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Ecological Modernisation - Isolation and Masculinisation?

The Decline of the Swedish Anti-Nuclear Movement
in Light of Ecomodernism

Angelica Wågström

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Abstract

What happened to the Swedish anti-nuclear movement after the referendum on nuclear power in 1980? Scholars describe a period of ecological modernisation, affecting discourse and structures within environmental organisations and politics, entailing a professionalisation of NGOs. Drawing on accounts of a decline of the Swedish anti-nuclear movement since the 1980s, this thesis explores how ecomodernism has affected this movement since then. In terms of discourse, scholars have noticed how ecological modernisation has led to an isolation of environmental movements into “one-issue movements”. Further, feminist research has suggested a “masculinisation” of environmentalism, implying a switch from concerns about health, moral and justice towards economical and technological arguments. Drawing on previous research, historical accounts and in-depth interviews, I claim that the Swedish anti-nuclear movement has been subject to a professionalisation, masculinisation and isolation from other social movements and issues. These changes should be understood as a part of ecological modernisation, reinforcing the hegemony of ecomodernism; and I suggest them to be seen as a key to the decline of this movement. Further, I argue that these aspects of ecological modernisation maintain an exclusion of concerns assigned to “femininity”, which if reconnected to would have a lot to offer environmentalism.

Key words: Anti-nuclear Movements, Ecological Modernisation, Ecomodernism, Masculinity, Professionalisation, Hegemony, Discourse, Nuclear Power, Political Opportunity Structure, Human Ecology, Sweden

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Front picture: Cover from the mixed-artist anti-nuclear album “Vi kan leva utan kärnkraft” (“We can live without nuclear power”) published by Silence Records in 1975.

1. Introduction

1.1 From physics to feminism - my first approach to nuclear power

I wanted to start this paper with a quote, perhaps by Elin Wägner, Rachel Carson or Arundhati Roy, reflecting upon how their very words on humans' relationship to nature during modernisation once planted the seed to my stance against nuclear power, or at least fostering my concern about it. Instead of a quote, it is this picture that comes to my mind when trying to remember how I first got into the topic:

A man, one of my professors at that time tapping his long pointer in the floor in front of us - *us* being the hundred or so students in physics at Lund University, seven or so years ago - repeating over and over how extremely *necessary*, *inescapable* and even *exciting* nuclear power is as an energy source. Without it, humanity (in Sweden) is doomed.

I quickly noticed that I was in minority among my classmates as being against nuclear power. "But you *do* understand the chain of reactions ...? It's just *math*", was one of the replies I got when lifting the issue. Another one: "the new generations of reactors will be totally safe". And so on. I wondered what made so many people within this group of physicists oddly happy about nuclear power. My theory back then was that these guys (women were in minority) were so in love with science and atomic reactions that any explosion would set their hearts on fire, that they were so marinated in math and numbers that arguments of risks and generational justice simply did not fit within the formulas they so happily typed into their computers.

I left physics after this first semester.

Thinking I would never return to Lund, several years later I ended up at the same university, but this time at the Human Ecology Department. It surprised me when a teacher, who I considered a true environmentalist, spoke in favour of nuclear power. "Look at Germany!", he argued, referring to their nuclear power phase out, while a parallel increase in production of coal has taken place.

So I looked at Germany.

It is true that Germany's greenhouse gas emissions have not decreased even though the use of renewable energy over the last years has been increasing, but the government decision to phase out nuclear energy should not be blamed. Instead, the failure to limit greenhouse gas emissions can just as well be explained by what they did *not* do: phase out coal - instead, they allowed exports of coal to other countries (Klein 2014:136).

What is more, I stumbled upon opinion pieces in which former Greenpeace activists and other environmental front figures such as Stephen Tindale, Mark Lynas, James Lovelock and Chris Goodall admitted their change in position to nuclear power, accepting it or even advocating it due to the threat of climate change (see e.g. Lovelock 2004; Connor 2009). I began to suspect that the decline in debate over nuclear power and the relative invisibility of the anti-nuclear movement had something to do with an increasing awareness of climate change. Is it really either-or?

When it comes to nuclear power *resistance*, one aspect I find interesting is that it is a part of environmental history which traditionally has been dominated by women (Nelkin 1981; Kakuchi 2011). It is well known that women tend to be forgotten in documentation of history (see e.g. Scott 1972; Shrivastava 2017). Therefore I wanted to shed light on a women-dominated part of the history of a field that I, as a student in human ecology and a former environmental consultant, am deeply involved with.

Within anti-nuclear movements, women have often been leading activists (Clancy and Roehr 2003:47). Not only do public opinion polls everywhere in all times show that women tend to be more negative towards nuclear power than men; but also, as I will discuss further in this study, concerns which are usually described as "masculine" tend to be prioritised over those characterising "femininity" when debating nuclear power.

Finally, having spent a large part of my Masters' studies exploring the relationship between masculinities and environmentalism, I started thinking that maybe this alleged antagonism between nuclear power and climate change might be just a symptom of our time's dominating discourse in energy and sustainability debates: ecomodernism (e.g. MacGregor 2009, 2010); or of the interrelated ecomodern masculinity (Hultman 2013). Sweden has been described as a distinct example of ecomodern hegemony (Anshelm and Hultman 2015), a masculine

discourse which proponents take environmental problems - especially climate change - seriously while simultaneously suggesting only small fixes within current economic and political system as solutions. Growing up in Sweden, a country taking pride for its gender-equality, I find it interesting to explore how this alleged equality is reflected in how interests and concerns perceived as either masculine or feminine are treated in the nuclear/anti-nuclear struggle in an era of ecological modernisation.

During the last decades the Swedish anti-nuclear movement like many other social movements in Western societies has decreased, both in number of members and in visibility (Diani and Van der Heijden 1994; interviews). In this thesis I explore how this decrease is related to ecological modernisation, and whether there are gendered aspects to this change. By gender, I am in this thesis not merely referring to the social categories “women” and “men”, but more to constructions of masculinity and femininity and concerns characteristic for these.

1.2 Aim and research questions

My aim is to gain an understanding of why the Swedish anti-nuclear movement has declined during the last decades and whether there are gendered aspects to the change. My assumption is that climate change has a role to play, but I want to understand why it does and in what way, as well as explore other possible causes for the change to the movement. Therefore, I leave the questions open. The main research questions of this study are:

1. Why has the anti-nuclear movement in Sweden decreased since the 1980s?
2. What gendered aspects are there to the changes in the movement?

Both questions are framed in ecological modernisation theory. Ecological modernisation connotes changes in political opportunities for environmental NGOs to engage in different kinds of anti-nuclear actions (Van der Heijden 1999; Mol 2000). Drawing on this notion, it is my objective to explore whether such changes are perceived by members of the anti-nuclear movement and if this development can serve to explain part of the decline of the movement. As a discourse, ecomodernism has been described as masculinist (MacGregor 2010); further, some claim that environmentalism has been subject to a “masculinisation”, meaning an

increased focus on masculine concerns and domination by men (*ibid.*). It is my aim to investigate whether such (ecomodern) masculinisation has affected the anti-nuclear movement.

As I see it the Swedish anti-nuclear movement is engaged in both political and cultural conflicts; the political issue of phasing out nuclear power and the cultural conflict of positioning themselves in relation to hegemonic discourse and the suggested masculinisation of environmentalism. I believe that these different conflicts, as perceived by the participants, are best understood using theories of different fields of research. The first research question will be explored from the perspectives of political opportunity structure while masculinity theory will provide answers to the second.

1.3 Contribution of study

In this study I draw on research on environmental movements during the hegemony of ecomodernism, with the intention to add an understanding of gender. I discuss feminist theories on masculinity, aiming to frame them in the wider social movement field of research. There is a lack of studies looking at social movements from a gender perspective and with this thesis I aim to explore this area of research. It is my belief that such a perspective can strengthen social movement studies in terms of understanding gendered power structures in discourses, activities and outcomes of movements. I further hope this study can shed some light on gendered consequences and causes of changes to environmental movements overall.

1.4 Disclaimers before reading

Throughout the thesis, I will refer to women and men. Although aligning myself with queer theorists such as Judith Butler (2007), meaning that gender is a social construct, I will here use a binary description of gender. I have thus not asked my interviewees about their gender identities, but assigned to them the same gender as our cis-normative society would do. This binary use of gender is due to my interest in systematic oppression towards people who are *perceived* by society as women, no matter their gender *identity*. By using these categories I am not claiming that women are women and men are men by nature, nor am I denying the possibility that some people I am writing about might have defined themselves differently.

Further, when discussing masculinities and femininities, it is important to note that these concepts are social constructions and can be embodied by any gender (Connell and Messerschmidt 2005:847).

While some of the participants in my interviews define themselves as a part of a social movement, several do not. I will not so much discuss whether or not anti-nuclear groups of today can be defined as a social movement, as to present possible explanations to *why* the previous movement has decreased in popularity. In order to facilitate the reading, I will refer to my participants as part of “the anti-nuclear movement”.

References to interviews are made throughout the whole thesis, where participants are referred to with pseudonyms.

1.5 Structure of the thesis

The first part of the thesis gives a historical account of the evolution of the Swedish anti-nuclear movement in context of the development of nuclear power in Sweden. Following this, research on this movement as well as anti-nuclear movements abroad is reviewed. Secondly, the theoretical framework of ecological modernisation and theories of political opportunity structures as well as masculinities are presented. The following methodology section discusses my ontological and epistemological standpoint in relation to chosen interview methodologies, as well as delineations and constraints of research. Interview findings are discussed in the following section, through the framework of ecomodernism. Lastly, I reflect upon insights from the research process before wrapping up the thesis with conclusions of main findings.

2. Background

Telling friends about my research topic, I got a few raised eyebrows, some amused smiles. I guess most of them were thinking of the retro pictures we saw (and laughed about) in our parents photo albums, or in documentaries about what we referred to as “the hippie times” in the 70s. The red smiling sun with the “Nuclear Power? No thanks!” written around it is to

many of us a symbol of the past, rather than a message for changing the future. Who would I even talk to about anti-nuclear activism today? Is there a movement to speak of?

This section gives an account of changes to the Swedish anti-nuclear movement from the 1970s to today, following a brief description of the emergence and current state and of nuclear power in Sweden. Lastly, relevant research on anti-nuclear movements is reviewed. But first of all, what and who is the anti-nuclear movement?

2.1 Defining the anti-nuclear movement

“We don’t *exist!* Chew on that.”¹

That is the answer I got when asking one interview participant, Elisabeth about the current work of the anti-nuclear movement. In this quote she is referring both to the peace movement, the anti-nuclear movement and resistance movements in general.

Trying to define a social movement is hard enough considering the variety of definitions and opinions. This task is not made easier when the people working together for the same cause have different views of the movement in question, some considering it dead and gone, others describing it as ongoing, while still others see it as resting, ready to mobilise in due time. The definitions of a social movement sprawl, the defining factor ranging from a collective identity (e.g. Diani 1992) to the confrontational interaction in itself (e.g. Tilly 1994). Since my interest is in the movement participants’ perceptions of conflict, as well as their positioning within hegemonic discourse - how they relate to it and how it affects their sense of shared identity within the movement - the definition I have chosen to draw upon is one by Diani (1992:13; my italics):

“A social movement is a network of informal interactions between a plurality of individuals, groups and/or organizations, engaged in a *political or cultural conflict*, on the basis of a *shared collective identity*”.

¹ Translated from Swedish by the author: “Vi *finns* ju inte! Tugga i dig det.”

In the definition above, I have chosen to focus on collective identity and conflict, since this allows me to look at both structural and cultural aspects of the change to the movement. In the term “political conflict” I include first of all the direct endeavour to phase out nuclear power, but also some of the contention around nuclear waste storage. The analysis will further include aspects of cultural conflict, discussing what I claim to be a masculinisation of discourse and organisational structure. As for collective identity, I have drawn upon the definition used by Polletta and Jasper (2001:285), explaining it as “an individual's cognitive, moral, and emotional connection with a broader community, category, practice, or institution.”

The different parts of the anti-nuclear movement are defined below.

2.1.1 Main actors

One component of social movements is social movement organisations (SMOs), defined in this thesis as groups who are identified by themselves and other groups within the same movement as part of it (Diani 2003:306). Another part of social movements are local groups and networks of individuals engaged in the conflict. In the case of the Swedish anti-nuclear movement I include non-governmental organisations and local grassroots' groups officially against nuclear power, aiming to close down the Swedish reactors, informing about risks and dangers of nuclear power, and/or engaging in discussions of waste repositories and related issues. For a list of movement actors, based on interviews and literature, see Appendix 1.

2.2 Nuclear power in Sweden

When discussing nuclear energy it is hard not to touch upon the history of nuclear weapons. Even in Sweden, research on development of nuclear weapons has been made in parallel with nuclear energy research (Wallerius 2012). The first nuclear weapon experiments in Sweden were made in Swedish Lappland, where in 1957 Nausta near Jokkmokk was shaken and electricity and buildings over several kilometres destroyed when a nuclear bomb was simulated (*ibid.*). Some claim that the main reason all nations have pursued nuclear energy - and are doing so still today - is to enable development of nuclear weapons under the cover of energy policy (Shrader-Frechette 2011:212-240).

The year before the Nausta experiment, in 1956, a nuclear energy program was accepted by the Swedish parliament and 19 years later the construction of thirteen reactors in total was approved (Flam and Jamison 1994:172-179). Following a referendum in 1980, the parliament decided to phase out nuclear power by 2010; although within the decommissioning period they allowed for a doubling of the six reactors then in use (Nohrstedt 2008:264). Despite this decision there are currently (2017) ten nuclear reactors operating at three different nuclear power plants in Sweden (Strålsäkerhetsmyndigheten 2017). Only part of the promised phase out has yet taken place; in 1999 the first reactor was closed at Barsebäck, followed by the second and last reactor at the site in 2005 (Barsebäck kraft AB 2016).

