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Theorising resistance in times of fossil fuels: Ecological grief, righteous anger and interaction rituals in Sweden's energy regime shift

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ABSTRACT

The emerging shift from fossil fuels to renewable energy engages a broad spectrum of society. Through protests, social media campaigns and civil unrest, different groups seek to impact the speed, direction and distributional effects of this transformation. In this paper, we develop a conceptualisation of how such resistance is socially mobilised. We ask how people come to resort to open resistance in the context of energy regime dynamics. The growing literature on the topic highlights that declining material and social capital are not enough to understand resistance in times of fossil fuels. We suggest in this study that attention to a wider spectrum of emotions is crucial for understanding the political and ethical contestations through which changes in energy provision materialize. We draw upon sociological theory, in particular the notion of interaction rituals, to understand the social and affective process of resistance. The concept of interaction rituals captures the movement from feeling aggrieved to mobilisation of resistance through attention to the sharing and transformation of emotions. We apply our theorisation in two Swedish examples of contemporary resistance – the Forest Rebellion and the Petrol Protest – to illustrate the grievances that underpin these movements, and how interaction rituals mobilise and justify resistance. We end the paper with a discussion and comparison of the two examples, and the implications of our findings for (academic) knowledge about the role of resistance in relation to energy regimes.

1. Introduction

History teaches that shifts in energy use and supply are accompanied with social unrest, riots, and conflicts [1]. A classic example is the Industrial Revolution, when the shift from reliance on living biomass to the use fossil fuels as the main source of energy tipped the balance of power between the landed gentry and the emerging economic elite of merchants, entrepreneurs and manufacturers in favour of the latter. This power shift imbued cultures with new moral values about family, work, government and nature [2]. Complex questions of causality aside,[1] the example of the Industrial Revolution illustrates how shifts in energy use change social power and life chances for different social groups. The co-occurrence of shifts in energy supply and social power, in turn, shake up culture, including e.g. status positions, roles, and the self-identity of groups [6].

Changes in energy provision and social power are known as 'sustainability transitions', 'sustainability transformations', 'energy transitions', or 'regime shifts' and are a subject of academic study in their own right [7]. In this paper, we use the term 'energy regimes' [8] to refer to the social and ecological structures that maintain ways of using energy, and 'regime shifts' to refer to the moments when these regimes change and become based on new energy sources. With the destabilisation of the biosphere through the use of fossil fuels, societies are on the verge of another regime shift. This time, it is a shift *away* from fossil fuels, but just like previous energy transitions, it is fraught with anxiety and contention.

Conflicts arise particularly when groups have different views about the goals of regime shifts, how they should be organised, and how costs

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[1] The transition from societies based on energy from living biomass to societies based on fossil fuels has been the subject of book-length debate [3]. A prominent question in this debate concerns the relationship between moral values and energy use, in particular, whether it is changes in values that facilitate changes in energy use, or vice versa [4]. Other questions relate to the permanence and universality of these shifts. What can be said with some certainty is that energy regime shifts involve interrelated changes in how people experience and relate to nature, to other people, and to their own impulses and emotions [5].

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and benefits should be distributed [9]. Groups that feel they are losing out in the shift may try to resist change [10–12], or co-opt the new opportunities that emerge [13]. These groups may be motivated by a desire to maintain power balances, fear of economic loss and downward social mobility [14]. In contrast, groups experiencing powerlessness and loss under the current energy regime may seek to propel change [15], for example through legal action against powerful actors [16], or various forms of resistance [12,17].

The growing literature on resistance in the context of energy regimes has documented movements and groups that seek to accelerate or block the shift to renewable energy provision. While some groups are resisting the inertia of contemporary social organisations and leadership to make changes towards environmental sustainability [12,18,19], other groups are mobilising resistance against a large-scale shift in energy supply, instead favouring the status quo through energy policies [20]. We have constructed an ideal-typical distinction of the main differences that can be observed between these two types of resistance in relation to energy regimes and shifts as described in the academic literature. The two types of resistance presented in the table navigate the contextuality and ambiguity of social reality by analytically exaggerating key features [21,22].

As can be seen in the table, the empirical observations include resistances against a fossil fuel regime and against its planned shift to other energy sources. On the one hand, movements such as Extinction Rebellion, the degrowth movement, Fridays for Future and the various pipeline protests around the world are resisting a fossil fuel-based energy regime, that they see involves the exploitation of nature, social inequality, mass consumption, and the favouring of the political and economic elites who benefit from the current situation. These movements have been associated with a 'cosmopolitan tradition' [32] and global values such as international solidarity and environmental justice [33,34]. On the other hand, movements such as the Yellow Vests, rally people around a shared concern and dissatisfaction with price increases and green taxes, as well as a distrust of political or academic elites who argue for attention to ecological, global and non-human concerns [28]. Opposing the political salience and privileging of such issues over more local concerns, these groups portray elites as responsible for their economic and social loss [35].

A next step in analysing and understanding of resistance in relation to energy regime dynamics is to explain its emergence, i.e. how and why these forms emerge and persist over time. To date, the literature highlights a number of causal conditions, including: people's perceptions, beliefs, trust, and attitudes towards, inter alia, institutions, technologies and fairness [36–38]; narratives [39,40]; income levels, previous experience of protest and political efficacy [41]; and dispossession [42].

In reviewing this work, scholars note that much of it is of a descriptive nature [43], and aims to identify antecedent causal conditions [37,41]. More effort can be made to explain the process by which people move from hidden to open resistance [42] and how social interaction shapes the construction of, for example, attitudes, perceptions, ideas, or narratives that are associated with forms of resistance [44].

In line with these remarks the purpose of this paper is to advance academic and social debates on the role of resistance in times of fossil fuels, by theorising the social process through which different forms of resistance – against the current energy regime and against the emerging energy regime shift – are mobilised. While antecedent causal conditions, such as (perceived) material injustices and inequalities are likely to trigger discontent, they do not in themselves explain why people begin to actively resist, or the process through which resistance is mobilised [45]. On the contrary, inequality, especially in meritocratic societies [46], can generate demobilising feelings such as shame or guilt [47], leading to cynicism and/or resignation [48]. In order to resist, rather than to resign, people often need to "*suppress self-defeating feelings and instead propose new, assertive emotions as appropriate for their members and the general public*" [47: 24]. To understand how people move from feelings of discontent to open resistance, scholars therefore suggest zooming in on the process through which resistance is mobilised [47,49].

