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More than one story: remaking community and place in Sweden's transition to a fossil free society

Anna Bohman[a], Clifton Evers[b] and Eva Lövbrand[a]

[a]Department of Thematic Studies: Environmental Change, Linköping University, Linköping, Sweden; [b]School of Arts and Cultures, Newcastle University, Newcastle upon Tyne, United Kingdom

ABSTRACT

In this article, we study how Sweden's transition to a fossil free society is interpreted and experienced by communities whose livelihoods and cultural identities are entangled with carbon-intensive industries. The study draws upon interviews with citizen groups in the coastal city of Lysekil, located next to Scandinavia's largest oil refinery. Our analysis speaks to a growing scholarly literature on just transitions where we argue that a better understanding of place attachment as an active and operating force in local transition processes, can provide important information for just transition policy design. Based on our research on place attachment in Lysekil, we suggest that inclusivity in just transitions, implies acknowledging and addressing more than material aspects of loss, involving loss of direction, loss of identities and loss of imagined futures. Moreover, we argue that the vision of an inclusive transition requires a more nuanced approach to the concept of "community" which recognises different stories, voices, and perspectives and challenges taken for granted assumptions about local people's priorities in debates on just transitions. Finally, based on our experiences from Lysekil we contend that inclusivity requires communicative spaces where citizens can meet to listen, speak, and discuss future pathways towards a fossil free society. The visions of just and inclusive transitions, we argue, can only be realised if driven by a place-based dialogue on future pathways and if agendas for a fossil free transformation are locally anchored.

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1. Introduction

A rainy and windy afternoon in March 2020, we got off the bus in the city of Lysekil on the Swedish west coast. What used to be a busy railway station was now a quiet bus stop. This was the day before the Swedish Environmental Court of Appeal had called to public hearings in the city. In focus was an environmental permit that would allow Scandinavia's largest oil refinery Preemraff – located in Brofjorden some kilometres north of the city – to expand its conversion of residue oil and hereby to serve a global shipping industry with low-sulphur fuel. The trial environmental permit had stirred heated debate within the Swedish climate movement and resulted in numerous appeals. Since Preemraff's expansion entailed a doubling of the refinery's carbon dioxide emissions (Langlet 2019), it did not only undermine the government's plans of turning Sweden into the first fossil free welfare state

CONTACT Anna Bohman anna.bohman@liu.se Department of Thematic Studies: Environmental Change, Linköping University, Linköping, Sweden

(Regeringen 2019). An intensified petroleum production in Lysekil also sent signals to the world that Sweden would fail to live up to its fair share of the Paris Agreement. Therefore, the bus also carried climate activists from several civil society groups including Climate Action and Extinction Rebellion to the city.

During the following days, the streets of Lysekil were filled with people protesting with colourful banners and loudspeakers. "Keep it in the ground" was one of the slogans chanted in outrage of Preemraff's expansion plans. The police force had called in horses and helicopters to keep the protests under control, and national media broadcasted live from the city hall that had been provisionally transformed into a court room. After a couple of days of turmoil, the journalist, the activists, and the police left Lysekil. Some trampled leaflets remained on the empty square. On the surface, life in the city resumed its usual languid pace. However, local citizens were left digesting conflicting opinions in a divided city. Feelings of hope, grief, anger, and anxiety prevailed (Figure 1).

In this paper, we approach the affective registers displayed in Lysekil as an example of the situated politics of low carbon transitions. Informed by a growing scholarship on just transitions (Morena, Krause, and Stevis 2020; Wang and Lo 2021), we seek to understand how transformative climate policy agendas unfold in places where livelihoods and cultural identities are entangled with fossil fuel production systems. Previous research has suggested that justice concerns may arise not only from an unequal economic distribution of climate benefit and harm, but also from the strong social and emotional ties that communities have to places facing industrial decline (Della Bosca and Gillespie 2018; Devine-Wright 2022; Groves 2015). Human geographers and sociologists have for some time insisted that such ties are important, precisely because challenges to place can become understood as a challenge to personal identity, self-continuity, and control (Neil Adger et al. 2013; Norgaard 2011; Tschakert et al. 2017). Place-informed analyses of low carbon transitions may thus help us to better understand why some communities resist change and embrace harmful industries. More attention to people–place relations can also offer important guidance in the design of just transition policy and practice.