In 2015, about 30 percent of the Swedish energy supply originated from nuclear power (Energimyndigheten 2016). This can be compared to close to 16 percent in 1980, the year of the referendum (*ibid*). The expansion should be understood in relation to the total energy supply from all energy sources in Sweden taken together, which has also increased (*ibid*). Nuclear power thus makes up a large proportion of Sweden's energy supply, and since the spent fuel is radioactive and dangerous about 100 000 years it has to be taken care of (Strålsäkerhetsmyndigheten 2016). In 2011, the Swedish Nuclear Fuel and Waste Management Company, SKB (Svensk kärnbränslehantering AB), applied for the construction of a final storage facility for nuclear waste: KBS-3 (SKB 2016a, 2016b). This application is still under review.

During the 2000s, nuclear energy policy in Sweden changed. In 2010, the same year when all nuclear power plants should have been phased out, the government - an Alliance consisting of four liberal to right parties - voted for a prolonged use of nuclear energy and allowed new reactors to be built at the locations of the current ones (Sveriges Riksdag 2009). During an interview, anti-nuclear activist Isa expressed her anger at this amendment:

“And then 2010 when it should be decommissioned. It was in June, in the shadow of the princess wedding - you always put it in such shadows, right, I say

they are shadows, when people are looking at wedding cakes and Daniel and Victoria - *then* you vote. That Friday. They got married on the Saturday.”².

No national mass protests arose after this amendment in the nuclear energy law (Tarasova 2017:18-20), which illustrates a change of the Swedish anti-nuclear movement in comparison to the years before the referendum when a large mass of Swedish people organised to demand a referendum on nuclear power. The next section describes the emergence of the Swedish anti-nuclear movement and the referendum campaign.

2.3 The birth of the anti-nuclear movement

March 23, 1980. The Swedish people went to vote, not for or against, but rather *about* nuclear power. Finally the anti-nuclear movement got a referendum, but it was not the vote they had been working for with a clear yes or no (Flam and Jamison 1994:187-188). Instead, three “lines” were on choice: Line 3 represented the “No-side”, propounding a relatively quick phasing out of nuclear power within ten years, while Line 1 and 2 proposed that nuclear power should be phased out in a time frame that would not threaten Sweden’s need for electricity, employment or welfare. Line 1 and 2 were formulated with the exact same words, except that on the back of Line 2’s ballot were some restrictions such as that the state should have the main responsibility for nuclear power (Anshelm 2000:274-299). The first line was commonly perceived as “conservative and pro-nuclear”, the second as “common sense” and the third as “anti-nuclear” (Flam and Jamison 1994:191). Not surprisingly in what Swedes often refer to as “Landet lagom” (the “Everything in moderation-country”), the middle alternative won.

Some scholars hold the view that the referendum defeated the anti-nuclear movement, partly due to established political parties dominating the referendum campaigns by for example setting rules for entry and resource distribution (e.g. Flam and Jamison 1994:163-165). Others argue that the parliament’s decision to phase out nuclear power following the referendum turned nuclear power into a depoliticised issue (Nohrstedt 2008:264-266). No matter the cause, since the referendum there has been a large decrease in anti-nuclear campaigns and

² Translated from Swedish by the author: Ja, och så tvåtusenio när det skulle avvecklas. Det var i juni, i skuggan av prinsessbröllopet - man lägger det alltid i såna skuggor, va, jag brukar säga att det är skuggor, när folk tittar på bröllopstårtor och, Daniel och Victoria - *då* röstar man. Den fredan. Dom gifte sig på lördan.”

mobilisation in Sweden, while assimilative strategies dominate (Diani and Van der Heijden 1994:359-367). Strategies described as assimilative include for example lobbyism and organising petitions or referendum campaigns (Kitschelt 1986:63-68).

One member of the anti-nuclear organisation *Folkkampanjen mot kärnkraft & kärnvapen*, FMKK (the Swedish Anti-nuclear Movement³), Lars, describes the disappointment after the referendum:

“(...) momentum was lost, partly because the vote was dribbled away by having three alternatives, there wasn't just yes or no”⁴.

But the story about the anti-nuclear movement starts well before that.

Already in the late 1950s, civilians opposed plans to build nuclear power plants near their homes, using means such as protests and petitions⁵ (Anshelm 2000:50-53). Within Swedish environmental movements, nuclear energy has been debated since the late 1960s (Flam and Jamison 1994:172-174), and the first larger conflicts emerged in the early 1970s when plans to open a reprocessing facility met with arguments of risks with nuclear waste, leading to the mobilisation of a local movement (Anshelm and Galis 2009:273-274). Before the referendum the anti-nuclear movement was generally driven by the grassroots⁶, important actors being Friends of the Earth and local groups developing from it (interviews with Sigrid and Lars). There was generally a sense of solidarity between the anti-nuclear movement and other social movements, not only in Sweden but globally, since most of them were critical towards the economic and political system and were aiming for similar system changes (interview with Lars). For example, parts of the peace movement and the anti-nuclear movement were closely connected; peace activists organised together with anti-nuclear activists to protest against

³ To avoid confusion, I refer to this organisation as FMKK, while the anti-nuclear movement in Sweden - all local groups and organisations considered - is referred to as “the Swedish anti-nuclear movement” or “the anti-nuclear movement”.

⁴ Translated from Swedish by the author: ”(...) sen gick ju luften ur, dels genom att ... omröstningen dribblades ju bort genom att det blev tre alternativ, det var inte bara ja eller nej.”

⁵ However, parallel to this opposition, nuclear energy was depicted by some environmentalists and political parties as an environmentally friendly option, arguing that it would enable the conservation of rivers which might otherwise be exploited for hydroelectric power, as well as limit air pollution from fossil fuels (Flam and Janison 1994:171-172; Anshelm 2000:100-102).

⁶ Most of the participants describe the birth of the movement among grassroots, predominantly environmentalists. However, this is contradicted by one of the participants, the previous politician Ulla, who means that nuclear power resistance started within political parties and later on spread to the grassroots.

nuclear power and nuclear weapons, recognising the strong link between the two (interviews with Elisabeth, Isa and Lars).

During the late 1960s to early 1970s, there was a breakthrough of anti-nuclear critique in the Swedish public debate (Anshelm 2000:116-120). One catalyst of public nuclear critique was an interpellation (1972:188) by Birgitta Hambraeus (The Centre Party) to the government in 1972, where she questioned the moral rights to let future generations deal with current generations' nuclear waste (Sveriges Riksdag 1972:34-38; Anshelm 2000:119). Such critique⁷ led to a government decision to reconsider nuclear power, and study circles were organised for this cause (Flam and Janison 1994:168; Anshelm 2000; interview with Ulla). After the accident at the Three Mile Island nuclear power plant in USA in 1979, risks related to nuclear power came in even greater focus and later that same year the campaign for a referendum was initiated (Flam and Jamison 1994:163-165). Nuclear opponents organised into a people's campaign against nuclear energy, the same which would later become FMKK. This consisted of members from the Centre Party (C) and the Communist Party (VPK) as well as women's and environmental groups, with the main demand of a referendum on nuclear energy (Flam and Jamison 1994:185). As stated, since then the movement has declined.

2.4 A post-referendum movement

Currently the only national organisation with the single purpose of working against nuclear power is FMKK. Apart from FMKK several local groups are engaged, such as church groups who are against nuclear power for ethical reasons and peace groups opposed to nuclear weapons (interview with Ben). Today FMKK has about 1500 members nationally, to compare with the time right before the referendum when there were 10000 members only in Gothenburg (interview with Sigrid). This decrease illustrates the general decline in popularity of the anti-nuclear movement. In Sweden like in most other European countries, there was no anti-nuclear mass mobilisation following the Fukushima nuclear accident in 2011 (Van der Heijden 2014).

⁷ Other public figures who are often mentioned as important actors in catalysing public critique against nuclear power in the early 1970s are for example Hannes Alfvén, Eva Moberg, Björn Gillberg and Ann-Marie Westman (Anshelm 2000:116-152; interview with Ulla).

In 2004, a big change occurred in the movement. A decision was made by the government that in order for NGOs to be able to participate in the process to review SKB's application of nuclear waste management, they could apply for funding from the Nuclear Waste Fund (Kärnavfallsfonden), a government authority which receives and manages fees from owners of nuclear waste facilities in Sweden (Sveriges Riksdag 2008; Kärnavfallsfonden 2017). Two coalitions were formed to apply for funding: Milkas, an outspoken anti-nuclear organisation, and MKG, which is not outspokenly anti-nuclear but whose founding organisations are (interview with Ben). Thus, parts of the anti-nuclear movement are now focused on working with the issue of nuclear waste repository⁸.

The anti-nuclear movement has demanded safer nuclear waste repository methods but also aimed to prohibit underground storage of the spent fuel (Anshelm and Galis 2009:278-279). While some argue that the first claim has been accomplished⁹, the second has not; instead, the demands on safer storage methods have led to a development of better methods and consequently to a wider public acceptance of underground nuclear waste repository (*ibid.*). This can be seen as a symptom of the hegemonic discourse of ecomodernism in which trust in technology is palpable, discussed further in the theory section.

2.5 Previous research

As I first started investigating the topic, I found that while the Swedish anti-nuclear movement in the years before the referendum has been studied by many (e.g. Kitschelt 1986; Flam and Jamison 1994, Nohrstedt 2008), there is a gap in research on the movement during the 2000s. This is the period I examine in my study, as well as the years following the referendum.

The shortage of research is not specific to this movement, but something common for current environmental movements in general (Thörn and Svenberg 2016:593-594). However, halfway through the research process I got in contact with a professor at Södertörn University who

⁸ Also the NGO SERO received funding from the Nuclear Waste Fund; although their main work consists of supporting renewable energy options rather than directly opposing nuclear power (SERO 2017). Further, in 2005 the association Miljövännen för kärnkraft (Environmentalists for Nuclear Power) got funded but never applied again after that (interview with Ben).

⁹ According to several participants of this study, the belief that there are any safe nuclear waste storage methods is false and due to lobbyism from SKB.

informed me that a PhD student there, Ekaterina Tarasova, this spring (2017) graduated with a thesis on anti-nuclear movements between 2005 and 2014 in Sweden, Russia and Poland. I will refer to her thesis in my analysis.

In the following sections, research exploring anti-nuclear movements through the perspectives of social movement theory, feminist theories and discursive opportunities is reviewed. But firstly, the Swedish anti-nuclear movement is put in perspective through a glance at movements in other countries.

2.5.1 Sweden in an international perspective

Sweden's anti-nuclear movement is not alone in having declined. A comparative study of anti-nuclear movements in Sweden, France, West Germany and the United States show that the movement in all these countries decreased after 1979 (Kitschelt 1986). Most Western countries follow a similar pattern: anti-nuclear movements emerged during the 1960s to the 1970s, reached a peak of conflict during the late 1970s to early 1980s, followed by a loss of mobilisation around the 1980s (Diani and Van der Heijden 1994). To a large extent Sweden follows this pattern. In the years between the nuclear accidents in Chernobyl and Fukushima, most European countries have seen a turn from actions directed towards nuclear power to actions addressing nuclear waste (Van der Heijden 2014). Further, during the last decades the nuclear industry claims that there has been a "nuclear power renaissance" in several countries, legitimised by climate change (*ibid.*; Bickerstaff *et al.* 2008:145-147). The argument goes that in order to curb climate change without compromising on our standards of living and our energy supply, nuclear power is necessary (*ibid.*).

Despite many similarities, the evolution of anti-nuclear movements differs between countries. For example in both Poland and Russia, new energy strategies similar to Sweden's amendment of the nuclear power law have been implemented between 2005 and 2009 and like in Sweden, no mass campaigns followed (Tarasova 2017). This is in contrast to Germany, where anti-nuclear protests are common (interview with Eva). Likewise in Japan, there have been mass mobilisations against nuclear power, many of them led and dominated by women, in some cases speaking as mothers rising up against radiations' specific dangers to pregnant women and small children (e.g. Kakuchi 2011).

2.5.2 Social movement theory as approach to anti-nuclear movements

As is obvious by its name, social movement theory is a common approach in research on social movements. Like most fields of study, approaches to social movement theory have trended and changed over time. Focus has shifted between grievances upon which the movements react, the movements' internal resources, political opportunities and threats, and collective identities.

There are four main branches within social movement theory. One is the classical, generally embracing the so called "grievance model", commonly used during the 1950s and 1960s, in which social movements are considered inevitable consequences of grievances caused by large-scale changes in society (Koopmans and Duyvendak 1995:235-237). This branch stems from Marxist notions of class conflict, in which the working class at a certain point in capitalist development is bound to engage in collective action and confront their antagonists (Tarrow 2011:17-22).

Another approach is the resource mobilisation model, to which internal resources are central for mobilisation (Koopmans and Duyvendak 1995:235-237). This branch is related to Lenin's focus on leadership and organisation, although lacking his trust in elite leaders, and was commonly used during the late 1960s and 1970s (Tarrow 2011:21-22).

A third branch includes political process models, emphasising external political opportunities and constraints which inhibit or facilitate contentious actions (Koopmans and Duyvendak 1995; Tarrow 2011:21-22). This approach has been commonly used since the 1970s (Tarrow 2011:21-22) and is the main approach in studies of the Swedish anti-nuclear movement of the 1970s to the 1990s (Tarasova 2017). From here on I refer to it as studies of political opportunity structures, POS. Among the arguments for analysing POS is that countries with a large number of nuclear power plants do not have stronger anti-nuclear movements per se; according to among others Koopmans and Duyvendak (1995), political opportunities provide a better explanation to anti-nuclear movements' successes or failures than only the grievance and the movements' internal resources or strategies. These scholars mean that movements generally emerge when opportunities to mobilise increase. For example, Tarrow (2011:163) argues that one main reason for the general thrive of social movements during the late 1960s was an expansion of political opportunities. Further, several scholars have emphasised

movements' *perceptions* of political opportunities rather than objective structures of opportunities: a crucial component of movement activity is that something is perceived as a threat to act upon (Klandermans *et al.* 2002; McAdam 2010; Tarrow 2011). Political opportunities can also open up with media attention (Tarasova 2017:230-235). In her research, Tarasova found that members of the Swedish anti-nuclear movement perceive opportunities in terms of media attention as limited, especially at the national level, both considering coverage of demonstrations and other actions as well as possibilities to get debate articles by anti-nuclear activists published (Tarasova 2017:203-207).