In this paper, we take as our starting point an argument put forward by Salmela and von Scheve [50], who distinguish between left-wing and right-wing populist movements in terms of how emotions are felt and can contribute to mobilising resistance. They claim that in right-wing movements, grievances about the loss of a certain lifestyle, standard of living, social status and reputation are transformed into anger through the repression of shame, and resentment towards various out-groups [50: 82]. In contrast, in left-wing movements the emotional experience of grievance is more openly communicated, allowing people to acknowledge humiliation and hurt which helps them to bond with others who share similar experiences. As we will see in the following sections, our study grants support for Salmela and von Scheve's premise, but we also observe differences in how members of movements interact and come to not only articulate but also *share* emotions and grievances.

The importance of sharing, interpreting and managing emotions for collective action is a key insight from theories on *interaction rituals* as introduced by Erving Goffman [51] and developed by Randall Collins [52,53]. We use and illustrate the concept of interaction ritual to understand the mobilisation of resistance in two Swedish resistance movements: the Forest Rebellion and the Petrol Protest. These groups were chosen to represent the typology of resistance against: (1) the fossil fuel energy regime and (2) the emerging shift from fossil fuels to renewable energy (see Table 1). The Forest Rebellion is an example of resistance against the fossil fuel energy regime. This movement resists what they perceive as the failure of the Swedish government to prevent further degradation and destabilisation of the biosphere and indigenous communities. The Petrol Protest is an example of resistance mobilised

Table 1
Two types of resistance in times of fossil fuel.

	Against a fossil fuel energy regime	Against a fossil fuel regime shift
Grievances	Environmental losses and declining human wellbeing, especially for future generations.	Economic losses and declining social power.
Concerns	The failure of societies, governments and companies to structurally address the environmental crises and social inequalities.	The failure of governments to recognise and address the loss of welfare, status, and political influence that low- and middle-class groups experience in relation to energy regime shifts.
Resisting what?	Growth of production and consumption; mass production; over-exploitation; the inequality in terms of economic, social and cultural capital that characterises current energy regimes.	Loss of economic, social or cultural capital due to government policies; relative deprivation; downward social mobility.
World view	Ecocentric (*vox naturae*).	Anthropocentric (*vox populi*).
Opponents	The system of capitalism that requires perpetual economic growth.	Political, cultural and scientific elites.
Constituency	'Powerless' groups, including: young people; indigenous communities; non-human others.	Self-proclaimed 'ordinary', 'local' 'real' or 'normal people'
Political orientation	Left-wing political parties.	Right-wing political parties.
Examples in the literature	Fridays-for-future [23]; Pipeline protests [24]; People's Climate Movement [25]; Fossil Gas Trap [26]; Degrowth movement [27]; Extinction Rebellion [17]; Urgenda [16]; see [12] for a review of examples.	Yellow vests movement [28,29]; farmers' protests [30]; pro-diesel demonstrations in Germany and Belgium [9,30]; the 2022 Freedom Convoy in Canada [31]; see [18] for a review of examples.

against a rapid shift to renewable energy, which they associate with a loss of wealth, status, and political influence. Our use of these examples is illustrative and not intended as representative case studies. Rather, our analysis of the Forest Rebellion and the Petrol Protest is a way of exploring and developing our theoretical argument about the role of resistance in relation to energy regime dynamics.

Methodologically, we rely on the written and spoken articulation of resistance and emotions by a key spokesperson from each of the two groups, as well as online interactions between ordinary members. The two spokespersons were chosen as key subjects because of their prominent appearances in various media channels, both in written articles and in video and radio interviews.

The paper proceeds as follows. First, we outline our theorisation of resistance as a social process that takes place through interaction rituals. Second, we apply the concept of interaction rituals to the Forest Rebellion and the Petrol Protest, to illustrate how emotions such as grief and anger can mobilise resistance. We also discuss the differences between the two movements, highlighting the importance of a shared focus of attention and forms of organisation that allow members to collectively transform demobilising emotions into more focused ones. We conclude the paper by considering the broader implications of an attention to emotions and interaction rituals in energy research and social science.

2. Resistance as social process

Existing theorisations of resistance in the context of energy regime dynamics tend to focus on people's attitudes and perceptions [18,36–38], as well as the structures and systems that constrain and/or enable resistance [54]. What is still lacking is an understanding of the social process by which people come to resist. In this section, we focus on the affective aspects of this process, developing a conceptualisation of how people move from individual experiences of grief, anger and other emotions to open, collective resistance – and the importance of social interaction in this process [55]. We do this by bringing together sociological literature on grievances – experiences of loss or bereavement [56] – with the concept of interaction rituals [52]. We argue that interaction rituals facilitate insight into the process by which open resistance becomes manifest.

2.1. Grievances

Resistance against the current fossil fuel-based energy regime, as well as resistance against a shift to renewable energy, is often explained in terms of grievances. Whether the resistance comes from groups that depend upon fossil fuel-based industries, such as coalminers, car mechanics and farmers [57], or groups such as Extinction Rebellion that seek to overthrow fossil fuel regimes [17], grievances are a key motivator. Grievances relate not only to the pain of experiencing financial loss, or missing out on opportunities for economic advancement, but also to the lack of social recognition and political voice. To understand how grievances can mobilise resistance, we consider in this section sociological approaches to the study of power, social change, emotions and social movements [58,59].

Moore [56: 15–44] usefully suggests that people may experience grievances in relation to three types of social interdependence: authority (who leads, who follows); the division of labour (who does what work, when, and how); and the distribution of goods and services (who gets what). The differences between these types of social interdependence, the corresponding grievances, and the sense of justice they evoke are schematically shown in Table 2.

Different groups that are interdependent - through authority, the division of labour, and the distribution of goods and services - tend to develop explicit and implicit understandings of their mutual obligations and justice. These formal and informal obligations have long been likened to a 'social contract', important for avoiding insecurity and the risk of conflict in societies [63]. People monitor ('sense') the fairness of how these social interdependences are organised is through constant (mostly unconscious) evaluation and comparison [64]. When they compare themselves with others around them, as well as compare their own past, present, and future life chances, they may react to differences in the level of freedom groups enjoy, their different contributions to public and social welfare, and different levels of social equality. It is through these habitual comparisons that grievances may arise.