In the following we use "place attachment" as an analytical lens to understand the local reactions in Lysekil following the Preemraff court case and Sweden's efforts to decarbonise. Drawing upon field work in March and October 2020, we examine how change is experienced in a frontline community that exhibits strong social and generational ties to Scandinavia's largest oil refinery and the unique coastal and marine environment of Brofjorden.

Our study is guided by the following research questions:

(1) How is change experienced in the city of Lysekil? What sensibilities come to the fore in the stories told about Sweden's transition to a fossil free society?

(2) How does attachment to place shape the local dynamics of Sweden's fossil free transition?

(3) How can place attachment as analytical lens advance our understanding just transitions in Sweden and beyond?

Our paper proceeds through four parts. First, we situate our study in the burgeoning literature on just transitions and outline how we make use of place-based approaches to understand the local

Figure 1. The bus station and climate demonstrations in Lysekil, March 2020. Photos: Anna Bohman.

dynamics of decarbonisation. Second, we introduce the Swedish city of Lysekil, which is the host community for this research and a place where the petrochemical industry has become deeply entangled with everyday city life. Third, we present our field-based approach and clarify how we used focus group methodology to foreground stories of place, daily life, identity, and change during a year of climate controversy and transformative struggle. Finally, we explore how attachment to place is articulated in our focus group interviews and discuss why it is important to attend to people–place relations when researching and planning for just transitions.

2. Just transitions and the centrality of place

Just transition is a concept that has gained widespread attention in climate policy debates and academic scholarship in recent years. Following intense lobbying by the International Trade Union Federation in the years leading up the 2015 UN Climate Conference in Paris (Rosenburg 2020), "a just transition for the workforce and the creation of decent work and quality jobs" was incorporated as a normative imperative in the Paris Agreement (UN 2015). Just transition is also a central concept in the EU Green Deal, launched by the European Commission in December 2019 to make Europe the first climate neutral continent by 2050 (EC 2019). Responding to critique from coal-dependent member states in Central and Eastern Europe (Biedenkopf 2021), the European Commission recognised that the transition to climate neutrality can only succeed if it is inclusive and just. To ensure that "no one or no place is left behind" in the shift away from fossil fuels, the EU Green Deal thus includes a Just Transition Mechanism that supports European regions, industries, and workers that are struggling to decarbonise (EC 2019).

In academic debate, the just transition concept has been picked up by environmental justice scholars to examine who lives with the side effects of fossil fuel extraction, generation, and production, and who will bear the social costs of decarbonisation policies (Newell and Mulvaney 2013; Sovacool 2021). Since the burdens associated with low carbon transitions often intersect with existing geographical patterns of socio-economic inequality (Garvey et al. 2022), work in this field has suggested that climate policies should be designed to support, rather than threaten, the social groups and frontline communities whose livelihoods are directly dependent on the fossil fuel economy (Morena, Krause, and Stevis 2020). To-date, much of this debate has focused on the loss of jobs and livelihoods in fossil fuel-intensive regions and the need for social protection programmes and job retraining for displaced fossil fuel workers (Bazilian et al. 2021). Given the unequal socio-economic distribution of climate benefits and harms, just transitions have here been construed as a matter of redistribution.

However, as illustrated by a growing number of studies (e.g. Della Bosca and Gillespie 2018; Groves 2015; Sayan 2019), decarbonisation policies can also bring about loss of more intangible assets such as sense of place, social cohesion, community identity and long-held sensibilities. Just as a changing climate may lead to loss of valued landscapes, habitats, and cultural practices that give people meaning in their daily lives (Neil Adger et al. 2013; Norgaard 2011; Tschakert et al. 2021), the transition away from fossil fuels can challenge the social, ecological, and cultural fabric of places dependent upon extractive industries (Devine-Wright 2022). Attending to the complex ways in which fossil fuel production systems become entangled with communal place-meanings extends the just transition debate beyond economic support to laid-off fossil-fuel workers (Bazilian et al. 2021). Numerous scholars have insisted that just transitions to climate neutrality also require that we recognise and listen to communities that have embraced fossil fuel industries as a part of their collective sense of self (Della Bosca and Gillespie 2018; Garvey et al. 2022; Mayer 2018).