Lastly, there are theories emphasising how movements are framing contentious politics, constructing collective identities, and shaping emotions in order to mobilise followers (Tarrow 2011:142-143). Identification of the problem against which the movement is mobilising - for example nuclear power - as well as ideas of solutions and strategies, are both parts of a movement's framing processes (Snow *et al.* 1988). This branch has been used since the 1980s and 1990s and developed from Gramsci's theory of cultural hegemony of the ruling class, against which workers could create a counter-cultural unity (Tarrow 2011:19-20). I draw on this perspective when discussing cultural parts of the anti-nuclear conflict, with a focus on the framing of nuclear power in hegemonic discourse. However, since gendered aspects are my focus, I place these discussions not so much within this branch of social movement theory as in feminist theories of masculinity, described in the theory section.

Both theories of POS and framing dominate social movement research today (personal communication with Håkan Thörn 2017-03-09). Using a mix of branches of social movement theory is suggested an appropriate approach to study social movements since looking at both structural and cultural elements could provide more complete explanations than merely focusing on one aspect (McAdam 2003:285-286). Similarly, in her research on recent anti-nuclear movements, Tarasova (2017) uses a mix of theories, finding that not only political opportunities but also discursive opportunities shape strategies of anti-nuclear movements; while the first lead the movement into different kinds of confrontational actions, the second steer what is legitimate to say and what arguments to make (*ibid.*).

2.5.3 Discursive and political opportunities shape action repertoire

Tarasova (2017) analyses how discursive and political opportunities are perceived by actors in the anti-nuclear movement and how these perceptions shape the movement's action repertoire. Actions outside of institutions are referred to as confrontational and can be described as either conventional, such as demonstrations or strikes, or disruptive, for instance blockades and actions carried out without permission (Taylor and Van Dyke 2004). They can also be violent (*ibid.*). In contrast, nonconfrontational actions are either in form of influencing public opinion, or participation through institutional channels, including discussion forums, public consultations and contacts with political parties (Tarsova 2017:216-235). Comparing Sweden, Russia and Poland, Tarasova found that within these different political contexts, the movements have adopted similar strategies and used opportunities for nonconfrontational actions when such opportunities are perceived (*ibid.*). Her findings are in line with arguments by Kitschelt (1986), claiming that when political opportunities enable nonconfrontational actions, social movements tend to use them.

In comparison to environmental NGOs, local groups in Sweden have less access to institutional channels, leading the first into more nonconfrontational strategies and the second into more confrontational actions (Tarasova 2017). However, the findings of Tarasova indicate that the choice of actions is not only shaped by political opportunities but also by discursive opportunities; public discourse does not approve of radical or emotionally based actions, why local groups tend to use more conventional protest actions when expressing resistance (*ibid.*) In terms of official discourses, meaning discourses expressed by the government and the nuclear industry, they mainly include notions of economic development, energy security and climate change mitigation, and are putting forward ecomodern ideas (*ibid.*), described further in the section on theoretical framework. This is in line with extensive discourse analyses by Anshelm and Hultman (2015), arguing that ecomodern discourses are hegemonic in sustainability and energy debates today.

Within anti-nuclear discourses, nuclear power is presented as unacceptable due to negative impacts on health, environment and economy, and is considered to be subsidized and unnecessary (Tarasova 2017:138-140). However, arguments about public health and the connection to nuclear weapons are no longer in the forefront as they were when the movement was younger, instead focus lies on climate change and unprofitability of nuclear energy

(*ibid.*). This can be interpreted as an adaptation to an ecomodern discourse. Tarasova (2017) further describes an “expert identity” common within many professionalised NGOs dealing with nuclear power. This expert identity is communicated by an emphasis on their education and expertise and as well as a use of scientific, analytical language combined with economic arguments about nuclear power (*ibid.*). Much due to information exchange between the different actors, the professionalised discourse used by NGOs is commonly adopted in arguments also within local groups (*ibid.*:135-138). As I will argue in the theory section of this thesis, this “expert identity” and the different aspects of professionalisation can be interpreted as a masculinisation of the movement.

2.5.4 Feminist perspectives on nuclear power and anti-nuclear movements

According to polls on public opinions on nuclear power, Swedish women in all times have been more negative to nuclear power than men have (Holmberg 2016). This is nothing specific to Sweden; women’s higher scepticism towards risk-technologies such as nuclear power and men’s tendency to trust technical solutions to environmental problems have been observed in studies overall, for example in United States, France, Japan and Germany (e.g. Nelkin 1981; Morioka 2014; GenderCC 2017).

Not only do women tend to be more critical of environmental risks than men; further, they are more often found in leading roles in groups against toxics (Nelkin 1981; Morioka 2014). In the United States, up until the 1980s a variety of women’s organisations took action against nuclear power, ranging from lesbian groups to Christian assemblies (Nelkin 1981). Dykes Opposed to Nuclear Technology, Another Mother for Peace, Feminists United to Save the Earth, Lesbians United in Non-Nuclear Action, and Church Women United are just a few of them (*ibid.*). Some radical feminists have used nuclear power as a symbol of “male dominance and exploitation” (*ibid.*), and the violence within patriarchal societies are for many feminists connected to nuclear power, which has been likened to rape (*ibid.*). For example feminist Nancy Powell blamed patriarchy for creating “the rapist-energy of radiation-ejaculating nuclear power” (*ibid.*:15). Returning to Sweden, following the Harrisburg nuclear accident two large women manifestations were organised (Bergom-Larsson 1980:7).

After the Fukushima accident in Japan in 2011, mothers organised in discussion forums and demonstrations, demanding the government to give correct information about radiation levels, considering that local governments had refused to measure radiation on the ground (Moiroka 2014:105). At this time, 73 percent of Japanese women expressed concerns about food safety while among men the percentage was 52, according to surveys (*ibid.*). Further, while mothers in affected locations often wished to evacuate their families to safer areas, fathers more often wanted to stay in order to continue working at their jobs (*ibid.*:108-109). Some women who demanded to relocate got accused by their husbands of being “neurotic and irrational” (*ibid.*). Scholars argue that Japan’s gendered differences in risk-perception is due to gendered division of labour; Japanese men tend to work full-time while women are often formally unemployed housewives or working part-time jobs, making men more responsible for economic safety and women more concerned about children’s health (*ibid.*). Although, studies have shown that women working full-time are still more concerned about environmental risks than male full-time employees (*ibid.*), indicating that gendered risk-perceptions are deeper rooted than merely employment.

While some studies show that women who are mothers have a higher perception of risk and are more environmentally concerned than other adults - which has been explained by their roles as care-takers for small children (e.g. Moiroka 2014) - other studies manifest that among children, girls tend to already have a higher awareness of environmental issues than boys do, a phenomenon that can be explained by early socialisation into different gender roles (e.g. Zelezny *et al.* 2000). In general, women and girls tend to have a larger concern for the environment than men and boys (Zelezny *et al.* 2000; Clancy and Roehr 2003). The gendered differences have been explained by different factors, ranging between essentialist ideas that women are naturally more nurturing and connected to nature through a special bond, and therefore more concerned about risks to health and future generations (e.g. Helen Caldicott in the *War Resister’s League Calendar* 1981, quoted in Harris and King 1989:81), to more constructivist explanations such as women due to social and cultural norms learn to become care-taking and aware of risks (e.g. Bergom-Larsson 1978; Solomon *et al.* 1989; Merchant 1996). The second, constructivist explanatory model is the one I am aligning to.

Taking a perspective of femininities and masculinities, research indicates that such traits are even more related to environmental concerns than a person’s gender; Zelezny *et al.* (2000) found in a study that feminine orientation was stronger related to high environmental concerns

as well as to a will to make changes in one's lifestyle for the sake of the environment, than only gender (*ibid.*:453-454). A "feminine orientation" here implies attributes related to cultural stereotypes of femininity such as sensitivity and gentleness (Baucom 1976). Important to note here is that both femininity and masculinity can be embodied by any person no matter gender (Connell and Messerschmidt 2005:847).

Masculinity is both a personal trait and an aspect of institutions (Connell 1990). Differences in how women and men are thinking is from this perspective due to images of femininity and masculinity endorsed from culture, and men's tendency of risk taking behaviour can be seen as a demonstration of masculinity (Moiroka 2014:107). Hegemonic masculinities affirm technological management and control over nature as answers to risks, rather than suggesting larger system changes (*ibid.*). Morioka concludes her study of gendered responses to the Fukushima accident arguing that "a serious risk of radiation exposure due to nuclear fallout can be ignored at *both individual and institutional levels* if the risk is interpreted as a potential threat to masculinity rooted in the dominant politico-economic system" (*ibid.*:110; my italics).

Even though there are distinct gender differences in risk-awareness and attitudes towards nuclear power, it is important to consider other social categorisations which influence how a person positions herself to the energy source. Paying attention to such intersecting structures strengthens arguments that gendered differences are not due to inherent traits, but rather to aspects constructed by culture. For example, in studies in the United States a so called "white male effect" has been observed, showing how white males with conservative values and high education and income are less concerned about environmental risks and have a higher trust in authorities than others (Moiroka 2014:106). Similarly, in another US study, researchers found that a majority of people acknowledging nuclear accident risks but at the same time being in favour of nuclear energy were male, white, college educated, relatively affluent and 65 years or older (Greenberg and Barnes Truelove 2011:825-828). Similar conclusions can be made from Swedish surveys. One opinion poll shows large differences in attitudes not only according to gender, but also social class; in 2015 only 6 percent of people from farmers' families were in favor of expanding nuclear energy while the number among business families was 24 percent (Hedberg and Holmberg 2016:18). Other opinion polls indicate differences according to age, showing slightly higher negativity towards nuclear power among younger people than among older (e.g. Analysgruppen 2015). Such intersectional differences are interesting to explore in further research, but stretches outside the scope of this study.

Some scholars (e.g. Kahan *et al.* 2007) argue that the white male effect is due to these men protecting their identities through following certain cultural norms. Although, to this notion I would add the short-term material benefits for men (and women) who are a part of privileged groups in society and gain economic advantages through business-as-usual rather than changing patterns in response to environmental risks; these material benefits are also possible explanations for the lack of environmental concern among these groups of men. Almost everywhere, men dominate central institutions, and thus it is their worldviews that define what implies a risk and what does not, and whatever the cause, men are more likely than women to prioritise economic benefits over environmental risks (Moiroka 2014:106-107).

3. Theoretical framework

I use theories of political opportunity structures (POS) to offer insights to why the anti-nuclear movement in Sweden has decreased over the last decades, understood in relation to a simultaneous growth of ecological modernisation as hegemonic environmental discourse. Gendered aspects are explored through masculinity theory.

Scholars have different views of what constitutes POS. In short, the four commonly mentioned aspects are the openness or closure of the political system, the presence of allies, capacity of the state to repress, and stability or instability of political alignments, the last referring to power balance between elites (McAdam 1996:27-28). The first and the second points have been strongly related to processes of ecological modernisation (see e.g. Van der Heijden 1999). Since my study elaborate on changes constitutive of ecological modernisation, taking place *within* the movement, I will discuss how the movement perceive aspects of the first two points. Considering openness/closure of political system, I will not go into details of the characteristics of the Swedish political system, but rather focus on outcomes of it in terms of choices of strategies and changes in the movement's organisational structure, mainly in terms of a suggested professionalisation and assimilation of hegemony.

I discuss hegemony both in terms of hegemonic masculinity and hegemonic discourse. The concepts stem from Antonio Gramsci's theory of cultural hegemony, describing the maintenance of class differences through institutions and ideologies in which the worldviews

of the ruling class are norm (Whitehead 2002:91; Connell and Messerschmidt 2005:830-832). Hegemony means dominance accomplished by social forces beyond physical violence; instead power is contested through cultural processes reinforcing hierarchies (Connell 1987:297). Since hegemonies are deeply rooted in society, in both structures and ideology, they are difficult to repeal (Whitehead 2002:91). Implications of hegemonic masculinity and discourse are discussed below.

3.1 Ecological modernisation

Buy your organic bananas, drive your hybrid car, and you are buying us all out of the environmental catastrophes we have created. This is true in the ecomodern discourse, which considers “green” or “environmental friendly” consumption and eco-friendly technology to be sufficient solutions to environmental problems, no system changes necessary (Hultman 2013). Since the 1990s, the ecomodern discourse has dominated energy and sustainability debates both in Sweden and globally¹⁰ (*ibid*).

Ecomodernism implies the recognition of environmental problems combined with a belief that care for the environment can be incorporated in current economic, political and social institution without changing their structures (Van der Heijden 1999; Mol 2000). Global policies, modern institutions such as science and technology, and the global market are considered arenas for curing environmental problems (Mol 2000). Besides stressing the importance of green consumption and technology, market solutions and economic growth are seen as parts of a solution to environmental problems without having to challenge status quo (Hultman 2013:93), which explains why ecological modernisation has been referred to as neoliberal environmentalism (e.g. Van der Heijden 1999).

Within the ecomodern discourse, climate change is acknowledged as the main environmental problem (Anshelm and Hultman 2015). Some ecomodernists argue that nuclear power is a necessary energy source in order to enable a global mitigation of climate change emissions

¹⁰ During the 1960s and early 1970s, dominant Swedish political parties and environmental groups believed that nuclear power and other modern technologies would help solve environmental problems (Hultman 2013:84). This modern industrial discourse was challenged by a more ecological discourse during the 1970s to early 1980s, which proponents argued for decentralisation of power and small-scale renewable technologies while expressing critique towards economic growth (*ibid*). Both these discourses were defeated by the ecomodern discourse in the early 1990s (*ibid*).

without having to limit our use of energy (e.g. Afasu-Adjaye *et al.* 2015). This is often motivated by its lower greenhouse gas emissions compared to fossil fuels¹¹ (Anshelm 2000:380-386; Energimyndigheten 2010; Lehtveer and Hedenus 2015:273). In *An Ecomodernist Manifesto (ibid.)*, 18 advocates of ecomodernism write:

“Nuclear fission today represents the only present-day zero-carbon technology with the demonstrated ability to meet most, if not all, of the energy demands of a modern economy. (...) A new generation of nuclear technologies that are safer and cheaper will likely be necessary for nuclear energy to meet its full potential as a critical climate mitigation technology.”