Table 2
How different types of social interdependence[a] correspond to grievances and different aspects of justice based on Moore's conceptualisation [56]; see also: [60–62].

Social interdependency	Concern	Grievance	Sense of justice
Authority	Who leads; who follows?	Loss of influence and freedom	Procedural justice
Division of labour	Who does what work, when, and how?	Loss of status	Contributive justice
Distribution of goods and services	Who gets what?	Loss of material goods	Distributive justice

[a] Sometimes scholars apply these aspects of justice to environmental issues too: the distribution of burdens of pollution and access to environmental resources; the right to participate in environmental management decision-making; and the recognition of alternative worldviews and understandings of social-ecological interdependencies [68].

Grievances can include feelings of resentment, hatred, anxiety, suspicion, frustration, stress, contempt, anger, but also righteousness, retribution, pride, and self-determination to address wrongs and injustices [65]. Grievances can manifest as 'dramatic' emotions, i.e. sudden outbursts of feelings from the experience of primary emotions (anger, fear, sadness), impulses and reflexes, as well as longer-lasting emotional moods[2] consisting of a cocktail of elaborations and variants of primary emotions and affective commitments that people have learned to manage [66,67].

Grievances about the consequences of changes in social interdependencies can turn into resistance when the social contract can no longer legitimise differences in terms of authority, division of labour, and the distribution of goods and services. Institutions that underpin the social contract (i.e. justify social interdependencies) can become less self-evident if groups feel less pressure to conform to mutual obligations, compliance, and solidarity as a result of losses or gains in power. This is the case when norms and views of mutual obligations and solidarity are resented and perceived as unfair, leading people to probe and negotiate where the limits of mutual obligations and solidarity lie [56]. Emotions associated with grievances thus signal how the state of social ties - the implicit social contract that organises and stabilises social interdependencies[3] - is felt [70–72].

2.2. From grievance to resistance

Sociological contributions to the study of resistance emphasise the mobilising capacity of grievances when people feel that (changes in)

[2] Emotional moods have a lower intensity, a more diffuse goal, a longer duration, a more vague origin than 'dramatic' emotions, and an embodied aspect, i.e. they affect a person's posture, gait and general behaviour [69].

[3] In an interview for a Dutch newspaper, a member of Extinction Rebellion says this literally: "*Obedience didn't work. As citizens, we have a contract with the government: we pay taxes, and in return the government makes sure we can live safely. The government has broken that contract. I'm not safe* [from environmental damage], and *neither are my children. So I don't take the rules too seriously*." [70]. The increase in court cases against governments accused of failing to protect their own citizens from the effects of climate change and biodiversity loss also signals that people feel the social contract has been broken [71].

social interdependencies and power are inconsistent with their moral sentiments and intuitions about justice and fairness [73]. Putting these theories into the context of energy regime shifts, a simple, stylised two-step process can be developed: changes in energy supply generate grievances (step 1), and grievances turn into resistance (step 2). Step 1 is reasonably well theorised and studied, as the above shows. Step 2 is less well understood. Despite a growing number of theoretical syntheses of the various factors that cause protest and resistance [59,74–77], the social mechanisms that link grievances to different forms of resistance and/or explain the transition of resistance from hidden to open remain undertheorised [59,77–82]. Often social mechanisms are not explained beyond the causal arrows in the diagrams that are used to illustrate theoretical frameworks [see e.g. 38,74]. Flam [65: 19] warns, in this regard, against "*treating emotions in a narrow, instrumental-functionalist manner, as social facts with functions or as a new type of resource that movements can use*".

As outlined above, open resistance is mobilised when people can overcome the emotions that keep social interdependence intact. These emotions include fear of losing life chances, defeatism, acquiescence, feelings of powerlessness, and shame for not conforming to social rules. In order for people to engage in open resistance, such feelings can be overcome, for example by reappropriating and legitimising anger [47]. Open resistance, in this conceptualisation, involves a process of resocialisation, in which people learn together with others how to reconstruct and reinterpret social interdependence, i.e. how they should feel about fairness and justice, and thus which mutual obligations that underpin the social contract should be resisted or refused.[4]

Processes of re-socialisation can be theorised, following sociologists such as Durkheim, Goffman and more recently Collins through the concept of interaction rituals: "*a mechanism of mutually focused emotion and attention producing a momentarily shared reality, which thereby generates solidarity and symbols of group membership*" [52: 7].[5] Interaction rituals consist of the coming together of people in time and place – a group "*assembly*" that is based on a boundary between insiders and outsiders – in which they share emotions and attention [52: 35–36]. Collins refers to these as the "*ingredients*" or "*initiating conditions*" of the interaction ritual, which include:

- Barriers to outsiders: These barriers can be material (often a place) or symbolic (aesthetics; jargon; dress codes, etc.) that give the participants in the interaction a sense of inclusion as well as a sense of who is an outsider and a potential enemy.
- Mutual focus of attention: A common object, activity, event that all participants focus on, attach importance to, and communicate about so that they become aware of each other's focus.
- Shared mood: The participants develop a shared emotional experience of the object, activity, or event as a result of the shared focus, interaction and communication.

According to Collins none of these ingredients alone is sufficient to produce an interaction ritual, because they "*feed back upon each other*". Even taken together, they may not be sufficient to produce a successful interaction ritual [52: 50–53]. So what then is the measure of success? Here, Collins points to the key mechanism of the interaction ritual, starting with the reinforcement between the mutual focus of attention and the shared mood: "*As persons become more tightly focused on their common activity, more aware of what each other is doing and feeling, and more aware of each other's awareness, they experience their shared mood more intensely, as it comes to dominate their awareness*" [52: 48]. Collins uses a number of terms to characterise this reinforcement such as the "*intensification of shared experience*", "*the formation of collective conscience or consciousness*", "*heightened intersubjectivity*", and also "*collective effervescence*" - a term originally used by Durkheim. Collective effervescence will produce a number of effects within and between people, which Collins refers to as the "*outcomes*" of interaction rituals. These outcomes include:

- Group solidarity: Feelings of group membership and affinity for one another, and hostility towards people outside the assembly, especially those that are perceived as depriving the assembly of life chances.
- Emotional energy: Collins describes this as "*a feeling of confidence, courage to take action, boldness in taking initiative. It is a morally suffused energy; it makes the individual feel not only good, but exalted, with the sense of doing what is most important and most valuable.*" [52: 49]. Emotional energy can last beyond the duration of the interaction ritual.
- Group symbols: These are all kinds of material and immaterial carriers - emblems, flags, posters, slogans, etc. - that symbolise group membership and help people to relive or re-experience collective effervescence outside interaction rituals.
- Moral standards: Norms and values that are generated in the process that give members a sense of "*rightness in adhering to the group, respecting its symbols and defending both against transgressors*" [52: 49]. These standards may reinforce or deviate from the moralities that characterise the wider societies in which interaction rituals take place.