Place is a fruitful analytical category that can help us to disentangle these cultural dimensions of just transitions. Drawing upon long-standing work across disciplines such anthropology, sociology, and human geography (Lewicka 2011; Norgaard 2011; Scannell and Gifford 2010), we here understand place as something more than a mere location in space with associated geographical coordinates and material features. As suggested by Tschakert et al. (2017, 6), place is also a way of seeing,

knowing, and understanding the world that gives meaning to peoples' daily lives and contributes to well-being. Place is therefore personal and subjective, as well as cultural and social. Informed by a constructivist ontology, we also think of place as relational and constantly in the making; materially, socially, culturally, and emotionally (Massey 1994). During our daily lives we live amid these relational processes, and as we do so place attachment occurs (Manzo and Devine-Wright 2014).

Place attachment has been defined as "the level of connection that individuals have with the people and environments where they live" (Altman and Low 1992; Neil Adger et al. 2013, 113; Scannel and Gifford 2010). It can be articulated through a sense of (self)-continuity, pride, security, and belonging and manifested by place-based networks of relationships between people, ecology, and industry (Norgaard 2011). Place attachment may also manifest as regional identity and community trust which can be either of bridging or bonding nature (Lewicka 2011; Mihaylov and Perkins 2014). Previous research has, for instance, shown how people who are attached to neighbourhoods with high crime rates tend to perceive them as safer than someone who has no emotional, physical, cultural, or social relationship with the place (Brown, Perkins, and Brown 2003; Lewicka 2011). Similarly, people who are attached to their city tend to perceive it as more pleasant and less polluted than someone without an established relationship to the area (Félonneau 2004; Lewicka 2011).

In this paper we advance place attachment as analytical lens to interpret and understand community responses to low carbon transitions. By attending to the affective bonds between people and the places where they live, we seek to make sense of feelings of loss and disorientation displayed in the city during this year of political turmoil and change. Previous research has suggested that industrial decarbonisation projects can lead to a sense of threat among impacted host communities and disrupt place-based meanings and identities (Devine-Wright 2022; Groves 2015). While place attachment can trigger both pro-environmental and anti-environmental behaviour (Carrus et al. 2014), the common denominator is a desire to protect one's community from harm and maintain the positive social, cultural, and environmental features of a place (Sayan 2019).

Neil Adger et al. (2013, 113) remind us that there are seldom any effective substitutions or economic compensations for lost sites of significance. When attending to the cultural dimensions of just transitions we therefore need to adopt, in the words of Tschakert et al. (2017, 3) "a distinctly situated perspective that foregrounds loss in the dynamic, multidirectional, and often contradictory values people hold, and their relationships with the people and places they live in, the meaning they derive from these relationships". The governance challenge is to design just transition policy that is attuned to these relationships and enhances rather than threatens "place-related continuity, distinctiveness, self-efficacy and self-esteem" (Devine-Wright and Howes 2010, 437).

3. Lysekil: a small coastal settlement with a large industrial heritage

The city of Lysekil, with approximately 14,000 inhabitants, is located on a peninsula in the Gullmarsfjord on the west coast of Sweden. Known for its red granite rocks and unique marine life, Lysekil has for long been an attractive tourist destination and bathing resort for the Swedish upper class (Fredh 2015). Historically, the city has also functioned as a strategic harbour for shipping and international trade. In the 19th and 20th centuries, Lysekil hosted a large-scale processing industry for fish products, including canneries. The city also manufactured engines for an expanding fishing fleet and exported granite rocks to an international market (Fredh 2015). Today the fishing industry continues in a vastly reduced scale, and the canneries, the stone masonries, and the engine halls are all closed.

Dominating the current industrial life of the city is Preemraff, an oil refinery which employs around 600 people in Lysekil and surrounding region (Preem 2022). The establishment of the refinery was propelled by concerns for energy security in a time of international economic and political instability during the 1970s. The Swedish Oil Cooperative (OK) had for some time lobbied the national government for a permission to build a consumer-owned plant that would reduce the market dominance of international oil companies and secure a steady supply of fossil fuels to Swedish farmers, fishermen, and car owners (OK 2022). In the late 1960s, OK identified Brofjorden

– a deep-sea fjord a couple of kilometres north of Lysekil – as a possible location for their plant. Given its deep-sea waters and stable granite rocks, Brofjorden was seen as an ideal site for oil processing, shipping, and storage (Fredh 2015).