Lovelock (2004) similarly argues:

“By all means, let us use the small input from renewables sensibly, but only one immediately available source does not cause global warming and that is nuclear energy.”

Within the ecomodern discourse are different strands; even though all ecomodern discourses are optimistic towards technology as solution to environmental problems, not all are pro-nuclear power (Anshelm and Hultman 2015). Still, within debates specifically on nuclear power, pro-nuclear ecomodern discourse dominates (*ibid.*; Tarasova 2017) and thus the anti-nuclear movement has to relate to it.

3.1.1 Professionalisation and assimilation

Not much research has been done directly on changes of environmental movements during ecological modernisation (Mol 2000). However, Van der Heijden (1999) and Mol (2000) have studied how environmental NGOs are affected by and reinforce these processes. According to Van der Heijden (1999), ecological modernisation is to a large extent based on shared definitions of environmental problems and solutions between business, some sectors of

¹¹ This argument has been commonly used by representatives from the nuclear industry as a reason for an expansion of nuclear power (Anshelm 2000:380-386). However, the claim that nuclear power is a clean energy source in terms of greenhouse gases has been contested by scholars arguing that this claim is based on calculations of emissions only during electricity use, missing the rest of the lifecycle stages such as transport, mining of raw-materials, and waste storage (e.g. Shrader-Frechette 2011:35-68).

science, politicians and the environmental movement. He describes how certain POS facilitates such shared definitions, such as open political input structures and a strong capacity to implement policies (*ibid.*:210-215). Sweden, he argues, fulfils these requirements (*ibid.*), which is one possible explanation to the high degree of ecological modernisation that has been observed in the country by for example Anshelm and Hultman (2015).

When it comes to openness or closure of a political system, open input structures are characterised by for example a large number of political parties and the presence of links for intermediation between interest groups and decision-makers (Kitschelt 1986). Such structures tend to facilitate assimilative strategies among social movements, in contrast to closed structures which are likely to repress them (*ibid.*). “Assimilate” is in the Merriam-Webster dictionary (2017) defined as “to absorb into the cultural tradition of a population or group” or “to make similar”; I use the term to refer to the internalisation of hegemonic ideology by individuals, groups or institutions. Assimilation of the ruling actors’ agenda is an example of how non-coercive power works to continue hegemony (Ciplet, Roberts and Khan 2015:29). In the analysis I discuss a similar assimilation of ecomodern ideas by the Swedish anti-nuclear movement.

Ecological modernisation is not only a discourse, but further describes practices undertaken by contemporary Western societies - here referring to mainly Western Europe and the United States - in dealing with environmental problems (Mol 2000). During ecological modernisation, environmental state authorities have lost some of their formal power much because of the increasing role of the market, leading to arrangements where tasks previously carried out by state agencies are performed in collaboration with or fully by private or market institutions (Mol 2000). These changes have led to the development of certain strategies within the environmental movement; also actors of environmental NGOs have taken over some of the tasks that were formerly run by state agencies, such as information dissemination and education (*ibid.*) Further, environmental NGOs are often collaborating with market agents in for example developing and marketing “green” products, safe for “green consumption” (*ibid.*). Even though parts of the environmental movement since the 1980s in this way have gained access to decision-making and to some extent managed to introduce environmental issues on the political agenda, at the same time the movement has made less material successes such as shutting down of nuclear plants, as well as structural changes in the political systems (Van der Heijden 1999:202-203). Global issues such as climate change and depletion

of the ozone layer have entered into focus of the environmental movement, while local problems such as air and water pollution get less attention (*ibid.*).

Thus, during ecological modernisation environmental movements within Western societies have changed extensively. Since the 1980s, these movements have in general transformed from grassroots groups working for radical structural changes into institutional organisations who rather than challenging the neoliberal system work within it (Van der Heijden 1999; Mol 2000). In other words: the environmental movement has become increasingly deradicalised and institutionalised (Van der Heijden 1999:199-202). These changes imply an increased use of conventional actions, often carried out through institutional channels, and a decreased adoption of disruptive contention (Tarrow 2011:206-208). As previously stated, since the referendum there has been very little anti-nuclear mobilisation in Sweden (Diani and Van der Heijden 1994). Sweden is not unique; in fact, since the 1980s anti-nuclear movements worldwide have decreasingly been using confrontational strategies (*ibid.*). Again, Germany is the exception; following the nuclear accident in Fukushima in 2011, there were anti-nuclear mass mobilisations all over Germany, one of them the largest anti-nuclear action ever in the country (Van der Heijden 2014).

Parallel to these processes of deradicalisation and institutionalisation, in adaptation to the new tasks of the movement, activities of mainstream environmental NGOs tend to be led by a small group of professionals rather than a large group of grassroots (Van der Heijden 1999; Mol 2000). This has been referred to as a professionalisation (*ibid.*), meaning for instance that more of the movements' work is paid and requires education or long-time training (Tarasova 2017:47-48).

One can argue that a similar professionalisation has taken place within the Swedish anti-nuclear movement. For example, some NGOs now have their own scientific experts investigating reports by the government and SKB (Anshelm and Galis 2009). In her research, Tarasova (2017) found that local anti-nuclear groups are less professionalised than the NGOs. Correspondingly, in comparison to environmental NGOs, local groups in Sweden have less access to institutional channels, leading the first into more nonconfrontational strategies and the second into more confrontational actions (*ibid.*). This suggested professionalisation of parts of the Swedish anti-nuclear movement is discussed in the analysis.

3.1.2 Movement allies

Movement allies can take the form of cooperation with political parties, other social movements or public opinion (McAdam 1996). If a social movement perceives a presence of allies, this opens up possibilities for cooperation and thus opportunities to advocate the movement's agenda (Tarasova 2017:196-199).

Van der Heijden (1999:203-204) and Mol (2000:48-49) describe how in the late 1960s to early 1980s, environmental protection was only one part of a larger discourse challenging status quo, other parts being for example women's rights, human's rights, anti-nuclear, peace and democratisation. Thus, the environmental movement was connected to other social movements. This changed from the mid 1970s, when the different social movements became increasingly isolated to their specific issues and thus transformed into "one-issue movements" (Mol 2000:48). One possible explanation for this is the ecomodern belief that modern institutions only have to be slightly reformed in order to solve environmental problems, and not radically transformed which earlier was a common goal to several movements (*ibid.*). As I will discuss in the presentation of findings, such isolation has occurred also to the Swedish anti-nuclear movement.

Tarasova (2017) found that the Swedish anti-nuclear movement to some extent engage in international cooperation - a kind of ally - with activists from Finland and Denmark and German researchers, as well as information-exchange with Japan. Besides these collaborations, Tarasova considers the political opportunities in regards to alliances as limited (*ibid.*).

3.1.3 Masculinisation of environmentalism

As stated, recent changes to environmental discourse and politics can be seen as a part of ecological modernisation (or: ecomodernism). In general, ecomodernism connotes a switch from for example health and peace perspectives to a focus on economic rationality and technological solutions and have by some feminist scholars been described as a "masculinisation" of environmentalism (MacGregor 2009; 2010). With the term masculinisation, MacGregor (2009) argues that environmentalism in general has been subject

to a process in which masculine concerns are prioritised and men dominate as economic and scientific experts, which she means is partly due to the increased reliance on natural science as explanatory field of environmental problems. Using the anti-nuclear movement as an example, according to Clancy and Roehr (2003:47) women have criticised the professionalisation of anti-nuclear movements, arguing that this has led to men taking over strategic positions and thus limited opportunities for women to influence nuclear politics.

Ecofeminists have described how in modern Western societies, emotion is depicted as in contrary to reason, the first being assigned to the feminine and the second to the masculine; “reason” tend to be defined as economic (neoliberal) rationality while “emotion” includes aspects of ethics and moral concerns (Plumwood 2002:31-37). As stated, in ecomodern institutions and discourses natural science and technology dominate. Here, values defined as masculine are steering, such as reason and rationality, while feminine coded values such as ethics and emotion are understood as irrational and are thus marginalised (*ibid.*). Concerns of social rights, justice and care are labelled as emotional and feminine and therefore tend to be externalised from masculine dominated areas (Wichterich 2015). In the discussion of findings, I argue that such a masculinisation has occurred to the Swedish anti-nuclear movement.

Feminist theorists have recognised the “force of emotionality” in social movements (Tarrow 2011:153) and argue that while some emotions are mobilising, such as loyalty, reverence, anger and love, others can be de-vitalising, such as depression, despair and resignation (*ibid.*:153-155). Shaping emotions is an important aspect in creating solidarity among members of the movement (*ibid.*:142-143). At the same time, it has been noted that in masculinised discourses, emotion has no or little place (Plumwood 2002). The connection between mobilisation and emotion are briefly discussed in the analysis of this paper.

MacGregor (2010:230) derives the masculinisation of environmental politics to when climate change started to be more addressed during the late 1990s to 2000s, generating a move of environmental debate and action into institutions of science and policy-making. Here, men have dominated (*ibid.*). This is in contrast to the 1980s and 1990s when health, biodiversity and anti-militarism were among the main environmental concerns (*ibid.*). As noted, ecomodern responses to climate change focus on technological and (natural) scientific measures (e.g. MacGregor 2010; Hultman 2013; Anshelm and Hultman 2015). Social inequalities tend to be reinforced by environmental problems such as climate change, as well

as by climate change and energy policies which do not take these issues into account (MacGregor 2010). This points to the importance of integrating social scientific knowledge and femininity in energy discussions.

As stated, discourse analyses by Tarasova (2017) and Anshelm and Hultman (2015) suggest that the hegemonic *discourse* in debates on nuclear power (and climate change) is ecomodernism. Similarly, the hegemonic *masculinity* in the energy sector and in sustainability debates is one embracing values of ecological modernisation: ecomodern masculinity (Hultman 2013).

3.1.4 Ecomodern masculinity

Masculinities relate to each other hierarchically, hegemonic masculinity being in top of the order as the ideal in a certain context; although it does not have to be enacted by a majority of men or be even realistic (Connell 1987:298). The hierarchy between masculinities facilitates the dominance by those (men) fulfilling the hegemony and reinforces the subordination of women (*ibid.*). From a gender perspective it is therefore relevant not only to notice a masculinisation of for example environmentalism, but to specify what kind of masculinity this entails. The concept of hegemonic masculinity was first coined in the early 1980s, and has been influenced by a variety of fields since then¹² (Connell and Messerschmidt 2005:830-832).

With the concept of ecomodern masculinity, Hultman (2013) describes a masculinity which embraces traditional masculine values combined with a care for the environment, expressed through ecomodern ideas such as the ability of economic growth and techno-fixes rather than life-style changes to curb climate change. Further, many are the feminist scholars who have acknowledged the dominating relationship to nature that tends to be present in hegemonic masculinities (Pease 2016:25). Values of ecomodern masculinity are clearly expressed in this

¹² For instance, hierarchies between different masculinities have been manifested through writings of Angela Davis and other scholars of colour, highlighting the race prejudice in understanding power merely as a result of sex difference and instead stressing power relations between men (Connell and Messerschmidt 2005). Similar hierarchies have been shown through experiences of gay men being exposed to biases and violence from straight men (*ibid.*). Using an intersectional perspective goes beyond the scope of this thesis but could provide interesting insights to future research on the movement.

quote from *the Ecomodernist Manifesto* (Afasu-Adjaye *et al.* 2015:6), where nature should be subject to “protection” rather than “care”:

“As scholars, scientists, campaigners, and citizens, we write with the conviction that knowledge and technology, applied with wisdom, might allow for a good, or even great, Anthropocene. A good Anthropocene demands that humans use their growing social, economic, and technological powers to make life better for people, stabilize the climate, and protect the natural world.”

Thus, in the same way that the hegemonic discourse in environmentalism - ecomodernism - has been claimed to be masculinist, the hegemonic masculinity in environmentalism can be described as one embracing ecomodern values. Drawing on claims by Anshelm and Hultman (2015) and Tarasova (2017), arguing that an ecomodern discourse dominates debates on nuclear power in Sweden, I investigate how this might have affected the anti-nuclear movement in terms of use of arguments and practices.

4. Methodological approach

In order to explore my research questions, I have used a combination of methods, which is usually advantageous in social movement research (Klandermans *et al.* 2002:315-316). Primary data has been created through audio-recorded semi-structured interviews while secondary data has been collected through literary studies. I also got the opportunity to take part of the annual meeting of FMKK, during which complementary information was compiled.

4.1 Ontological and epistemological reflections

With most of my educational background in Earth Sciences, I recognise my ontological position as influenced by realist understandings of “reality” as something material and concrete, something true that to some extent can be found if we (literally) just dig deep and hard enough (see e.g. Sayer 2000). Adding “critical” to realism acknowledges my belief that while knowledge is constructed, the world is not - it exists independently of our knowledge of it (*ibid.*). Still, critical realism allows for the recognition that while certain aspect of the world

have essences, for example water, other things are socially constructed, such as gender (*ibid.*:87-91). Roy Bhaskar highlights the ability of critical realism to make a distinction between ontology and epistemology, which he argues many poststructuralists fail to do (Laclau and Bhaskar 1998:11-14)¹³.

Epistemologically, I share the view of constructivists claiming that knowledge is created by scholars and study participants during the process of research (Mir and Watson 2001). There is never neutrality. Drawing on this view, it follows that I see my interviewees as participants rather than study subjects, who take part of the knowledge production through the interviews (e.g. Leavy 2011:4-25). Further, I draw on the critical realist notion of knowledge being enmeshed in discourse (Sayer 2000:2). This notion is elaborated in discussions on findings, reflecting on hegemonic discourse and its consequences on what counts as important knowledge and what does not.