The interaction ritual can transform initial emotions - such as fear or shame at the anticipation of a lack of solidarity from the larger society, and the risk of losing life chances and emotional energy from being deviant [paraphrasing 84: 48] - into "*counter-emotions*" [47: 19], such as anger or pride, felt in relation to a shared understanding of injustice and what or who is blocking life chances for the group [49,84]. Fundamental to the development of a sense of injustice is the reallocation of blame and guilt for losses and mismatches of power and status from the self to others [84]. In other words, shifting grievances from being "*self-centred*" to being "*society-centred*" [85]. The interaction ritual, and membership of an assembly, offers people the opportunity to tap into new sources of solidarity, emotional energy, and a shared identity "*at the price of limited solidarity with the dominant culture*" [84: 50]. As such, interaction rituals play a key role in generating the solidarity needed to maintain and accept the various institutions that order social interdependencies [52: 13–16], as well as in breaking down and resisting these same institutions [52: 41–42]. Interactions rituals are thus "*reminders of how persons stand toward each other*" [52: 18] in terms of authority, division of labour, or the distribution of goods and services.

The importance of interaction rituals for resistance in relation to energy regime dynamics has only recently attracted scholarly attention. Antadze and Gujaraidze [86], for example, offer a number of compelling cases of local communities opposing dam construction through traditional rituals that emphasise and demonstrate their culture and agency as a group. However, the authors do not explicitly theorise or explain why and how rituals are successful, i.e. why and how these particular forms of social interaction become so important as drivers of resistance. Our article advances this burgeoning literature by conceptualising resistance as a process in which what we have called *grievances* are shared, mobilised and transformed into open resistance through interaction rituals. We expect that these theoretical tools can enhance an understanding of the diversity of antagonistic responses arising from

[4] Note here the difference between resistance and refusal. With resistance there is still a motivation to maintain a social contract, albeit under very different terms. With refusal there is no such motivation. Refusal is when people neither recognise an implicit social contract nor accept the legitimacy of the legal authorities they oppose. Resistance refers to opposition to authority, while refusal is the rejection of authority [83].

[5] Collins' definition of ritual is broader than the conventional understanding which equates ritual with formality or ceremony. It also differs from anthropological studies where rituals are typically seen as reflections of social structures, cultures and values [52].

contemporary energy regimes and their planned and unplanned transformations.

3. How interaction rituals mobilise resistance: the examples of the Forest Rebellion and the Petrol Protest

To further develop our theorisation of the mobilisation of resistance in the context of energy regime dynamics, we present two Swedish examples: the Forest Rebellion and the Petrol Protest. In applying our theoretical argument, we first qualify the grievances that triggered both resistances, and then focus on how interaction rituals took shape in the groups by analysing how spokespersons talk about the goals, challenges, opponents and actions of their respective movements. Our qualitative study of the spokespersons' public statements is combined with an analysis of more conversational communication between regular members online. While existing conceptualisations of interaction rituals have studied offline settings, we approach online interactions as a key avenue for improving and extending the utility of the concept in contemporary social movements, where social media have become increasingly important for mobilisation [87].

Our empirical data was selected after an initial review of the available material, including preliminary qualitative analysis of relevant Facebook groups [87]. After familiarising ourselves with the two resistance movements through their websites, social media channels and various media appearances, we selected a limited amount of material for in-depth analysis, to explore and develop our theoretical argument. On the one hand, this includes six Facebook posts and their comments that show interactions between regular members of the two resistance movements. Three posts from each resistance movement were selected on the basis of showing a high level of interaction between members (i.e. a high number of comments and reactions). Specifically, we selected one post from each Facebook group for the months of November 2021, December 2021 and January 2022, as this was a period of high contention around the forest industry and fuel prices – which reached 'record levels' in the winter of 2021/2022 [88]. The selected posts were downloaded by us in February 2022. On the other hand, we analysed eight interviews with the spokespersons that were published online by newspapers, non-governmental organisations and other outlets in 2019–2022, as well as a research interview with the spokesperson of the Forest Rebellion that was made available to us as part of a larger research project.[6] Apart from the formal, researcher-led interview, the material was collected from open sources such as newspapers, NGO websites, YouTube channels and two public Facebook groups. To facilitate the data analysis, sound and video material was transcribed into written text, resulting in a total of 15 documents[7] which were analysed through a thematic coding analysis using Nvivo software, identifying key themes related to emotions, affect, resistance and ritual interaction.

To illustrate the grievances that triggered the Forest Rebellion and the Petrol Protest, and the interaction rituals through which these groups mobilised resistance, we selected quotes from the two spokespersons, as well as quotes from social media interactions. The quotes from the spokespersons are taken directly from their media appearances. The social media quotes, on the other hand, are our own constructions, closely based on the original posts but not copying any material directly. We use constructed rather than original quotes because we were not able to ask for informed consent from all the people contributing to the discussions on social media. Without informed consent, we do not deem it justifiable to reproduce the posts we analysed, even as these were published in open Facebook groups which anyone can access. Since the social media users may not have considered how their messages can be used for research and other purposes [89], we choose not to literally reproduce any of the posts we studied. In order to still provide the level of description expected of qualitative research, we offer stylised quotes instead.

3.1. The Forest Rebellion

The Forest Rebellion ("Skogsupproret" in Swedish) is an activist group protesting against the extensive and large-scale logging of Nordic forests, which is seen as a consequence of the use of fossil fuels and the logic of profitmaking in a capitalist economy. The group is a collaboration between members of the Swedish environmental movement and local Sámi communities in northern Sweden. Muonio sameby is the Sámi community that has been most visible in the Forrest Rebellion, but at least 28 other Sámi communities have also expressed their concern over logging in a public letter titled "Forest companies are clearing our reindeer grazing lands" and published in one of Sweden's major national newspapers [90].

