvärr jag har inte									
			Lack of collective identity			Oxelösundsandan							
						Oxelösundsandan							
						Oxelösundsandan							
			Distinctiveness from other companies	Distinctiveness from other companies		Oxelösundsandan	Jag som har kom						
	Cons with decent												
	White-collar hatr	Alltså man kan ju											
	There used to be	Hockey, Fotboll. I											
	Nyköping do not												
	Oxelösund was c	Jo jo. Och det är											
	Similarities within the industry	Similarities within the industry		Company culture									
				Strong identity fo									
				We work towards	Man känner ju er								
				Socializing with b									
				No strong divide									
	Creating bonds outside the company	Social activities outside the company		You got together									
				Engaged in sport									
				Socialize with pe									
				The sport associ	Vi hade ju mycke								
				Had a manager v									
				Ah i början så va									
The blue-collar w													
The company is													
SSAB arrange a													
The company do													
Lack of social activities			Less association										
			Company related										
The industry as a culture	Connection between industry and culture		Identity is central	Nej, men det är e									

10.3 Appendix 3: Consent form



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Information till forskningspersoner

Jag vill fråga dig om du vill delta i forskning till ett mastersarbete som ingår i ett större forskningsprojekt. I det här dokumentet får du information om projektet och om vad det innebär att delta.

Innan du bestämmer dig är det viktigt för dig att förstå varför forskningen görs och vad den kommer att innebära. Ta dig tid att läsa följande information noggrant och diskutera den med andra om du vill. Fråga mig/oss om det är något som är oklart eller om du vill ha mer information.

Vad handlar projektet om som denna masteruppsats är del av?

Övergången till ett koldioxidsnålt samhälle kommer att kräva omfattande industriella förändringar. Samtidigt som fokus länge har legat på energisektorn måste även andra kolintensiva industrier bidra till minskade utsläpp. Stålindustrin är en av dessa branscher, som satsar på en grön och fossilsnål produktion för att minska sin klimatpåverkan, och i Sverige finns olika planerade förändringar menade att uppnå detta mål, till exempel genom HYBRIT.

Denna strukturomvandling kommer potentiellt att ha omfattande socio-ekonomiska konsekvenser, både inom branschen och utanför den. Orter där stålindustrin är baserad har ofta nära sociala och ekonomiska band med industrin. I detta projekt frågar vi oss: Vad kommer att hända med dessa platser när den industriella verksamheten flyttar eller förändras? Vad kan sådana förändringar innebära? Hur kan industriell förändring hjälpa samhällen att frodas i framtidens koldioxidsnåla ekonomier? Forskningsprojekt kommer att pågå fram till december 2024.

I mitt mastersarbete, länkat till ovannämnda forskningsprojekt '*Arbetsplatsers strukturomvandling*', är jag intresserad av att genom intervjuer fördjupa mig i hur tidigare och nuvarande anställda i Oxelösunds stålindustri upplever den stundande omställningen inom industrin. Mer specifikt är jag intresserad av vilken roll arbetet har i de anställdas liv samt hur omställningen kan komma att förändra utförda arbetsuppgifter och behov av kompetens.

Varför vill ni att jag ska delta och vad innebär deltagande?

Som en del av min masteruppsats bjuder jag in människor att delta i intervjuer, och bjuder in dig eftersom jag tror att din kunskap och erfarenhet kan ge värdefulla insikter om hur denna förändring påverkar människor och platser. Din medverkan kommer att innebära att du får



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frågor kring dina tankar och upplevelser kopplade till den planerade omställningen inom industrin. Dina svar kommer att göra det möjligt för mig att ge en bättre bedömning av de olika upplevelser/förväntningar som människor har gällande förändring och grön omställning. Intervjun förväntas ta ca 60-90 minuter.

Eventuellt deltagande i en workshop, som man bjuds in till separat, förväntas ta mellan 90-120 minuter, och innefattar gruppdiskussion och brainstorming, som leds av en av forskarna. Deltagare uppmanas att dela med sig av sina tankar och förväntningar kring framtiden, och hur eventuella förändringar i stålindustrin kan komma att påverka deras liv.

Forskningshuvudman för projektet är Lunds universitet. Med forskningshuvudman menas den organisation som är ansvarig för projektet. Ansökan är godkänd av Etikprövningsmyndigheten; diarienummer för prövningen hos Etikprövningsmyndigheten är 2023-00394-01.

Möjliga följder och risker med att delta i projektet

Deltagare rekryteras på frivillig basis. Inga ekonomiska förmåner erbjuds, även om kostnader (resor, uppehålle) kan ersättas efter överenskommelse i förväg. De slutliga resultaten av studien kommer att bidra till den utvärdering och analys som är menad att besvara våra forskningsfrågor. För eventuella frågor angående denna forskning, vänligen kontakta forskargruppen (kontaktuppgifter finns i slutet).