4.2 Interviews

I have interviewed ten persons in total, eight women and two men, all but three aged over 65 (see Table 1). The overrepresentation of older people is illustrating of the loss in mobilisation of new members; I actively asked to speak to young people as well but they are simply not that many. The high representation of women is partly due to my interest in women's history, and partly due to a similar tendency as that of ages: slightly more women than men are and have been engaged in anti-nuclear groups in Sweden, according to several participants¹⁴.

The interviews took place in February and March 2017. All were held in Swedish with the exception of one in English. Six of them were face to face interviews ranging from 40 minutes to almost two hours. The participants were free to choose location. Most of them took place in

¹³ Roy Bhaskar describes this using the semiotic triangle, which demarcates the signifier, for example a word or an image, and the signified, which is the concept that the signifier refers to, from the referent, meaning the actual object which exists beyond both the signifier and signified (Laclau and Bhaskar 1998:11-14). This, I mean, is relevant when discussing gender; we can discuss femininity and masculinity as something real in terms of our interpretations of material life, without claiming that these dichotomies exist *outside* of our gendered understandings.

¹⁴ An interesting side-note is that Tarasova (2017:78) in her research found it easier to locate male respondents than female (ratio 8 to 5) within the Swedish anti-nuclear movement, that is, the opposite to my case. One possible explanation to this is that while she focused on people in leading roles, I contacted both leaders and grassroots; which further illustrates the suggested professionalisation and masculinisation of the movement where men tend to get leading roles in NGOs.

their respective homes, although three of them were located in compound locals and offices where they were active. After the face to face interviews I conducted two short key-informant interviews and two additional in-depth interviews, each around 40 minutes over phone. All interviews except the two shorter phone interviews were audio-recorded and transcribed. The interviews all turned out differently depending on the participant and her relation to anti-nuclear activism, although they were based on the same interview guide covering opinions on nuclear power and first engagements against it, identification of allies, relation to other environmental or social issues, and experiences of power structures.

Some of the participants were selected by mapping down key organisations, individuals and groups who according to historical records were most active before and during the referendum in 1980, as well as by browsing internet and social media for groups active today. These persons in turn provided me with new contacts, and thus part of my sampling was done in a snowball-fashion. Since I am interested in stories which might not be prominent in history records, I have interviewed persons from different levels of the movement, some more grassroots and others in leading roles. Three are from FMKK, one from Milkas, two from the local group Värmland mot kärnkraft, one from the local group Rädda Tölö Kronopark, one from Kvinnor för fred, and one from a local group within Friends of the Earth - some active in more than one of these (see Appendix 1). Most participants are members of FMKK, however not all are active. In order to understand the relationship between politicians and activists/organisation workers I decided to also speak to two politicians who are outspokenly anti-nuclear, one active during the referendum campaign and one active today.

As for face to face interview method, I conducted them in a fashion somewhat between oral history and in-depth interview, making them more structured around a topic than what is common in the first, but still with more open-ended questions and room for the participant to steer the narrative with personal reflections than what is generally the case in the second (see Leavy 2011). Oral history interviewing is helpful to explore past periods of current movements and perspectives of those active back then (Blee and Taylor 2002:102), which this study aims to do. What further places some of the interviews within oral history is their aim to document firsthand accounts of social change (Leavy 2011:17-22), such as the evolution of the movement from the referendum until today.

A common feminist aim is to “unearth subjugated knowledges” by understanding the perspectives of the subjects of study (Leavy 2011:4-5). Especially since I am researching a social movement struggling within a field dominated by a discourse which embraces the opponents’ interests - pro-nuclear, status-quo - this aim is highly relevant. Oral histories can further reveal aspects that documents might conceal (Blee and Taylor 2002:102). Considering the relative invisibility of women’s stories in history records, oral history thus has even more to offer this study.

In addition to containing different aspects of oral history, each interview was treated as a key-informant interview to a varying degree (Blee and Taylor 2002:105-107). In key informant interviews the participant is treated as an expert, a source of insider information about the movement (*ibid*). Technically this combination of methods was achieved by asking more open-ended questions in the beginning of the interviews, in order to give room for spontaneous histories, while more fact-based questions in general were saved to the end.

Table 1. The participants (pseudonyms) and their engagements in the Swedish anti-nuclear movement.

Name (pseudonym)	Time of engagement in movement	Main scale and type of engagement	Age group (2017)	Gender ¹⁵	Type of interview
Elisabeth	Today and during the referendum	International National Activism	80-90	Woman	Face to face, 70 mins
Ulla	During the referendum	National Party politics	80-90	Woman	Face to face, 100 mins
Maria	Today and during the referendum	Local Information to the public	70-80	Woman	Phone, 40 mins
Sigrid	Today and during the referendum	National Organisational, information to the public	80-90	Woman	Phone, 20 mins
Lars	Today and during the referendum	National Local Activism, administration	70-80	Man	Face to face, 65 mins
Eva	Today	Local Activism Information	30-40	Woman	Phone, 40 mins
Ingegerd	Today and during the referendum	Local Organisation Information to the public	60-70	Woman	Phone, 15 mins
Ben	Today and after the referendum	National Organisation information etc	60-70	Man	Face to face, 85 mins
Isa	Today and during the referendum	International National Information Activism	60-70	Woman	Face to face, 60 mins
Karin	Today	National Party politics	40-50	Woman	Face to face, 40 mins

¹⁵ See chapter 1.4 *Disclaimers before reading*.

4.3 Ethical considerations and reliability

Not wanting to steer the participants directly into specific topics but see what issues they themselves would bring up, I decided not to tell the participants the full aim of the study until after the interviews. The technique I was using - narrowing down into specific topics a while into the interview in case the issues had not been brought up by the participants - demands full information to be given *after* and not *before* the interview (Kvale and Brinkmann 2009:77-96). What they knew beforehand was that I study the change in Swedish nuclear resistance - I did not say "movement" since I first wanted to see whether or not they referred to themselves as a movement or not.

The withholding of exact purpose and standpoint of the study - the feminist perspective and my interest in discourse - was done with two exceptions: firstly, since I contacted the first participant (Ulla) early on in the process, before I had decided on not sharing my exact focus before the interviews, I told her about the feminist perspective. I noted in the interview that she started to reflect upon gender issues, possibly more than she would otherwise have done, and thus I had already steered her story a bit. Secondly, in case any intended participant asked, I let her know that I am myself against nuclear power - in some cases this standpoint of mine was actually a condition for them to agree on an interview with me. Also, it might have made these persons feel safer and enabled them to share their thoughts more freely. According to some scholars, sharing a common standpoint with the interviewee allows the researcher to gain empathy and trust from him (Blee and Taylor 2002:97).

Interviewing people with an aim to analyse how they relate to climate change and what kind of discourse they are using, without them being fully aware of this, raises ethical questions of approval - can I really take their agreement to participate in my research as *informed* consent, when they in fact do not know the full aspects of the study? Having reflected upon this, I finally came to the conclusion that this would be the best way to go about in order to be able to get reliable material - would they know exactly what aspects I was looking for, I would likely have steered their answers and they might have restricted themselves and their stories. To compensate for this and be transparent to the participants, they were sent the thesis before submitted, allowing them to oppose to my interpretations of the material. Considering the sometimes sensitive information that arose during the interviews, I further decided to give them pseudonyms.

As is routine in oral history interviews (Blee and Taylor 2002:102-103), I cross-checked factual claims in literature and/or with other participants. The importance of this process is partly due to the fact that memory often fails us, and especially since several interviews covered events of over 40 years ago, this is crucial for the reliability of this study. Further, during one of the interviews the participant at several times made claims of being one of the founders of a well-known political group, a claim that various sources contradict. At the day of our interview she also showed difficulties in remembering recent events and told me about slight memory problems. Due to this, I decided to use her interview not as a source of factual information, but rather as a personal narrative and an account of belief systems, discourse and other aspects of the movement which are less tied to facts.

As for consequences to the anti-nuclear movement, it is my hope that the findings of this thesis can provide its members with insights of the relationship between ecological modernisation and the decline in mobilisation, as well as reflections on how this hegemonic discourse can be countered partly by using arguments and ideas of their own.

4.4 Delineation of research and constraints

When discussing the concept of masculinity, I focus on hegemonic masculinity while hierarchies of masculinities are not considered. This is due to my interest in the relationship between hegemonic discourse, hegemonic masculinity and how these phenomena affect the movement. Looking at alternative masculinities and femininities would be an interesting approach to go more into depth of how participants are doing gender within movement activities, as well as whether certain masculinities and femininities are more consistent with an anti-nuclear agenda than others. However, such an approach goes beyond the scope of this study.

The Swedish anti-nuclear movement is not an isolated phenomenon. Anti-nuclear movements are currently evolving in diverse ways in different geographical areas. In this study I focus on the Swedish context, although in order to strengthen my findings, similar studies could be carried out in for example Germany, where the anti-nuclear movement is stronger (Van der Heijden 2014; interview with Eva).

The choice to do a few semi-structured rather than many structured interviews limits my opportunity to compare the responses (Blee and Taylor 2002:93), although I consider the depth and breadth of the different semi-structured interviews more valuable for my aim to gain an understanding of movement participants' perception of the movement before and today. Further, I did not conduct several interviews with one and the same participant(s), which would be a common practice in for example oral history interviewing. Being able to hear a variety of voices from different parts of the anti-nuclear movement - in-depth - felt like a necessary approach when studying a fairly unstudied movement. However, in future research both surveys with a larger number of participants as well as several in-depth interviews with the same person would be helpful to strengthen some findings and to gain deeper perspectives on the changes to the movement experienced from the inside.

5. Discussion on findings

The participants give different views on in what ways the anti-nuclear movement has changed, some offering theories on why it has done so. The main changes described directly by participants or illustrated indirectly through accounts of experiences are: (1) new funding opportunities to participate in the nuclear waste management investigations; (2) the hiring of professionals in some NGOs; (3) very technical and extensive documents from the nuclear industry and SKB which some parts of the movement deal with; (4) negative or lack of response to moral arguments against nuclear power; (5) a sense of politicians "owning" the issue of nuclear power since after the referendum, alternatively a decrease in interest of it due to the promise of a phase out by 2010; (6) difficulties to engage young people, and those who are environmentally concerned seem to rather join the climate movement; (7) lack of media attention towards anti-nuclear actions, and difficulties to get anti-nuclear opinion pieces or articles accepted by mainstream newspapers; (8) a decreased awareness and understanding of the link between nuclear power and nuclear weapons, both within the movement and overall; and (9) a loss of solidarity between different social movements which were earlier connected.

In order to answer my research questions, I first discuss the isolation of the anti-nuclear movement from other social movements (aspect 9). Secondly, I focus on the funding and participation of parts of the movement in the process to review SKB's application as well as

the parallel hiring of professionals and changes in tasks (aspects 1-3 above), referred to as a professionalisation of the movement. Lastly, I examine the use of masculine rhetoric and prioritising of masculine areas of knowledge, referred to as a masculinisation, which to a large extent overlaps with the professionalisation (aspects 2-4). These changes are discussed through a framework of ecological modernisation, both as a hegemonic (masculine) discourse and as certain transformations of political opportunity structures, illustrated in Fig. 1.

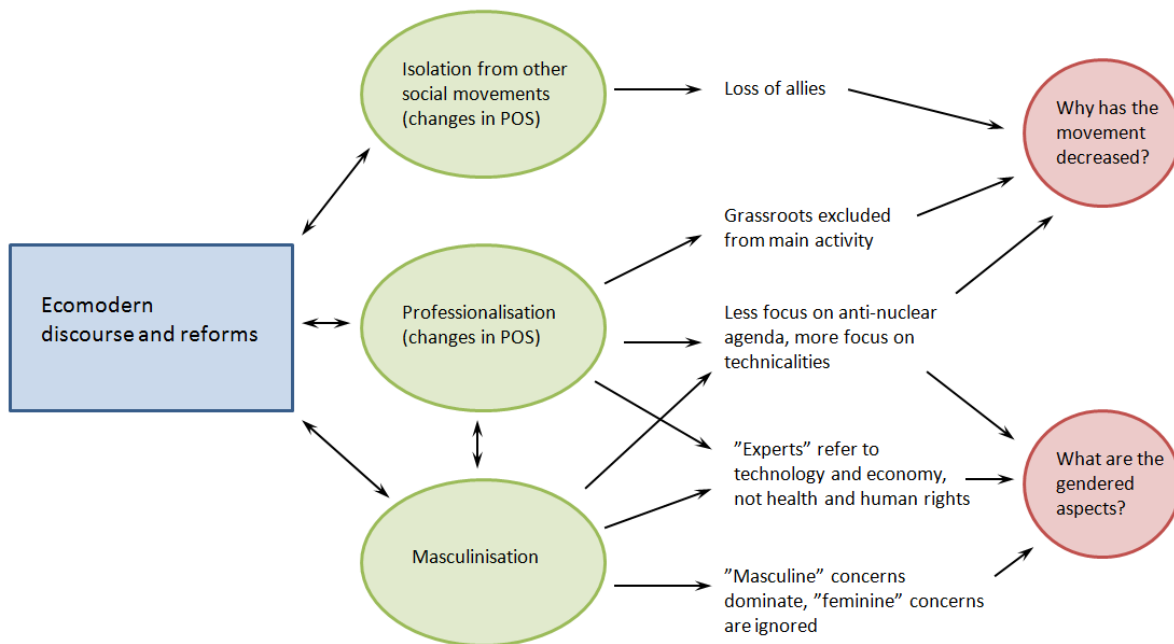


Fig. 1. Map showing influences on the Swedish anti-nuclear movement by ecomodernism, both as hegemony in energy debates and as reforms affecting political opportunity structures (POS). Three main changes are pointed out (green ellipses). Concrete outcomes of the changes and relations between them are indicated by arrows. The arrows further show what part of the change that can provide an answer to which research question (red circle).