The Forest Rebellion was initiated in 2020 with an occupation of the headquarters of Sveaskog, Sweden's biggest forest owner and a state-owned company. In April 2021 the Rebellion started a number of blockades to halt logging. One of these blockades will be discussed in detail below. These actions raised awareness of the campaign and made other environmental groups, such as Fältbiologerna (Swedish environmental youth organisation focused on nature conservation), Fridays For Future, Greenpeace, Amnesty Sápmi and Naturskyddsföreningen (The Swedish Society for Nature Conservation) join the movement.

The grievances that motivate the Forest Rebellion concern the disappearance of natural forests, including the loss of biodiversity particularly of ground lichens (e.g. Cladonia spp. and epiphytic pendulous lichens such as *Bryoria fuscescens* and *B. fremontii*) which are important forage for the reindeer that Sámi herders graze in the interior and coastal boreal forests during winter. In the spring, the animals migrate to the mountains in the west, where they spend the summer. A study of the historical abundance of lichens in boreal forests concluded that these species have declined by 71 % in the last 60 years [91]. The authors argue that extensive logging and intensive reforestation have replaced "*old, open pine-dominated forests, which are important habitats for ground lichens*", with "*dense, managed forests that favor mosses at the expense of lichens*" [91].

The loss of old open pine forests is responsible for the decline in lichen-rich forests, and is a major reason why Sámi communities oppose large-scale logging. As these communities write: "*Planted trees do not constitute a forest. In a natural forest, a pine tree has a life cycle of 1000 years, as a living tree, dry pine and flame. It provides a habitat and benefits animals, lichens, fungi, plant species and people. A pine plantation is established only to be felled again after 80 years*." [90]. The Forest Rebellion sums up the existential threat of logging for Sámi communities with a pithy slogan: "*when the forest dies, we die!*"

Although not everyone in the Forest Rebellion belongs to a Sámi community, the movement clearly identifies with this indigenous community and manages to build a common understanding and identity between this group and the larger Swedish environmental movement. What unites these groups is that they all feel aggrieved by the operations of large forestry companies, especially Sveaskog.

To understand the grievances that underlie this resistance we first need to look at how the demise of reindeer husbandry is connected to the resilience of Sámi communities and the logging practices. In the following quote, the spokesperson for the Forest Rebellion, and a Sámi herself, articulates the fear that the demise of reindeer husbandry is not only the loss of a source of income, but also the loss of community and culture:

> "*Everything is just like one big cycle, so if the reindeer and their grazing lands are affected, we* [Sámi communities] *are affected. And I've always been told that as long as the reindeer can survive, so can we. But now we have reached a point where the reindeer cannot survive, because we have*

[6] For access to the formal interview, we are grateful to our colleagues Cornelia Johansson, Nora Forell, Anke Fischer, and Sofie Joosse.

[7] See the online Appendix for an overview of the empirical data.

no grazing land for them. So for us, it's a huge pillar of the Sámi culture that is dying out, or rather: The Swedish state is strangling a part of the Sámi culture because reindeer herding has been a part of the Sámi way of life since time immemorial and it's not just a job, it's a whole way of life that's going to disappear. So it takes a mental toll on you."

Notice how the Swedish state is framed in this quote through the metaphor of strangulation – a slow and painful death – as the opposing force that is deemed responsible for the loss, and how these grievances take their emotional toll. To understand these grievances in more detail we now turn to another excerpt, in which the spokesperson explains the difficulties that reindeer herders face in feeding their animals:

"*I do not do much reindeer herding myself, but my family does, so my uncle takes care of my reindeer. But I can sometimes get very, very sad thinking that my children will not get to experience everything that I have experienced. It feels a little bit like my grandfather's generation was the generation that had to take a lot of shit, my dad's generation just had to live with it and then my generation came along and we fought back. And I'm also afraid that we'll get so fucking tired of it, that people feel that they can't cope and that you want to give up, that it feels more worthwhile to become more "Swedish" if you can put it that way, than to continue to be Sámi because it's always an uphill battle. So it's very… I know we're very tough and there are a lot of people who demand a hell of a lot and that makes me very happy, both Sami and non-Sami people, but it makes me afraid that there's so much that we have to fight for that it can sometimes feel pointless.*"

It is clear from the quote that the spokesperson experiences grievances as feelings of sorrow. In addition, she links the present resistance to a long history of Sámi struggles to protect their way of life and culture. By emphasising the resistance of past generations, she voices feelings related to hope(lessness) and power(lessness).

In a study of how Sámi reindeer herders experience climate change, Furberg et al. [92] describe similar feelings and emotions as a "*sense of grief for the future*" and "*resignation and powerlessness*", particularly in relation to dealing with authorities, competition with other economic interests, and economic viability. Several scholars understand these feelings as "*ecological grief*", which encompasses feelings of "*anger, sadness, frustration, anxiety, distress, hopelessness, depression, and despair*" over the loss of meaningful places, species, and ecologies; the loss of livelihoods, self-identities, and cultures tied to places; and the lack of a future for next generations [92: 277].

Consider again the previous two quotes from the spokesperson. These quotes articulate ecological grief because they concern the loss of specific places, communities, cultures, and ways of life. But they also contain signs of hope when the spokesperson says that her generation will fight back. To understand how the spokesperson's ecological grief does not drift into resignation [93,94], we consider the assembly of people who make up the Forest Rebellion, and their coming together in place and time. To do this, we turn to the spokesperson's description of a road blockade organised by the group in Juoksuvaara.

In the following quote, the spokesperson comments on the unusual collaboration between the Swedish environmental movement and Sámi communities, and how the active and physical joining of different people during a road blockade helped build solidarity:

Interviewer: During the time when you were there [at the Juoksuvaara blockade]*, were there times when you felt that there was a lot of energy in the group, that something was happening?*

Spokesperson: Yes, there was a lot [of energy]*, especially in Juoksuvaara, where it got a lot of attention that there were people. Maybe what gave me energy was that it was both locals who joined, because otherwise it can be difficult up here to get locals to cooperate with, for example, Greenpeace. There can be quite a lot of hesitations from locals, even though it is to their advantage to get help. So when it dawned on the locals that you could get help from Greenpeace, it grew. And that* [Greenpeace] *is not just people sticking themselves to bridges or something, but people who can actually help out up here. I think it was things like that that gave me energy and made it feel worthwhile.*

The blockade to which the spokesperson refers in this quote was set up during the night of 22–23 April 2021 by members of the Forest Rebellion, who also occupied a forest harvester belonging to Sveaskog - the state forestry company - to stop further logging. The blockade was broken on 3 May when a large police force escorted a driver to the harvester in the early hours of the morning. The harvester then collected already felled logs under police escort until the early morning 5 May, when both the police force and the harvester left the area.