The building of OK's oil refinery in Lysekil – originally named Scanraff – was one of the largest industrial endeavours in western Sweden during the post-II World War era. In the decades following the war, rural areas experienced population decline as people moved into bigger cities. The establishment of Scanraff broke this trend and attracted workers from afar to the region (Fredh 2015). The construction work began in October 1971 and involved the building of a deep seaport, multiple on-ground processing units, underground oil storage areas and two 140-meter-high chimneys. To counter protests from nearby houseowners, concerted efforts were made to let the refinery melt into the landscape and hereby create "an ecological balance between industry and nature" (Fredh 2015, 23, our translation). New roads were built to facilitate the transport of materials and two new schools were established in Lysekil to serve the families of incoming Italian and North American workers. As argued by the local city planner Nils Halla at the time, "we have customized Lysekil's urban plan to accommodate OK" (Fredh 2015, 9, our translation). In May 1975 the refinery in Lysekil was officially inaugurated by Swedish King Carl XVI Gustav. The event was widely attended by local and national government and celebrated as an important step towards Swedish oil independence and energy security.

Fifty years later, the industry and the city are deeply intertwined in a technical–material–cultural symbiosis. Although the refinery today is owned by Saudi sheik Mohammed H. Al Amoudi and belongs to the larger petroleum company Preem, it remains closely tied to Lysekil and its inhabitants. Every year 1500 oil tankers pass through Brofjorden and transport refined petroleum products to Swedish and international markets (Preem 2022). Surplus heat from the oil processing is piped throughout the city's district heating system and keeps the homes of Lysekil warm during the cold and windy winter season. When Preemraff in December 2016 applied for an environmental permit to expand its operations through a project labelled ROCC (Residue Oil Conversion Complex), the local reactions were therefore largely positive. The ROCC project was presented as a response to the International Maritime Organization's decision to ban high-sulphur shipping fuel and entailed the building of a cracker that would allow the refinery to convert sulphur-rich residue oil into low-sulphur diesel and gasoline (Langlet 2019). The project involved a 15 billion SEK investment that was estimated to give employment to 2000 construction workers over a 2-year period and result in 200 new long-term jobs at the refinery (Lysekilsposten 2017).

In the local city council, politicians from the left to the right openly celebrated the number of jobs promised by the industry. However, local environmental activist groups contested the ROCC project and questioned whether it was compatible with the Swedish climate policy goal of reaching net-zero emissions of greenhouse gases by 2045 (Naturskyddsföreningen 2021). Already in 2018 Preemraff was the third largest Swedish point source of carbon dioxide with annual emissions of 1.7 million tons (Naturvårdsverket 2023). With the ROCC-project in place the emissions were estimated to increase to 3.4 million tons per year, turning Preemraff into the largest industrial emitter in Sweden (Langlet 2019). In November 2018 the Swedish Society for Nature Conservation sent a formal appeal to the Swedish Environmental Court of Appeal, and in June 2019 the court decided to recall the provisional environmental permit granted to the refinery. In early March 2020 the involved parties were invited to court negotiations in Lysekil.

4. Method and material: interacting with the field

This study rests upon three sources of primary material: (1) five field visits to Lysekil during the period April 2019 to October 2020, (2) participant observations during the Environmental Court of Appeal's public hearings in Lysekil in March 2020, and (3) four focus group interviews carried out in Lysekil in October 2020. During our field trips we visited the Preemraff production site, held informal meetings with industry representatives and public officials in the city council, and engaged in conversation

with local environmental activists and scientists at the nearby marine research station Kristineberg. In March 2020 we also participated in a planning meeting held by incoming climate activists from Extinction Rebellion, Climate Action and the Swedish Society for Nature Protection, and attended the street demonstrations that unfolded outside the city hall. We also interacted with local citizens who observed the protests and court hearings from the streets of Lysekil. While we recorded our observations through field notes, we did not make this material subject to systematic content analysis. Rather, our field observations were used to contextualise our interview findings, engage with cultural nuances, and build rapport (Schrock 2013).