Regarding the other aspects, the increased uptake of environmental issues in political parties' agenda can be seen part of ecological modernisation but will not be in focus of my analysis. The perception that young people are difficult to engage is possibly a symptom of the depoliticised issue of nuclear power, but is beyond the scope of this thesis. Regarding media attention, Tarasova (2017) gives an extensive discussion on this in relation to discursive opportunities and will not be in focus of my analysis. The decreased understanding of links between nuclear power and nuclear weapons can be seen as a symptom of the ecomodern transformation of movements into "one-issue movements"; however this specific connection is not discussed in depth here.

5.1 Ecomodern discourse

The ecomodern discourse is clearly present in arguments of most participants. Although, some of them shift between rhetoric characteristic of ecomodernism and of counter-discourses throughout the interviews, and a few did not express ideas of ecological modernisation at all. Whether the use of ecomodern ideas is due to a drizzling down of this discourse from NGOs within the movement, as suggested by Tarasova (2017), an adaptation to the overall energy and environmental debate in which the ecomodern discourse is hegemony (e.g. Anshelm and Hultman 2015), or even tendencies which have always been present in the movement, cannot be determined by this study. However, participants' accounts give reasons to believe that the ecomodern discourse is relatively new within the movement.

Among the ecomodern rhetoric articulated by the participants is optimism towards technology as solution to environmental problems without having to challenge status-quo. According to Ulla, renewable technologies such as solar panels are promising because of their potential to give Sweden clean energy, economic growth and employment:

“Today solar energy is so cheap that the climate problem can be solved while prosperity grows, no sacrifices needed. There is a house which roof is made out of solar panels! It's cheaper than a regular roof. The free energy from the sun makes the house self-sufficient. And the production of such houses gives employment.”¹⁶

This is not to say that only ecomodern discourses are pro technology; small-scale technologies are highlighted as solutions even within more radical counter-discourses. However, the stressing upon technology as a means to solve environmental problems while simultaneously fostering economic growth is characteristic of ecomodernism (Anshelm and Hultman 2015). Another ecomodern idea is that of green consumerism, which one of the participants, Ben, expresses trust in as a way to shift from nuclear power to renewable energy:

¹⁶ Translated from Swedish by the author: “Solenergi är nu så billig att klimatproblemet kan lösas och välståndet rent av öka utan uppoffringar. Det finns ett hus som har solceller till tak! Det blir billigare än ett vanligt tak. Huset blir självförsörjande med gratis energi från solen. Och produktionen av sådana hus ger sysselsättning”.

“In Sweden, you can now choose your electricity supplier. So if everybody chose green electricity, then nuclear power companies would go out of business”.

The use of ecomodern rhetoric by members of the movement might be new, but anti-nuclear debaters have always been answered with technological optimism. This is illustrated in following quote by Ulla, describing a discussion with a fellow minister in the government some years before the referendum:

“My question to him was: “do we have the *right*, moral right, to burden future generations with something which might not be possible to manage?” And then he answered: “oh, the engineers will come and find solutions””¹⁷.

5.1.1 Climate change versus nuclear power?

As stated, within the ecomodern discourse climate change is acknowledged as the main environmental problem of our time (Anshelm and Hultman 2015), and the hegemonic discourse in energy debates is a type of ecomodernism which considers nuclear power as a necessary means to curb climate change (*ibid.*; Tarasova 2017). Thus, it is reasonable to assume that climate change is an issue that anti-nuclear activists must position themselves in relation to. Accordingly, during the interviews almost all participants brought up the topic of climate change without having been asked directly about it; it was evident that they are both aware of this environmental problem and deeply concerned about it. One of them, Eva, reflects upon the framing of climate change as a reason for using nuclear power:

“If we have a climate problem, we should not replace that problem with another problem. As nuclear power is. Rather, there *are* other possibilities where we can have neither nor”¹⁸.

¹⁷ Translated from Swedish by the author: ”och min fråga till honom var: ”har vi *rätt*, moralisk rätt, att belasta kommande generationer med nånting som vi, som kanske inte går att klara av?”. Och han svarade då: ”åh, teknikerna kommer och hitta lösningar”.

¹⁸ Translated from Swedish by the author: “Om vi har ett klimatproblem, då ska vi inte ersätta det problemet med ett annat problem. Som kärnkraften är. Utan vi har - det *finns* andra möjligheter där vi kan ha varken eller”.

The “either nuclear power or else climate change”-argument present in nuclear power debates is by several participants perceived as a constraint when discussing nuclear power. The active politician, Karin, describes how the dominance of climate change in energy debates and politics has made anti-nuclear opinions harder to express:

“It [the issue of nuclear power] is related to how you look at the energy issue, of course, it has very much become a climate question. The energy issue is a climate issue, and therefore, it has become harder to discuss nuclear power. It has kind of been pushed to the background”¹⁹.

Several of the participants claim that it is due to lobbyism that nuclear power is seen as a solution to climate change. Only one, Karin, believes that there might be a need to continue using nuclear power to some extent in order to avoid a climate catastrophe. At some point soon it must be phased out, she argues, but actions to curb climate change might have to slow down the decommissioning process in order not to force Sweden into using other energy sources that produce more greenhouse gases.

My findings are thus in line with claims that the hegemonic discourse in energy debates is one of ecomodernism and beliefs that nuclear power is necessary to some extent. However, with the exception of the active politician, the participants differ from the hegemonic discourse in that they do not consider nuclear power necessary to curb climate change. While some of them turn to another type of ecomodernism highlighting renewable technologies and innovations such as “climate friendly” cars rather than nuclear power as solutions - still within current institutions - others express different discourses suggesting the need for large system changes, decentralisation, the end of capitalism, and a turn away from “too much” technology.

5.2 An isolated movement

The research by Mol (2000) and Van der Heijden (1999), noting how the environmental movement has transformed from being connected to other social movements into being more

¹⁹ Translated from Swedish by the author: “Den är ju relaterad till hur man ser på energifrågan, såklart, så den är ju stor och den har ju blivit väldigt mycket också en klimatfråga. Energifrågan är ju en klimatfråga, och därför, det har ju gjorts att det har blivit svårare att diskutera kärnkraft. (...) den har liksom tryckts under lite i bakgrunden.”

of a “one-issue movement” focusing only on environmental problems, is illustrated in several of my interviews. One of the participants, Lars, describes how in the early days of the anti-nuclear movement, during the late 1960s and 1970s, nuclear power was “a piece in a larger palette of social issues”. Further, some claim that there was a large overlap of people engaged in different movements such as the peace movement and the more general environmental movement. During these years, most environmentalists were anti-nuclear, according to Lars. He further describes 1968 as a year when things “exploded” following growing criticism towards society all over Europe in the 1960s, after which political parties joined the movement’s cause:

“The uprising against society, the educational system, what the hell you want, it was about *that*, and nuclear power, when it became an issue (...) ... Then the Centre joined, and the Left, or the Communists at that time (...)”²⁰.

Today, the solidarity between the anti-nuclear movement and other social movements to a large extent seems to have disappeared. As stated, this change follows a general development of social movements in ecomodern Western countries (Mol 2000). From a POS perspective, the loss of allies in terms of other movements limits the anti-nuclear movement’s opportunities to reach a wider audience with their agenda and thus engage more people, and can be interpreted as one explanation to the decline of the movement. Here my findings are in line with Tarasova (2017), who also argues that the anti-nuclear movement have limited amount of allies.

Despite the pessimistic accounts of the lack of solidarity between movements in Sweden, some of the participants told me about collaboration between parts of the Swedish anti-nuclear movement and anti-nuclear or environmental groups abroad. For example, members of the Swedish anti-nuclear movement have reached out to international groups such as the German Ende Gelände as well as anti-nuclear groups in Finland and individuals from different countries to organise civil disobedience actions together. One of the participants, Isa, further speaks about a meeting this year, where she as an anti-nuclear and peace activist discussed and exchanged knowledge with people from the climate movement, the feminist

²⁰ Translated from Swedish by the author: “Upproret mot samhället, utbildningssystemet, vad fan du vill, alltså det handlade om *det*, och kärnkraften, när den liksom vart en fråga. Det var väl ... så hakade ju Centern på då, och Vänstern, eller kommunisterna på den tiden (...)”.

movement, the LGBTQ movement, and the peace movement. She argues that solidarity between movements is crucial:

“We have to join forces, several movements. We have to teach each other, we have to educate the public, we have to understand, tell each other, and we have to cooperate. (...) I see it as a Hydra. The body of a Hydra. That's the capital. The neoliberalism. The arms are: nuclear power, military industry ... (...) And almost every issue is in the end located in that Hydra, so I think we are working for the same thing but we could cooperate much, much better”²¹.

Thus, findings indicate that even though the anti-nuclear movement has become more isolated during processes of ecological modernisation, there are still elements creating solidarity between social movements.

Allies can also be political parties. When I asked the current politician, Karin, whether they have any contact with the anti-nuclear movement, she answered that they listen to “the experts” such as MKG and Milkas. However, during the annual meeting with FMKK some members described how they over and over again send letters to politicians asking for a meeting, but keep receiving answers that the politicians do not have time to meet them. These findings indicate that experts in the anti-nuclear movement's professionalised NGOs have a larger access to allies in terms of politicians than the grassroots do.

5.3 Political opportunities lead to professionalisation

The professionalisation of environmental movements has been noted by several scholars (e.g. Van der Heijden 1999; Mol 2000). The findings of this thesis strengthen those of Tarasova (2017), claiming that the Swedish anti-nuclear movement follows this trend.

Since 2006, following a decision in 2004, NGOs have been able to apply for funding from the Nuclear Waste Fund to finance their work on the process to review SKB's application. These

²¹ Translated from Swedish by the author: “Vi måste gå ihop många rörelser. Vi måste lära varandra, vi måste folkbilda, vi måste förstå, berätta för varandra, och, vi måste samarbeta. (...) Jag ser det hela som en Hydra. Hydrans kropp. Det är kapitalet. Nyliberalismen. Armarna är: kärnkraft, militärindustrin ... (...) Och nästan varenda fråga har vi i slutändan i den där Hydran, så jag tror vi arbetar för *samma* sak men på ... och vi skulle kunna samarbeta mycket mycket bättre”.

are new political opportunities which have changed structures and practices within the anti-nuclear movement. The two coalitions that were formed in order to apply, Milkas and MKG, hired professionals - both of them men - one with a Ph.D in Ecology and Environmental Protection and MA in Environmental Studies (Milkas), and one with a Ph.D in Science, Technology and Global Security and a M.Sc in Engineering Physics (MKG). These changes can be seen as part of the professionalisation.

The professionalisation is expressed in both rhetoric and actions, for example through the use of (technical) expert language, participation through institutional channels, and a change in focus from direct anti-nuclear agendas towards nuclear waste management and other technicalities. In following sections I discuss how this professionalisation affects the movement in terms of inclusion of grassroots and priority of agendas.

5.3.1 From grassroots to top-down

As Tarasova (2017) points out, the professionalisation in terms of demands on technical expertise has not drizzled down to the local anti-nuclear groups. This is confirmed by my participants; leaders and members do not need any education or formal training to be a part of them.

However, according to some participants the dominant activity of the movement is now participation in the process to review SKB's application and activities linked to it, such as writing technical documents. Not all parts of the movement participate in these processes. According to Ben, much of the material they are investigating from the Swedish Radiation Safety Authority, SSM (Strålsäkerhetsmyndigheten), is not accessible to people without technical knowledge:

“It's technical, it's esoteric, and most people don't have the background or aptitude, or even interest to try and understand it”.

Since members of the local groups do not (necessarily) have technical expertise they are thus excluded from one of the main activities that the movement engages in. What Ben is describing can be interpreted as a shift towards “expert identity”, in which scientific,

analytical language is prominent. One of these documents, the application to build a waste facility at Forsmark, he describes as something almost unmanageable:

“The application to build a waste facility, up at Forsmark, (...) must be about one and a half meters if it's stacked up right now. Maybe two meters high if you take all of it. (...) This is the document about the application - *just* the application that the industry has submitted is over a meter wide.”

According to the anti-nuclear information site nonuclear.se, the application to build the final storage facility KBS-3 is in total approximately 9000 pages long, 2000 of them being the same since applications are sent to both the Environmental Court and to SSM (Goldstick 2011).

When only the most technically knowledgeable members of a movement participate in one of the main tasks, what happens to the movement? Ben argues that the hiring of professionals has changed the structures of decision-making within the movement, from collective decisions by grassroots to governing in a top-down manner. This is strengthened by other participants who express a trust in “the experts”, who are often invited to speak at their meetings. Maria describes the professionals:

“They work amazingly. And are *very* efficient. And have everyone's attention, you know. You listen to them because they are the right people and they are very, very knowledgeable”²².

Her trust in “the right people”, those with the “right” education, can be interpreted as a part of the professionalisation of the movement and an adaptation to hegemonic discourse which stresses technological and economic knowledge, manifested in the new “expert identity”. Thus, the opinions of the professionalisation of the movement vary between the participants, and in several cases also within one and the same person. For example, the same participant who is critical towards the NGOs hiring professionals to investigate the nuclear waste

²² Translated from Swedish by the author: ”Dom är ju, dom är alltså ... jobbar fantastiskt. Och är så *himla* duktiga. Och har tror jag liksom, allas öron sådär va, du vet. Man lyssnar på dom för att dom är ... dom är rätt personer och dom är väldigt, väldigt kunniga va.”

management, Ben, expresses pride in scientific experts active within other parts of the movement:

“We have one of the most qualified geologists in Sweden who is working in the anti-nuclear movement. And his merits, in the geology field, are unsurpassed in Sweden. He is one of the most knowledgeable people. And he’s documented problems with the earthquake risks”.