Fig. 1 below shows Forest Rebels occupying the forest harvester during the Juoksuvaara blockade. The protesters have manoeuvred themselves into vulnerable positions. According to Salmela and von Scheve [50], this strategy is typical of left-wing protests, where people e.g. sit on busy traffic lanes, or climb on stages to disrupt meetings or performances in order to be arrested.

The Juoksuvaara blockade is considered by the rebellion to be one of the more successful actions that took place around the same time. This is because it lasted for a relatively long time, attracted a lot of attention in the local, regional, and national media, and eventually succeeded in getting Sveaskog to stop further logging in the area until further notice and to promise consultations ("samråd" in Swedish) with the local Sámi communities.

As the spokesperson's quote above makes clear, the blockade generated energy and helped to strengthen the solidarity between the local Sámi community, of which she is a member, and the environmental movement. This cooperation proved important also for the environmental movement in mobilising resistance. For most of the supporters of environmental issues, the effects of climate change and biodiversity decline, for example, are experienced indirectly through media and scientific reports rather than through direct exposure. Because of their scale and ubiquity, environmental threats remain rather elusive and diffuse; they are situated everywhere and anywhere [95]. Following Clark [96: 61], we understand these concerns through the concept of "Anthropocene horror" rather than ecological grief. Both terms refer to similar feelings, but whereas ecological grief concerns specific places and ways of life, Anthropocene horror refers to feelings of loss related to a globally changing environment. The latter is the more elusive concept, less directly painful, and best suited to describe the grievances of people who lack an "*immediate sense of the earth as a finite planet*" [96: 62]. Anthropocene horror, due to the lack of a specific target and lack of context, can produce persistent feelings of bereavement and entrapment, as the grief is associated with unfocused guilt, helplessness and powerlessness [93,94]. This grievance is likely to lead to "*resignation, anger, apathy, ressentiment*" [97: 131] because of the disconnect between personal agency and collective, unforeseen effects playing out on a planetary scale.

The collaboration between Sámi communities and the environmental movement in the Forest Rebellion illustrates how grief over global environmental change (Anthropocene horror) can be transformed into grief focused on specific places and people (ecological grief). The Juoksuvaara blockade is an example of an interaction ritual in which such a transformation of feelings was achieved.

3.2. The Petrol Protest

The Petrol Protest ("*Bränsleupproret*" in Swedish) began on 10 April 2019, when one of the founders started a Facebook group in response to the increase in the price of fuel to 16 Swedish Crowns (SEK) per litre. Less than a month later, the Facebook group had 200,000 members. Today, the group has nearly 600,000 members, exists as a formal association ("Uppror") and claims to be Sweden's largest grassroots movement.

The grievances that mobilise the Petrol Protest stem from increased

Fig. 1. Forest Rebellion occupying and blocking the Sveaskog forest harvester in Juoksuvaara on 3 May 2021 (Photo courtesy of Extinction Rebellion Sverige).

household expenditure due to rising fuel prices, with taxation singled out as the root cause of these increases [98]. To make their voices heard, the Petrol Protest has an active presence online, but they have also organised demonstrations on several occasions since 2019. Some of the demonstrations covered by the Swedish media were a convoy on 1 May 2021 in Stockholm, and a number of smaller demonstrations in cities around the country, such as Östersund, Sundsvall, and Borlänge. But most of the social interaction and mobilisation takes place on social media.[8] For example, during the month of May 2024, members posted 260 posts on the Facebook site.

In contrast to the protests and blockades organised by the Forest Rebellion, the demonstrations organised by the Petrol Protest show few signs of vulnerability or desperation. As Salmela and von Scheve [50] argue, when physical gatherings take place in right-wing movements, there is little or no display of emotions that can threaten self-identities (such as shame or fear). Instead, symbols, slogans and other forms of communication are used to display anger and reinforce self-identities. We found support for this assertion in online discussions and photos of protests organised by the Petrol Protest, where people assert their presence through a display of strength and self-affirmation. This is often done by driving machines such as cars and tractors, as seen in the photo below (Fig. 2).

The members of the group identify themselves as 'ordinary' and 'working' Swedes, i.e. people who live outside major cities and for whom automobility is essential for everyday life. The self-identification with 'workers' and 'work' is significant for the Petrol Protest and has been observed to be typical of movements with reactive and populist ideologies [99,100]. By using the word 'ordinary', members of such movements distinguish themselves - socially and emotionally - from ethnic, religious or sexual minorities [101], but also from groups they construct as 'elites', to which they do not (want to) belong. As we shall see, for the Petrol Protest, a salient out-group is the political elite, i.e. people who enjoy high income and status in the political sphere, but who do not – according to the Petrol Protest – work for the benefit of 'ordinary' people in Sweden. Indeed, much attention is paid by the Petrol Protesters to disqualifying political elites, especially politicians from the Swedish Environmental Party.

But how 'ordinary' are Petrol Protesters? A recent study found that the average member of the Petrol Protest diverts little from the general Swedish public in terms of common characteristics (e.g. level of education; income; age), except in one aspect: distrust of the government [102]. This distrust is based on the feeling that national politicians favour global environmental concerns over the household economy of ordinary Swedes. According to its spokesperson, the Petrol Protest should be seen as an attempt by people to take care of themselves because the Swedish state is not failing in this respect:

[8] The spokesperson for the Petrol Protest is aware that digital or online interaction rituals are weaker compared to human interactions in real-time. This is evident in statements where he comments on some of the criticism launched against the Petrol Protest, where journalists and others have compared the movement to "*a bunch of empty profiles on Facebook*". In his own messages on Facebook, the spokesperson urges readers to come to demonstrations and to sign up as members of the formal association: "*If only 10 % of the Facebook members signed up then we would have an organisation that is bigger than Motormännen* [the Swedish national union of car owners], *bigger than several political parties,* [then] *we could demand active change not just a fictional one*".

Fig. 2. Demonstration Petrol Protest, Stockholm, 1 May 2021.
(Photo courtesy of Magnus Fröderberg/Auto Motor & Sport).