Vad händer med mina uppgifter?

Projektet kommer att samla in och registrera information om dig. Ingen obehörig kommer att få ta del av den information som samlas in. Dina svar kommer att behandlas så att inte obehöriga kan ta del av dem.

De insamlade uppgifterna kommer att användas för att underlätta ytterligare datainsamling och analys, som kan komma att publiceras i akademiska tidskrifter, böcker, offentlig kommunikation, policyrapporter och andra professionella kanaler.

Ansvarig för dina personuppgifter är min handledare Bregje van Veelen. Enligt EU:s dataskyddsförordning har du rätt att kostnadsfritt få ta del av de uppgifter om dig som hanteras i projektet, och vid behov få eventuella fel rättade. Du kan också begära att uppgifter om dig raderas samt att behandlingen av dina personuppgifter begränsas. Rätten till radering och till begränsning av behandling av personuppgifter gäller dock inte när uppgifterna är nödvändiga för den aktuella forskningen. Om du vill ta del av uppgifterna ska du kontakta



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Bregje van Veelen (se kontaktinformation nedan). Kontaktuppgifter till dataskyddsombudet finns i slutet av detta dokument. Om du är missnöjd med hur dina personuppgifter behandlas har du rätt att ge in klagomål till Integritetsskyddsmyndigheten, som är tillsynsmyndighet.

Alla lagrade forskningsdata och material kommer att raderas fem år efter projektets slutdatum. Forskningen uppfyller alla juridiska krav på dataskydd och informationsfrihet. Allt det ovanstående gäller både data insamlad under intervjuer och all övrig data, inklusive information som deltagare tillhandahåller oss vid ett annat tillfälle än under själva intervjun.

Hur får jag information om resultatet av projektet?

Forskningsdeltagare kommer att få 'ögonblicksbilder' av fallstudierna som sammanfattar resultaten från fallstudien de deltog i. Ytterligare projektresultat kan hittas på projektets webbplats: <https://www.post-carbon.co.uk/changingplacesofwork>, eller kan erhållas genom att e-maila forskningshuvudman. Övriga resultat kan också komma att publiceras, med förbehåll för att etiska riktlinjer och datahanteringsbestämmelser följs.

Deltagandet är frivilligt

Ditt deltagande är frivilligt och du kan när som helst välja att avbryta deltagandet. Om du väljer att inte delta eller vill avbryta ditt deltagande behöver du inte uppge varför. Om du vill avbryta ditt deltagande ska du kontakta ansvarig forskare (Bregje van Veelen).

Kontaktinformation

Dr. Bregje van Veelen (ansvarig forskare), biträdande universitetslektor vid Lunds universitets centrum för studier av uthållig samhällsutveckling (LUCSUS):
bregje.van_veelen@LUCSUS.lu.se

Sanne Malmberg, student på masterprogrammet, miljö- och hållbarhetsvetenskap, vid Lunds universitets centrum för studier av uthållig samhällsutveckling (LUCSUS):

sanne.malmberg.130@student.lu.se

Dataskyddsombud
Postadress: Lunds universitet, Box 117, 221 00 Lund
Telefon: 046-222 00 00
E-post: dataskyddsombud@lu.se



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Tack för att du tackar ja till att delta detta mastersarbete som ingår i ovanstående forskningsprojekt. Detta samtyckesformulär är nödvändigt för att säkerställa att du har fått information om detta forskningsprojekt (se informationsblad) och förstår syftet med ditt engagemang, och framförallt för att bekräfta att vill delta i projektet. Genom att skriva under bekräftar du att du har fått muntlig och/eller skriftlig information om studien och har haft möjlighet att ställa frågor. Du får behålla den skriftliga informationen. Vänligen markera nedan om du accepterar.

- Jag bekräftar att intervjun/mötet/diskussionen kan spelas in och att ett protokoll kan förvaras säkert för framtida referens.

Samtycke till att delta i projektet

Jag samtycker till att delta i detta mastersarbete, länkat till projektet *Arbetsplatsers strukturomvandling*. Genom att underteckna detta formulär godkänner jag att:

1. Jag förstår vad projektet handlar om.
2. Jag deltar frivilligt i detta projekt. Jag förstår att jag inte behöver svara på alla frågor som jag får, och jag kan när som helst avbryta intervjun. Jag kan också begära att visst material ska hållas konfidentiellt.
3. Jag förstår villkoren för hur information registreras och lagras.
4. Jag har kunnat ställa de frågor jag vill, och jag förstår att jag närsomhelst i framtiden kan kontakta forskaren med ytterligare funderingar.

Vänligen underteckna nedan för att bekräfta att informationen ovan är korrekt:

Plats och datum	Underskrift
	Namnförtydligande