In October 2020 we returned to the city to carry out interviews with local citizen groups. We opted for semi-structured focus groups (Wibeck 2010) as a suitable method since the group format would allow us to observe how meaning is created in interaction between participants (Kitzinger 1994). As a first step, we mapped potential networks in Lysekil with the aim of reaching different citizen groups and thus multiply perspectives. The recruitment of participants was facilitated by contacts made during our field visits and a research assistant living in Lysekil, using snowball and convenience sampling (Parker, Scott, and Geddes 2019). The recruitment process coincided with the massive environmental campaigning following the Preemraff court case. In early September 2020 the Greenpeace ship Rainbow Warrior blocked the inlet to Brofjorden, an event that attracted widespread media attention. Later the same month, Preemraff announced that it would cancel its expansion plans and redirect its operations towards renewable fuel production (Preem 2020). This decision created confusion and uncertainty in the city and affected both the willingness to participate in our interviews and the dynamics of the group discussions.

In total, we ended up with four focus groups (listed in Table 1). These included refinery workers, local environmental activists, and staff from the city's energy and water utility. As industrial work tends to be male dominated, we also gathered a group of women living in Lysekil. Since the project involves human research participants it was reviewed by the Swedish Ethical Review Authority. Our respondents received detailed information about the project prior to the interviews and gave their consent in written form.[1] Due to the project's ethics approval, we were not allowed to involve young people under the age of 18 in our discussions. Hence, the perspectives of youth are missing in our material. Since the focus groups were conducted during the COVID 19 pandemic, the number of participants was also restricted. Due to symptoms of illness, the groups ended up with uneven numbers.

The interview discussions were moderated by two research team members who invited the participants to reflect on seven thematic topics:

(1) Free associations when you hear the name of your hometown, Lysekil
(2) Free associations over the history of Lysekil
(3) What would you like Lysekil to look like in 2045?
(4) What does the "transition"[2] concept mean to you?
(5) What does a fossil free transition make you think of?
(6) What comes to your mind when you hear inclusive and just transition?
(7) What do you think of the future? What is the role of Lysekil in a fossil free society?

The focus groups lasted between 1 and 1.5 h. They were recorded with permission from the participants and thereafter transcribed verbatim. Transcriptions were subject to inductive and reflexive thematic analysis (Braun and Clarke 2019). Hence, rather than searching for pre-existing themes in the data, our coding scheme was developed and refined through an iterative process (Braun et al.

Table 1. Focus group interviews in Lysekil, October 2020.

Group 1	Three women of mixed ages; no previous relation.
Group 2	Two men working at Preemraff.
Group 3	Three women and one man employed at the local energy and water utility.
Group 4	Four men and two women engaged in the Swedish Society for Nature Conservation (SSNC) and Fridays for Future Lysekil.

2019). First, we read the transcripts several times to get familiarised and "immersed" in the data. As a second step, recurring themes were identified across the four groups. In this analytical process, place attachment appeared as an important thematic explainer of the stories told by the informants. In the final round of analysis, we therefore traced how the focus group participants articulate their relationships to place and how place-attachment feeds into their understandings of the Preemraff court case and Sweden's transition to a fossil free society. The analysis was undertaken in Swedish and later translated into English.

5. Transition localised: stories of change and place in Lysekil

This section presents attachments to place that came to the fore in our focus group discussions and how these are linked to expressions of belonging, cultural identity, and community capacity to navigate uncertain futures.

5.1. Our city versus the occupied city – place attachment and the us who remain

The sea, the cliffs, and the wind were key reference points when participants were asked to associate freely about their hometown. Tales about the natural beauty of the coastal environment were coloured by feelings of pride, as well as elements of local patriotism and regionalism. Here, place attachment was articulated through an affection for the natural environment and the pristine coastal and marine landscape.