> "[…] *ever since 2012, people are incredibly dissatisfied with the political developments in terms of promises and what the parties, not all of them, but what many parties have become, and it's not what people expected. So I think that a, let's call it a vigilante group that defends the citizens, that speaks for the citizens, that exists for the citizens, like the association 'Uppror' does, is exactly what is needed.*"

Many supporters of the Petrol Protest single out the Swedish Environmental Party ("Miljöpartiet" in Swedish) - who took part in the national government between 2014 and 2022 - as the main advocate of fuel taxes.[9] On the Facebook page, participants frequently post angry messages or poke fun at national politicians, and the Swedish Environmental Party in particular. In these posts, an illustration of which is shown below, they claim that politicians from the Environmental Party are not willing to lower taxes on fuel because they know little and care little about the everyday lives of Swedes outside Stockholm.

> *Per Bolund, do you want everyone to install solar panels? You should set the example and take them yourself, especially since you can afford it. Practice what you preach. Your party's environmental policies and taxes are burdening the Swedish people. I use public transport when I can and I recycle, I do the best I can for the environment. But I simply don't have the money to pay for solar panels. It's disheartening, it's scary for those of us struggling here in Sweden to hear that you are funding environmental policies abroad.*

The above, constructed quote illustrates a shared focus of attention among group members, where the Swedish Environmental Party is singled out as their main opponent. The same sentiment is demonstrated by the fact that one of the great achievements of the Petrol Protest, according to themselves, is the Swedish Environmental Party's withdrawal from the Swedish government in 2021. While the withdrawal was influenced by a multitude of factors, the Petrol Protest on their website claim that their actions have been instrumental in the party's withdrawal.

In the material that we analysed for the Petrol Protest, anger is the emotion that is most clearly communicated. However, on the basis of interaction ritual theory, we can assume that other emotions are collectively subverted, repressed or transformed into anger. Studies suggest that, alongside anger, shame is a central emotion that typically underpins populist movements but one that is rarely articulated [50].

The combination shame/anger can be seen in the following quote where the spokesperson refers to feelings of shame:

> "*We want to see a fair fuel tax where we are not fed with lies and made to feel 'climate-shame'. That's the wrong way to go. Since before the pandemic started, well since we started this, we have been checking the information. We have seen that since 2014, for example, the use of cars has only increased more and more and more - regardless of what taxes we have had. It's related to what we have to do, not what we want to do, that's a big difference.*"

By arguing that people do not drive their cars for pleasure, the spokesperson frames the feeling of shame as an injustice - something unfairly imposed on citizens who need their cars for work or other necessary tasks.

As the literature points out, shame is notoriously difficult to observe because people often hide it. People have learned to hide their shame as to appear normal and accepted by others [105] and they may be embarrassed to feel ashamed [106], and therefore unwilling to let it out. For these reasons shame is typically "*unacknowledged*" [107], yet, it pervades social life; it has an omnipresence to which people can become

[9] The price of a litre fuel is determined by a number of factors. If we take the fuel price that triggered the Petrol Protest (May 2019), it consisted of production costs of 5,5 Swedish Crowns (SEK), energy and CO^2 taxes of 6,7 SEK, and Value Added Tax of 3,5 SEK. This means that 40 % of the 2019 price was made up of taxes. Taxes have been fairly stable between 2018 and 2022 [103], and at the time of writing (June 2024) taxes account for 51 % of the fuel price [104]. This means that changes in the oil price are primarily responsible for the increase in fuel costs at the pump. Nevertheless, the members of the Petrol Protest find that the Swedish government should help to dampen the effect of the oil price increase on the total fuel price by lowering the taxes on fuel.

accustomed [108].

Despite the hidden nature of shame, we did encounter some conversations in the Petrol Protest's Facebook group where users indicated feelings of shame alongside other emotions that contribute to the grievances at the heart of the Petrol Protest. One such post included a photo of a handful of coins lying on a kitchen table, and a message about financial hardship and parenting, which we illustrate through the constructed quote below:

> *I had just fuelled up my car and said something to my wife about what a crazy amount of money we spend on fuel every month. They must have overheard us because when we got home our two kids came up to us and emptied their purses on the table. Told us they wanted to help paying for gas. Those little ones. They notice our worries even if we try to shield them from it. P.S. this message seems to spread widely, so I want to assure you that our kids have everything they need.*

The post and the comments it received focused on the difficulty of parenting in times of financial hardship, and displays concerns about how children are affected. The conversation taking place in the comments is not one of anger. Several people express sadness that Swedish children are experiencing economic insecurity in these times. It is interesting to note that the shame of not being able to provide for one's children is implicit when the parent who wrote the post, motivated by its large spread, clarifies to the group that their children are not economically deprived.

The post and the reactions are revealing because they demonstrate how the Petrol Protest mobilises people around more than the demand for the abolition of fuel taxes. They also coalesce around the experience of loss of economic security and the disappearance of ways of living to which people have become accustomed. In the Facebook group, there are repeated remarks about what people deserve and comparisons are made with an 'ideal' or 'past' society [85]. There is a sense of disbelief and outrage in these posts about what Swedish society has become.

The online discussions on the Petrol Protest Facebook page are interaction rituals albeit in an online form. The isolating experience of shame can be counterbalanced by sharing emotions with others who have had similar experiences. By sharing grievances online (of which anger, fear, and shame are part) with like-minded people, the Petrol Protest builds new social bonds to replace the bonds and trust that have been lost. The experience of empathy and solidarity that online sharing can generate also helps to transform feelings of shame into feelings of righteous anger [47], by collectively locating the blame for what is wrong with the opponent rather than with oneself.

According to Scheff [72], the threatening of social bonds - when people fear that relations on which they depend (see Table 2) will be strained or broken - can trigger shame. Shame has therefore aptly been described as "*social pain*" [109: 11], and includes feelings of being ignored, rejected, deemed inadequate or powerless [110]. Shame thus violates feelings of honour, pride, and respect that people have about themselves. It follows that shame concerns feelings about who one is, rather than feelings about what one does [72]. These feelings can come from what others do and say, or from people's own ideas about how they think others will see and treat them [106]. Because people are highly interdependent, they are also usually highly sensitive to social cues: shame can be triggered from only slight changes in the amount of deference or respect people think they (should) receive from others [72].