Thus, my findings indicate that the professionalisation of NGOs within the movement has changed the movement structure into being more hierarchic, and that one of the main activities excludes anyone who does not have technical expertise. Returning to the definition of a social movement which I am aligning to: “a social movement is a network of *informal interactions between a plurality of individuals, groups and/or organizations*, engaged in a political or cultural conflict, on the basis of a shared collective identity” (Diani 1992:13; my italics); these formalised tasks of experts within the professionalised NGOs as well as the hierarchic tendencies within the movement indicates a loss of what characterises a social movement. That is, there are reasons to believe that the professionalisation is part of the cause of the decline to the movement.

5.3.2 From emotionality to technicality

Scholars have noted that professionalisation of social movements tends to be followed by a change of action repertoires. Tarasova (2017) argues that actions of the anti-nuclear movement, like other social movements with a high degree of professionalisation, are assimilative rather than confrontational. Similarly, I mean that in the case of the Swedish anti-nuclear movement, the turn to technical arguments of nuclear power and nuclear waste repository as well as formal interactions with the nuclear industry can be considered assimilation of ecomodern hegemony. Illustrating of this is the answer Maria gives on the question of what the goal of today’s anti-nuclear movement is; instead of replying “decommissioning nuclear power”, she critiques the technique for nuclear waste repository currently suggested by SKB:

“Our goal is of course to ... in a way we have to deal with this waste. But that method that you have, the KBS-method from SKB, it's *completely* insane, and the thing is that you might be allowed to store this during a longer time, until you find a method that is safe.”²³

Most participants of this study tell a similar story. Ben accounts for a decrease in grassroots' civil disobedience actions during the last decades. He argues that the decrease in confrontational actions is because of a feeling of apathy within the movement, a feeling which he means is due to the participation in the process to review SKB's application. He describes the turn from confrontational to assimilative actions:

“Initially they [the nuclear industry] didn't want to have anything to do with us, like in the eighties and so on. They avoided us like the plague. But now, they want to invite us, and they want us to come, they want us to come to meetings. Because then we blow off steam. And it's over. They then don't have to worry about us doing civil disobedience and getting massive headlines. (...) And it's quite smart. To welcome the protesters in, and let them say what they want to say, treat them with respect ... and then they feel satisfied, that they've communicated their message, and they go back home”.

Similarly, Eva describes how she first got involved in the Swedish anti-nuclear movement after the Fukushima nuclear disaster in 2011, astonished by the lack of mobilisation following the accident:

“In 2011, in March, the nuclear power plant in Fukushima bashed. And well then a couple of us were thinking, “oh, now we need to get out in the streets and demonstrate against nuclear power”. (...) And then, we sat and kind of waited and thought, “but someone will surely summon a call, or make a call for a manifestation. When something like this happens, you know it's really, really serious, and then it's just out on the street. At least that's what I thought. And

²³ Translated from Swedish by the author: “Nej, vårt mål är naturligtvis att ... på nåt sätt måste ju vi ta hand om det här avfallet. Men den metod som man då har... KBS-metoden då från SKB här, den är ju helt vansinnig, och grejen är det att man kanske får lagra det under längre period, tills man hittar en metod som är säker va.”

so, I checked the internet and such, and looked for someone making a call, but no one did. So at last I made a call myself.”²⁴

Despite the general decrease in confrontational, disruptive actions, local anti-nuclear groups are still holding anti-nuclear manifestations. Three of the participants further account for recent peaceful actions at nuclear power plants abroad, which are clearly confrontational actions, some of them leading to arrests. Civil disobedience actions carried out by Swedish anti-nuclear activists are today mostly performed by local groups protesting against plans to build nuclear power plants in the Bothnian Bay area, such as the current plans in Pyhäjoki in Finland. There are also more independent activists who collaborate with local groups and activists abroad. One of these activists, Isa, describes an encounter with the police when breaking into Pyhäjoki nuclear power site for a peaceful action in April 2016 (“blocking” and “wings” refer to certain formation strategies in civil disobedience actions):

“So I’ve been in there [in custody] ten times. And then I blocked. We’ve got wings and such. But always, always non-violence. We have been really careful. But then the second day, the 28th of April, the first was the 26th, that was symbolic ... the Chernobyl day the 26th of April. (...) The first day I was blocking (...) and they [the police] just took us. They took thirty-seven persons.”²⁵

Thus, still today the Swedish anti-nuclear movement have radical grassroots’ elements, even if they are not the core of the movement.

As stated, the professionalisation and the participation in the process to review SKB’s application seem to reinforce the increased focus on technical details about the nuclear waste management rather than direct anti-nuclear agendas. However, this is not only a symptom of

²⁴ Translated from Swedish by the author: “Tvåusenelva, i mars, då small det till i kärnkraftverket i Fukushima. Och då var vi ju några stycken som tänkte, ”oj, nu måste man ju ut på gatorna och demonstrera mot kärnkraft”. (...) Och då, då satt vi och väntade liksom och tänkte ”men nån kommer säkert å kalla till upprop, eller göra ett upprop och kalla till manifestation”. Asså när en sån här grej händer så vet man ju att liksom, nu är det riktigt riktigt allvar, liksom, och då är det ut på gatan som gäller. Tänkte i alla fall jag. Så, man kollade igenom internet och sådär, och letade liksom efter nån som gör ett upprop, och det gjorde ingen. Så till slut så styrde jag själv ett upprop.”

²⁵ Translated from Swedish by the author: ”Så jag har suttit tio gånger där [i häktet]. Å då har jag blockat. Vi har vingar å sånt där. Men alltid, alltid icke-våld va. Vi har vart jättenoga. Men den andra dan, tjugooåttonde april, första var tjugosjätte det var symboliskt ... Tjernobyldagen den tjugosjätte april då. (...) Första dagen blockade jag (...) och dom [polisen] bara tog oss. Dom tog trettiosju personer.”

the decrease of the movement or a change in action repertoires. Moving emphasis from the issue that is the foundation of the movement - the unconditioned phasing out of nuclear power - towards technical discussion with the nuclear industry and politicians, seems to remove some of the emotional attachment to the anti-nuclear agenda for the participants. Apart from the above account of a feeling of “apathy” within the movement, Lars admits that a big part of today’s engagement is done by “routine”.

Further, the hegemony of ecomodernism and its emphasis on reason rather than emotion and the related decrease in confrontational, emotional actions are changes which suggest an overall loss of emotionality within the movement. Almost all of the participants express emotions such as resignation, a feeling which has been connected to low degrees of mobilisation in comparison to for example anger, which is voiced by only two of the participants. One of them, Elisabeth, clearly expresses a mix of anger and disappointment on people who she means do not engage in anything political:

“I’m actually a really inappropriate interview victim because I’m so furious I only feel like fighting. Well I am! Damn, they are bringing us to hell and nobody shows any resistance! Nobody.”²⁶

Following feminist notions of the importance of emotions for mobilising social movements, these indications of feelings of resignation can provide an explanation to the decrease in mobilisation. More research on the role of emotions within this movement could provide insights in what motivates anti-nuclear activists of today, for example by comparing expression of emotions of still radical elements to professionalised parts of the movement.

5.4 An ecomodern masculinisation

As discussed above, while the environmental NGOs within the movement have been professionalised, the local anti-nuclear groups have not. However, looking at discourses gives another impression.

²⁶ Translated from Swedish by the author: “Jag är egentligen ett väldigt olämpligt intervjuoffer för jag är så förbannad så jag har bara lust att slåss. Jomen jag är det! Faan alltså dom för oss åt helvete och ingen gör motstånd! Ingen.”

Tarasova (2017) found that in terms of rhetoric, the local groups have adopted some of the professionalised language, the so called “expert voice” situated within ecomodernism, due to contacts and knowledge exchange with the NGOs. Similarly, several participants in this study account of knowledge exchange during meetings and actions of local groups to which representatives of the NGOs are often invited to speak. Tarasovas’ argument is partly strengthened by my findings and partly contradicted; as stated in above sections, while most of the participants use ecomodern rhetoric, others rely more on arguments contrary to this discourse.

I argue that the different aspect of the professionalisation is a symptom as well as a driving force of a masculinisation of the Swedish anti-nuclear movement, drawing on MacGregors’ (2010) notion of masculinised environmental politics. The masculinisation - or *ecomodern* masculinisation to be more specific - can be exemplified with the prioritisation of professionals from male dominated fields of research, the hegemony of a masculine discourse (ecomodernism), resulting in invisibility of feminine arguments and interests.

In this section I discuss gendered aspect of the hegemony of ecomodern discourse and the related professionalisation of the anti-nuclear movement. Counter-hegemonic discourses are briefly discussed in the following section.

5.4.1 Experts in technology, not human rights

Important to note is that the professionalisation of social movements in an era of ecological modernisation refers to technical and scientific expertise, and dedicating all focus on these fields naturally leads to exclusion of other fields of knowledge. Many have observed the lack of attention to social aspects to environmental problems and how such ignorance risks increasing existing social inequalities (e.g. MacGregor 2010). Looking at this from a gender perspective, the prioritised fields of concern - technology, natural science and economy - have been described as masculine areas, traditionally dominated by men, while excluded fields are those characterised as feminine and more dominated by women, such as health and human rights. This, I argue, is an expression of a masculinisation of the movement.

5.4.2 Exclusion of feminine fields of knowledge and concerns

The participants agree that in order to be respected and heard, “rational” arguments about economic inefficiency and technical flaws should be used while moral arguments better be avoided. This can be explained by claims of Anshelm and Hultman (2015) that ecomodernism is hegemonic in energy and sustainability debates. Eva describes that before the referendum arguments of risks with nuclear power was most commonly used by the anti-nuclear movement, while today arguments about nuclear power’s energy inefficiency is more occurring since it attracts the public:

”Today it’s more this argument that, yes but we *have* renewable energy and it *works*, and we do *not* have to pull down on our living standards just because we decommission nuclear power. That’s an argument which works best today.”²⁷

The hierarchy where masculine concerns are higher valued than feminine interests is further illustrated by the participants’ accounts of being “blamed” of emotionality or irrationality when adding concerns of health, human rights and intergenerational justice to energy debates. Further, Karin accounts for discussions where those arguing for a phase out of nuclear power were blamed of simply not *understanding* energy politics.

Blaming anti-nuclear activists for emotionality, irrationality or ignorance is not new. Feminists within the referendum’s Line 3 argued that nuclear power was a masculinist and destructive project. In turn, they were accused of being irrational and emotional and were warned that women would lose their jobs if nuclear power was shut down (Anshelm 2000:259-299). For example, as reply to a debate article by Maria Bergom-Larson demanding women’s concerns to be heard, Carl-Eric Wikdahl who was the security manager at Oskarshamn’s nuclear power plant questioned women’s knowledge of the energy source: “I strongly doubt that women in Sweden would seriously want to phase out nuclear power would they be correctly informed about the full consequences of such a decision” (Wikdahl 1978, my trans.).

²⁷ Translated from Swedish by the author: “Idag är det mer det här argumentet att, ja men vi har förnybar energi och det fungerar, och vi behöver inte dra ner på vår levnadsstandard bara för att vi avvecklar kärnkraften. Det är ju ett argument som drar mest idag.”

If a typical (ecomodern) masculine concern is reliance on technology and science, typical feminine concerns are often described as care of human rights, such as access of shelter and food, and the right to a healthy environment (MacGregor 2010). The higher status of masculine concerns is not new in energy politics; for example the previous politician, Ulla, accounts for the many times she did not feel she could talk about moral aspects of nuclear power because “it didn’t feel as if that was politics”. However, the spread of this discourse to the movement seems to be a rather new phenomenon.

Here, the study by Zelezny *et al.* (2000) is interesting to highlight. Their study shows a connection between femininity and environmental concerns as well as a higher will to make changes to one’s lifestyle for the sake of the environment. Speculating on this, it is easy to draw the conclusion that allowing feminine concerns to be at least part of the core of an environmental movement, such as the anti-nuclear movement, would enhance the likelihood of demands on transformative changes. As suggested by several environmentalists, gender equality advocates and scholars in for example (Ecological) Marxism and ecofeminism, transformative changes are what we need to curb climate change and other environmental problems, since those are embedded in the political and economic (capitalist) system (see e.g. Merchant 1994; Van der Heijden 1999; Layfield 2008:129-133).

5.5 Counter-hegemony and evolution of discourse

I have argued that there has been a professionalisation and masculinisation of the Swedish anti-nuclear movement. Even so, there seems to be elements within the movement expressing feminine values such as concerns of ethics and morality. Not all of the participants use rhetoric characteristic of ecomodernism; several of them argue completely or partly in line with counter-discourses. Some of them describe the current human-nature relationship as destructive, expressing a wish for a more holistic and collaborating exchange. For example, Ulla criticises the human view on nature as something mechanical, while in fact we should “cooperate with nature”:

“Because nature is amazing if you work with it instead of trying to crush it in different ways, and poison it.”²⁸

Several participants express ideas of environmental justice, both international as well as intergenerational in Sweden, values characteristic of for example ecofeminism (Gaard 2011) and eco-socialism (Anshelm and Hultman 2015:81-96; Ciplet, Roberts and Khan 2015:25-26). Ben considers environmental justice when talking about the fact that most people living near Canadian uranium mines are Indigenous, Maria mentions the “slave-like conditions” for workers in uranium mines in Namibia where a large part of Swedish uranium is mined, while both Isa and Elisabeth account for a disproportionately large damage by the Chernobyl accident on Sami people's livelihood in the north of Sweden, which they mean was not enough compensated or spoken about due to racist structures in Swedish governance.

While most of the participants express optimism towards small-scale renewable energy as solutions to the nuclear and climate problem, three of them stress that the only really safe solution is energy conservation and life-style changes, that is, values which have been related to femininity. Several participants see system changes and transformations of life-styles as a necessary means to be able to handle environmental problems and some of them question technology as well as “the car-society”. As one of them, Lars, puts it:

“So apparently there doesn't seem to be any energy inducing method that is totally clean. Well, which doesn't have any downsides”²⁹.