Tourism belongs to this storied sense of place and was presented as a local economy that brings a dual character to the city. Lysekil is one place in the summer and another in the winter (FG 1, 3), we were told. Some participants even spoke about the city as "occupied" by tourists during the summer season. When entering the city centre in summertime, one participant explained, it feels like "someone has taken over … " and "it is hysteric, the city is transformed beyond recognition" (FG 1). However, when the tourist season is over, "it is our city again" (FG 3). Here, place attachment was manifested as a division between "those who come and go" versus an "us who remain", a tension shared with many rural tourist destinations. Interestingly, for some Preemraff enters into this narrative as "one of us". For many citizens of Lysekil, Preemraff is much more than a workplace. Fifty years after its construction, the refinery has become so entangled with place and worker identities, we were told, that it is "in their blood" (FG 3). In contrast to the city's incoming tourists and summer residents, the refinery symbolises continuity, economic stability, and a sense of belonging across seasons. This weaving together of industry, place and communal identity explains why a threat to Preemraff's expansion plans came across as a threat to the community of Lysekil in year 2020. In this light the national climate politics appeared as a project for "those that come and go" whereas trust was put in Preemraff, which leads the way through turbulent and uncertain times (FG 2 and 3) and stands s with us that remain.

5.2. Celebrating and mourning an industrial past

In our material, Lysekil is marked by a pronounced sense of the past. When the focus group participants talked about their city, they made spontaneous references to Lysekil's industrial history. Stories were shared about the good old days when Lysekil hosted a thriving fishing and canning industry, produced engines for the fishing fleet in the North Sea and exported granite rocks from local stone masonries. Informants pointed to relics of the industrial heritage that are still visible in the cityscape. Empty and deserted factory buildings were described as "a sad memory of a time that has passed" (FG 1). While we were told nostalgic stories of a city filled with life and prospects, Lysekil was in year 2020 described as a place in "stagnation" and "decline" (FG 1, 3).

The city's altered character of place invoked a sense of vulnerability and loss amongst the focus group participations. Loss was both expressed in view of Lysekil's industrial decline over the past

half-century and the disruption of collective meaning, purpose, and direction. In this context, Preemraff featured as a symbolic link to the city's industrial past and the continued processing and shipping of oil in Brofjorden as a way of maintaining security and continuity of place.

5.3. Making community in a small city

The advantages and disadvantages of life in a small city was a central topic in the group discussions. A small coastal settlement like Lysekil, it was argued, creates a strong sense of community and togetherness. However, emotional attachments to place can also result in social control and silence voices that challenge collective habits and expectations (FG 1, 3, 4). Some participants told us that they hesitated to openly share their views on Preemraff's expansion plans. "One doesn´t dare to say anything if one is not positive to the expansion" (FG 1), argued one of the participants. Since Lysekil is such a small city "there is always a neighbour or a family member who is dependent on the refinery" (FG 1). Participants explained that the Preemraff court case caused polarisation in the city (FG 1). "Especially, during the demonstrations (in March 2020) there was a lot of talk, and it was very infected" (FG 1).

Some focus group participants expressed solidarity with friends, family members and neighbours who feared losing their jobs and income when the refinery's environmental permit was subject to appeal. Although they worried about climate change and the environmental effects of continued fossil fuel burning, strong community ties made it difficult to question the refinery's continued operations in Brofjorden. "Even those who are usually in favour of a transformation, people who are interested in the environment, are pro (the expansion) in this case" (FG 1). Hence, efforts to maintain the character of Lysekil as a place complicated the imagining of community life in a fossil free society. Participants argued that in Lysekil more generally there was little motivation to prepare for or even discuss what the city could be like without the petrochemical industry. Efforts to protect the continuity of Lysekil as a place seemed to erode community willingness and capacity to deal with transformative social change.

5.4. Imagining a future without fossil fuels

During the interviews, participants were invited to share their hopes and dreams for the future of Lysekil and its community. They were also asked to reflect on what they think are realistic trajectories for the city. These two aspects of the future were hard to disentangle in the focus groups. Discussions mainly revolved around the possibility of making a living in the city. The future of Lysekil was conditional on "what (livelihood) opportunities that are offered" (FG 2). The economic opportunities of a fossil free transition were hard to discern for some. "If there is no profit involved there´s no point in it" (FG 2), argued one participant, and insisted that the shift away from fossil fuels "must pay back somehow" (FG 2). Ambitious climate policy was here associated with economic loss and giving up on consumption, mobility, and material welfare. "We will have to sacrifice something … something we will have to sacrifice" (FG 2), we were told. In this discussion, transformative agency was placed in the hands of others.