In societies based on meritocratic principles [46] and neoliberal discourses of self-responsibility [111], unfettered market capitalism [112], and where wealth is made visible and highly valued [113], people are quick to blame themselves for the loss of freedom, reputation, or material goods. Studies demonstrate that when people find themselves to blame, they hide and may even repress feelings of shame [50]. Scheff [114: 25] argues that anger often serves as a "*substitute or defense against feeling shame*" – "*we seem to get angry at someone who insults or rejects us as a way of avoiding the painful feeling of shame*". Likewise, Nussbaum points out how shame can be linked to aggression and the denigration of others who are seen as standing in the way of various types of self-fulfilment and identification: "*The self, aware of its inadequacy, seeks to blame someone for its condition.* […]. *This shame-driven rage often constructs its own object–whatever the most plausible surrogate in the surrounding environment might be for the original source of frustration*" [105: 209–210].

A number of scholars consider this transformation of emotions (from shame to anger to resentment) as a psychodynamic process [50]. We don't reject this framing, but we would add that no one goes through the transformation alone. Moreover, the successful transformation requires the sharing of emotions with others in interaction rituals.

3.3. Analytical considerations: theorising through empirical examples

By confronting our theorisation of the social process of resistance in times of fossil fuel with the examples of the Forest Rebellion and the Petrol Protest, we highlight the importance of emotions and different forms of interaction in mobilising resistance. In particular, we note how different articulations of emotions - such as anger and grief - in the two groups were linked to their different forms of organising, for example in online discussions vis-à-vis offline collective action. But here we need to be careful. The differences we observed may be due to the different data sources we studied and/or linked to the different personality traits of the persons whose utterances were included in our analysis. More research is needed to understand the social and emotional process by which people mobilise resistance in particular ways.

As mentioned above, our findings lend support for Salmela and von Scheve's argument [50] that emotions are less pronounced in protests by right-wing social movements than by left-wing groups. In the material we analysed for the left-leaning Forest Rebellion, we observed a diverse range of emotions. It included mourning and grief (see 2nd quotation in Section 3.1), but also hope, especially in relation to the description of the Juoksuvaara blockade (see 3rd quotation in Section 3.1). By contrast, the emotional articulation in the more right-leaning and online-based Petrol Protest was more restrained.

In this paper, we have shown that by looking at the mobilisation of resistance through the analytical concept of interaction rituals, a more nuanced understanding of emotions emerges. While the primary emotion articulated in the Petrol Protest is anger, we also found other affective expressions, for example around shame. By analysing discussions in the Facebook group between regular Petrol Protesters, alongside material from traditional media – which included more in-depth interviews with the spokesperson – using the theoretical framework proposed above, we observed the transformation of shame into an injustice (see 3rd quotation in Section 3.2) and instances where shame could only be postulated but where members shared their grief and disappointment at collectively experienced hardship (see 4th quote in Section 3.2).

Further research is needed to understand the emotional motivations, and ritual interactions that lead people to resist in certain ways and not others, and the process by which resistance is sustained, (de)legitimated, expanded, and/or dismantled in times of fossil fuels.

4. Conclusion

At a time when collective action to address global sustainability is hampered due to growing economic and cultural divisions, the consideration of grievances and resistance is crucial, because they indicate where the limits of mutual obligations and social solidarity lie [56: 18].

The growing social science literature on energy regimes and regime shifts shows how we need an account of people's emotions in order to understand resistance. We used this literature to outline a typology of resistance that can be observed in relation to fossil fuel energy regime dynamics. We then theorised the social process that mobilises resistance using the concept of interaction rituals. The theory on interaction rituals, as described by Randall Collins and others, is based on the insight that emotions, such as grief, anger or shame, have "*we-creating*"

potential when they are shared with a group [90]. Importantly, the sharing of emotions through interaction with others can transform how people experience and respond to grievances from felt injustices.

A critical moment in the mobilisation of the Forest Rebellion is the merging and transforming of elusive concerns about global environmental change with geographically and temporally situated feelings of grief and anxiety about specific places and lives in danger of disappearing. This emotional transformation took place through a series of face-to-face interaction rituals between the Swedish environmental movement and indigenous Sámi communities. During these meetings, feelings of grief and anxiety were shared and transformed into feelings of hope and righteous anger directed at those in power and the structural inequalities of contemporary Swedish society.

For the Petrol Protest, interaction rituals are largely digital and online. Collins recently commented that when an assembly is not together in time and place, its interaction ritual is weakened. Online it is harder to establish rhythmic coordination, with its accompanying sense of intersubjectivity, making it more difficult to generate solidarity and emotional energy [115]. Indeed, we found that the interaction rituals of the Petrol Protest were less intense than the blockades of the Forest Rebellion. Nevertheless, by sharing their anger online, Petrol Protesters transform personal grievances about household expenses and a loss of lifestyle into a matter of justice for an entire group of self-proclaimed 'ordinary' or 'working' Swedes.

The examples of the Forest Rebellion and the Petrol Protest illustrate how interaction, both on- and offline, can make people experience their grievances as righteous, and thus motivate and legitimise the types of resistance that feature prominently in the literature on energy regime shifts. Awareness of interaction rituals facilitates a deeper understanding of the social and affective process that historians observe when societies transition to using other energy sources.

What distinguishes the current transition from previous historical ones is that, since the last century, modern welfare states have significantly expanded their responsibility for public life. Many states assume responsibility for energy transitions with the idea that these can be managed and controlled by public institutions [116]. What remains underexposed, however, is that the greater responsibility for various aspects of social life makes governments more prone to failure, and consequently, a usual target for various forms of resistance. By claiming that governments are violating the social contract, resistance movements de-legitimise authorities that are often taken for granted. This makes resistance both hopeful and potentially dangerous [96]. It is hopeful because by challenging the social contract, resistance creates the possibility of transforming social structures and the energy regimes on which they are based. It is dangerous because the rejection of the contract opens the door to the moral endorsement of the use of violence [117]. We have argued in this paper that the social and emotional aspects of energy regime shifts should never be dismissed or ignored. If the transition to more sustainable and equitable societies is to be realised, governments and civil society will need to be explicit and prepared to address changes in social interdependence in terms of authority, the division of labour, and the distribution of goods and services that result from shifting energy regime dynamics.

CRediT authorship contribution statement

Wiebren Johannes Boonstra: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Conceptualization. **Nora Söderberg:** Writing – review & editing, Validation, Project administration, Methodology, Investigation, Data curation.

Declaration of competing interest

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Data availability

Data will be made available on request.

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Appendix A. Supplementary data

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