For some, the concept of the fossil free society evoked uneasiness and doubt. Participants raised questions such as "what alternatives do we have and what consequences would they bring? Should we expand nuclear energy instead?" (FG 1). There was confusion over the meaning of transition and/or transformation, with some asking; "what are we trying to achieve?" and "where are we heading?" (FG 2). One of the participants likened the future to a fog, invoking feelings of uncertainty and disorientation. The lack of direction and a clear vision of what Lysekil is transitioning to, made this fog difficult to navigate. Others spoke about the city's remote geographical location "at the end of the road on a peninsula" (FG 2, 4) as an important source of community vulnerability, and worried that Lysekil would be forgotten or disconnected in a fossil free future.

In parallel to the sense of vulnerability and insecurity generated by Sweden's industrial decarbonisation, some were also inspired by the idea of transformation and used the group discussion as an opportunity to imagine hopeful futures for Lysekil and its communities. Preemraff's unexpected decision to cancel the ROCC project and invest in renewable fuel production prompted reflections about the refinery as a possible pioneer or leader in the fossil free transition. Others imagined the city of Lysekil as a transformative frontrunner without the refinery. "If we handle this right, we could become a good example, a role model … " (FG 4). "Maybe … we can become a place on the map. We could lead the transformation" (FG 3). The city's location by the North Sea was central to this transformative story. Some participants envisioned a future where Lysekil is a hub for marine research, education, and commerce. Sustainable aquaculture, like mussel and algae production, could offer new economic opportunities for the city and form the ground for a "blue economy". Others dreamed of a marine reserve that would protect the Gullmardfjord's unique marine ecology and attract sustainable tourism.

In this discussion we observed the cautious bringing together of desired futures that can enhance, rather than threaten, the participants' attachment to place. Given the local tensions generated by the Preemraff court case, the focus groups offered a safe space where the participants were allowed to jointly explore new ideas and identify alternative futures for the city. Towards the end of the discussion, some participants also shared their reflections upon the interview and expressed how they had enjoyed learning from each other and seeing Lysekil from new perspectives. By inviting participants to share stories of loss, disorientation, and hope, the group discussions created a communicative space where new attachments to place could be explored and debated.

6. Concluding discussion

In this paper we set out to explore how deep decarbonisation policies unfold in places where livelihoods and cultural identities are entangled with fossil fuel production systems. Speaking to an expanding scholarship on just transitions, we advanced a place-informed analysis that is sensitive to the social and emotional ties that communities have to the places where they live.

Sweden may not come across as the typical site for this kind of work. In academic debates, Sweden is often portrayed as a progressive green state and a frontrunner in the transition to a low carbon and sustainable society (Bäckstrand and Kronsell 2015). The political ambition to transform Sweden into the first fossil free welfare state taps into this legacy and has over the past years been embedded in a positive narrative of green jobs, industrial competitiveness, and sustainable welfare (Brodén Gyberg and Lövbrand 2022). Nonetheless, Sweden struggles to bring emissions down at a rate that is compatible with the Paris Agreement (Anderson, Broderick, and Stoddard 2020) and domestic critique of the country's climate policy agenda has in recent years been voiced from the political left and right.

Lysekil is a Swedish city where these transformative tensions come to the fore. Drawing upon field work during a year of political turmoil in the city, we have here traced how a frontline community with strong generational ties to Scandinavia's largest oil refinery responds to Sweden's transformative ambitions. By using place attachment as analytical lens, we have learned that there is more than jobs and economic livelihoods at stake in the transition away from fossil fuels. Decarbonisation policies are also challenging the continuity of Lysekil as a place and remaking its social, ecological, and cultural fabric. The Preemraff court case gave us an entry into storied sense of pride, community, and belonging generated by the city's industrial past, as well as feelings of disorientation and uncertainty evoked by the idea of the fossil free society. In line with previous place-based studies of energy and industry transitions (Della Bosca and Gillespie 2018; Devine-Wright 2022; Groves 2015), we found that Sweden's decarbonisation policies are unsettling people–place relations in this coastal city and the individual and collective attachments that sustain them.

From these findings we draw three conclusions of relevance for just transition policy and planning. First while job retraining programmes and social protection schemes can compensate for

the economic fallout of decarbonisation (Garvey et al. 2022), they will not attend to the loss of identity, security and direction that may follow an altered sense of place. From this follows that, a politics for just transitions must move beyond a mere economic problem representation and embrace aspects of culture and identity as critical components of an inclusive and place enhancing politics and governance.

Second, our study alerts us to the social bonding dynamics (Lewicka 2011) in smaller cities and the conformism that may follow efforts to maintain the continuity of place. Several of our focus group participants recounted how they hesitated to publicly voice concerns over Preemraff's expansion plans not to risk offending family and friends with strong ties to the industry. These findings illustrate how the solidarity and care implied in all attachments (Groves 2015) can have silencing effects that restrict the possibility of community members to participate in the renegotiation of their collective futures. Although human geographers for long have insisted that we approach people–place relations as dynamic and constantly in the making (Massey 1994), we see a risk that just transition policy rests upon a narrow and overly static understanding of the "communities" facing industrial decline. To ensure that transition processes do not reproduce existing patterns of socio-economic inequality (Garvey et al. 2022), we argue that inclusive transitions must move beyond the idea that frontline communities speak with one voice and be attentive to difference even where it may not be immediately apparent.

Third; the visions of just and inclusive transitions, we argue, can only be realised if driven by a place-based dialogue on future pathways and if agendas for a fossil free transition are locally anchored. Our study underscores to the importance of enabling dialogue where affected communities are invited to articulate what is at stake in decarbonisation processes and to participate in the remaking of the places they call home. Deliberative theorists have for long highlighted the power of democratic communication to cultivate mutual understanding, empathy, and trust in view of complex and conflict-ridden socio-ecological challenges (Smith 2003). Responsive democratic politics requires that the politically disenfranchised are given voice and presence in decision-processes, and that those in power are ready to listen and recognise what they hear (Dobson 2014). Whereas just transition research and policy emphasise the importance of public engagement and social dialogue (Krawchenko and Gordon 2021) current collaborative efforts in Sweden largely focus on state-industry relations (Lövbrand et al. 2023).

The Citizen Assemblies that have been set up in Ireland, France and in the UK provide examples of attempts to institutionalise participatory procedures for just transitions.[3] The Taranaki 2050 Roadmap is the result of an another engagement process in New Zealand that invited wide-ranging stakeholder dialogue on how a fossil-fuel dependent region can transition to a low-carbon economy.[4] More place-based dialogue of this kind will not do away with the tensions and conflicts engendered by the transition to climate neutrality. Deep decarbonisation policies are disruptive and risk eroding the social, cultural, and emotional bonds between fossil-fuel dependent places and their communities. However, we suggest that more democratic dialogue is a necessary starting point for such places to heal, repair, and imagine new beginnings (Miller 2020). In this study we found that the careful forging together of alternative futures begins with the creation of communicative spaces where multiple stories of loss, grief, hope and possibility can be articulated and shared. The collective meaning-making that took place in our focus group discussions allowed the participants to recognise that places embed memories, but also hope (Castan-Broto et al. 2010). While the connections between the people and coastal environments of Brofjorden embed the memories of a carbon-intensive period in Sweden's industrial history, they can also change and be imagined anew.

Notes

1. Swedish Ethical Review Authority Dnr 2020-01118.
2. We are aware of the conceptual distinctions between "transformation" and "transition" (see Linnér and Wibeck 2019) and the possible implications of using one or the other concept. In Swedish language there is no linguistic

distinction made between the two terms. "Omställning" is a word that can be used both in reference to transformation and transition. Hence in the interviews we made no distinction between the two terms, but left this open to participants.

3. For an overview of the Irish, French and UK Assemblies see Duvic-Paoli, L.-A. 2022. "Re-Imagining the Making of Climate Law and Policy in Citizens' Assemblies." *Transnational Environmental Law* 11 (2): 235–261.
4. https://www.taranaki.co.nz/assets/Uploads/Like-No-Other/Taranaki-2050-Roadmap.pdf.

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