From an ecomodern perspective it is possible to solve environmental problems *within* the capitalist system. This is a view which several of the participants do not share; some of them mean that in order to find sustainable solutions, neoliberalism and capitalism must be dismantled. One of them, Isa, links nuclear power and nuclear weapons to capitalism:

“It is the capitalist society that ... well why do we have wars today? It's because of weapon producers. (...) Earlier, war was due to protecting borders and taking other countries. That's not okay, but it *was* like that. *Today*, it's the weapon

²⁸ Translated from Swedish by the author: “För att naturen är ju så fantastisk om man liksom arbetar med den istället för att försöka krossa den på olika sätt och förgifta den.”

²⁹ Translated from Swedish by the author: “Så tydligen, det verkar ju inte finnas nån energiframkallande metod som ... är helt ren. Ja som inte har några avigsidor”.

industry. USA themselves says that they cannot shut down their military industry because then too much people become unemployed.”³⁰

Focus on environmental solutions such as energy conservation, radical changes of political and economic systems, and life-style changes are aspects typical of for example an eco-socialist discourse (Anshelm and Hultman 2015). Hence, my findings indicate that the ecomodern discourse co-exists with counter-discourses and might not be as hegemonic as suggested by Tarasova (2017). This could either mean that the participants feel safe when speaking to someone whom they feel are on their side, and that arguments they are using when talking to me therefore differ from arguments they use when speaking to the public or writing information materials. It could also mean that some parts of the movement do not agree with ecomodern ideas. This implies that more studies are necessary to gain a deeper understanding of varying discourses within the movement. Such research would further be valuable in order to find existing discursive connections between different social movements on decline, enabling insights in where values overlap and solidarity could be created.

5.5.1 Changing times, changing discourse?

Several participants explain that while they two or three years ago were treated as crazy or blamed of emotionality when arguing against nuclear power, today it is already different. One of them, Eva, describes that just a couple of years ago, people she met said “Yes, nuclear power is not so good, but what should we have instead?”, while today there is a consensus of renewable energies being a solution. Similarly, Karin recalls how she was considered “crazy” when arguing against nuclear power in 2014, while today it is rather the very pro-nuclear people who are seen that way:

“That is the difference between 2014 and today. (...) I was portrayed as kind of crazy when I said that we should shut down several nuclear power plants during this term of office. That was actually during autumn of 2014. (...) Today, I think, it has changed, it is rather those who go out in a debate claiming that it is very

³⁰ Translated from Swedish by the author: “Det är det kapitalistiska samhället som ... ja varför har man krig idag? Det är ju vapenproducenterna. (...) Förr så var ju krig för att skydda gränser och ta andra länder. Det är inte okej, men det var så. Idag är det vapenindustrin. USA säger ju själv, dom kan inte lägga ner sin militärindustri för då blir det för många arbetslösa.”

important that there are new generations of safe nuclear power, which moreover would be something to invest in, who seem a bit ... out of space”³¹.

These stories indicate that the public view of nuclear power is changing. However, this should not be interpreted as the rise of a counter-hegemonic discourse in Swedish society or in energy debates. What the participants describe seems to be rather a turn to a kind of ecomodernism which see other technical inventions than nuclear power - such as solar panels and modern windmills - as solutions to environmental problems without having to challenge status quo, much due to the economic inefficiency of nuclear power. Would cheaper means to use nuclear power be developed, or would the Swedish state consider nuclear power of such importance that it needs to be further subsidised again, it could easily recapture its alleged role as a climate rescuer, or solution to another environmental problem. Thus, I mean that developing opportunities of counter-hegemonic discourses and actions would be a more successful strategy in the long-term, both for the anti-nuclear movement and for environmental movements in general. Shifting the emphasis from purely ecomodern masculine arguments and professionalised activities towards demands of feminine values and grassroots' actions I mean is a start.

6. Reflections

I want to return to the definition of a social movement I am using:

“A social movement is a network of informal interactions between a plurality of individuals, groups and/or organizations, engaged in a political or cultural conflict, on the basis of a shared collective identity” (Diani 1992:13).

When a network of grassroots' groups become increasingly focused around professionalised NGOs, when informal interactions become formal participation in the process to review SKB's application, when the political conflict becomes a depoliticised management issue, and the shared collective identity is influenced by experts; following the definition above, we

³¹ Translated from Swedish by the author: “Det är skillnaden mellan 2014 och idag. (...) Jag framställdes ju som hyfsat galen när jag sa att vi skulle stänga flera kärnkraftsverk under den här mandatperioden. Och det var faktiskt under hösten 2014 (...). Idag så tycker jag att (...) det har svängt så att det snarare är dom som går upp i en debatt och säger det är väldigt viktigt att det finns nya generationer av säker kärnkraft, som dessutom skulle vara nåt att satsa på, som känns lite såhär ... out of space.”

barely have a social movement. Thus, findings of this thesis suggest that the professionalisation of the movement plays a key role in the movement's decline.

As for the definition of collective identity stated in the introduction, highlighting “an individual's cognitive, moral, and emotional connection with a broader community, category, practice, or institution” (Polletta and Jasper 2001:285), the sense of collective identity seems to differ among the participants. As stated, the emotional connections to the anti-nuclear community and the practices they engage in vary between the less mobilising emotions resignation and even routine to the more mobilising emotion anger. While some approve of the large role played by technical experts, others are opposing it. This, along with the diversity of - sometimes antagonistic - ideas of causes of and solutions to environmental issues and the use of nuclear power, expressed through the use of a variety of discourses, indicate that the sense of collective identity is rather weak. A reduction of collective identity might be one further explanation to the decrease of the movement. However, to draw such a conclusion, building of collective identities would have to be studied among a wider number of participants.

The ecomodern framing of climate change as the most urgent environmental problem, to be solved without transformative changes legitimises the abandonment of several other social and environmental issues such as risks related to nuclear power. Solutions to climate change are suggested to be found within current political and social institutions; technological fixes are prioritised in order to mend problems identified with natural sciences, while social injustices are left unaddressed. I mean yes, climate change is a huge threat - possibly the most urgent one - to our planet, but I agree with those participants and scholars who argue that non-transformative changes addressed only at mitigating greenhouse gas emissions risk replacing this environmental threat with something else as well as reinforcing social injustice. Examples of this would be the continuing health and environmental impacts around uranium mines in order to keep nuclear power plants going, a sacrifice to “save” us from climate change without challenging status-quo. When most focus of environmentalism is directed at fixing this specific issue - no radical changes needed - this further closes opportunities for solidarity to other movements whose focus issues are not considered as urgent as climate change, and therefore not a priority. Linking the anti-nuclear movement to more radical elements of the climate movement who *do* recognise the need of transformative changes and environmental justice, such as the climate justice movement, could be a strategy worth to explore.

Mol (2000) argues that the environmental justice movement has succeeded in repoliticising environmental issues which during ecological modernisation has become increasingly depoliticised. Following the notion by Nohrstedt (2008) that also nuclear power has become depoliticised, one could ponder what a reconnection to more political arguments can do for the movement. Could a turn from merely technical and scientific arguments against nuclear power, towards a focus on ethical and moral issues - similar to those by environmental justice movements - help to repoliticise nuclear power? According to Gramsci's theory of hegemony, civil society can create resistance to hegemonic power in order to demolish it; such projects have later on been referred to as counter-hegemonic (Pratt 2004:318-319). However, civil society can also be a part of maintaining hegemony, as has been exemplified in this thesis by environmental NGOs assimilating hegemonic discourse. I mean that counter-discourses found in parts of the anti-nuclear movement have a potential in challenging status quo and would facilitate solidarity and collaboration with social movements struggling for other issues.

In *The Politics of Everybody*, Holly Lewis (2016) calls for the building of solidarity between social movements, with the main enemy of capitalism, in specific neoliberalism. I have argued that this common enemy cannot be identified using an ecomodern, masculinist discourse; for that we need to bring in more feminine values, such as the revaluation of moral concerns of intergenerational justice - once a main argument within the anti-nuclear movement - and social scientific, holistic understandings of connections between environmental and social problems. As Lewis puts it:

“Solidarity is not a condition that results from mature humans learning to accept diversity: it is a political recognition that our futures are tied together” (Lewis 2016:257).

Findings of this thesis suggest that such solidarity building is still happening in some - presumably more radical - parts of the movement. Further research on this topic is necessary to understand where in the different movements solidarity still exists; not only to create political opportunities for the movement actors to spread their agenda, but also in order to aim for transformative changes which are needed to limit environmental and social problems embedded in our economic and political system.

Returning to my standpoint in critical realism, an alignment to this ontological and epistemological position means acknowledging that social practices are informed by ideas which might be true or false (Sayer 2000:18-19). For example, the assumption that gender is natural and not constructed brings with it an acceptance of the naturalness of the subordination of women (*ibid.*), and to this I would add the subordination of femininity. To recognise the falseness of certain understandings in society implies the belief that such ideas - and the actions based on them - should be revised (*ibid.*). In this case, the understanding of professionalisation and ecomodern, masculine values as something natural can be interpreted as a false understanding that can and ought to be changed. A revaluation of femininity in the anti-nuclear movement would go well with an agenda to not only phase out nuclear power but seriously consider another energy system which takes into consideration justice, health, and human rights. *That* would be reasonable from a long-term sustainability perspective.

6.1 Suggestion of further studies

During the interviews I was able to take part of participant's views of human-nature relationships, accounts of civil disobedience actions abroad, and ideas suggesting the presence of counter-hegemonic discourses within the anti-nuclear movement. These experiences and discourses would be interesting to investigate in future studies. What connecting points of interest do participants of diverse movements see in between them? The role of emotions in the anti-nuclear movement - especially in sections connected to social movements for other causes such as the LGBTQ and the feminist movement - is another topic I would like to see investigated. Discourses and emotions within the Swedish anti-nuclear movement could be compared to those of anti-nuclear movements in countries where mobilisation is stronger.

Further, some participants mentioned conflicts that have arisen when engaging in anti-nuclear actions in areas where a large part of the population are workers at nuclear power plants. For example one of the participants, Maria, describes how during the 1980s several women engaged in a local civil disobedience action were married with men working at a power plant nearby and asked others not to "tell my husband" about their anti-nuclear engagement. Such conflicts, related to workers' dependency on income from an industry which at the same time is degrading their local environment, and possible gendered aspects of those, would be interesting to explore further.

While masculinities in environmentalism has been a topic of investigation (e.g. Hultman 2013; Filteau 2014; Morioka 2014) the concept of femininities have almost disappeared from this field after it was first introduced (Connell and Messerschmidt 2005). Drawing on the study by Zelesny *et al.* (2000), showing a connection between femininity and environmental awareness, I believe that a focus on the role of femininity and different femininities within environmentalism and environmental movements would be helpful to understand gendered aspects, reasons of motivation and differences in outcomes of environmental actions.

7. Conclusions

I want to wrap up this thesis with a quote, finally, from the Swedish journalist and author Elin Wägner, to whom some of the participants of this study refer to as a source of inspiration³². Written almost 70 years ago, it still feels up-to-date. It can serve to illustrate the masculinity embedded in modern civilisations' hunger for development; but also Wägner's today counter-hegemonic view on nature as something alive, with powers to be awakened:

“But the freedom and happiness of humans has come to mean the mastery of the planet. This thirst for conquest, which has increasingly come to determine development, has not tolerated any limits for mankind. Therefore, even during times of peace civilisation has been ready for war. It works with speed, mass, with powers which it awakens but does not fully master. It loves breaking laws and resistance. (...) Where it forges ahead, older cultures must be demolished, nature be defiled and plundered”³³(Wägner 1949:13).

Since the 1980s, ecological modernisation has found its way into environmental debates as the hegemonic discourse. Discussions on nuclear power are no exceptions. The ecomodern belief that environmental problems can be solved within current economical, cultural and political systems has spread to core parts of the anti-nuclear as well as other environmental

³² Another commonly mentioned source of inspiration is Rachel Carson, specifically the book *Silent Spring* (1962).

³³ Translated to Swedish by the author: “Men människornas frihet och lycka har kommit att betyda herraväldet över jorden. Detta erövrarmål, som allt mer kommit att bestämma utvecklingens hållning, har inte tålt att några gränser bestod för människan. Därför har civilisationen även under fredstid varit på krigsfot. Den arbetar med fart, massa, med krafter som den väcker upp och inte helt behärskar. Den älskar att bryta lagar och motstånd. (...) Där den går fram, måste äldre kulturer raseras, naturen skändas och plundras”.

movements, leading them away from demands of radical system changes which previously were a connecting point between them. This, I mean, has affected the anti-nuclear movement in the same way as many other social movements have changed during this ecomodern, neoliberal era: it has become increasingly isolated from other social movements. From a political opportunity perspective, this loss of allies brings with it decreasing opportunities to engage new members, cooperate and advocate the anti-nuclear agenda and is thus one part of the answer to my first research question: why has the anti-nuclear movement in Sweden decreased since the 1980s?

Another change to the movement is its professionalisation. This change is rather more recent; around the time of the governmental decision in 2004 enabling funding of NGOs working to investigate SKB's proposal, professionals were hired to lead the investigation processes within the newly formed coalitions Milkas and MKG. The professionalisation has changed the structure of the movement, from grassroots' led to more top-down managed. Accordingly, the focus has to a large extent shifted from direct anti-nuclear actions towards technical critique of nuclear waste management methods. Further, since participants in local anti-nuclear groups might not have the technical expertise necessary to engage in the process to review SKB's application, they are excluded from one of the movement's main activities. The grassroots' lower access to this institutional channel would, from a political opportunity perspective, increase the likelihood of them using confrontational actions. Some are still carried out, but the amount is not comparable to the 1970s to 1980s. Speculating, this could be partly explained by the hegemony of ecomodern discourse, which emphasises institutional channels rather than civil society as the arena for environmental solutions. Van der Heijden (1999) accounts for a decrease in active participation in environmental movements following their professionalisation, institutionalisation and turn to domination by few. That is, processes related to these ecomodern changes lead to a demobilisation in terms of active engagement. Thus, I mean that the professionalisation of the anti-nuclear movement is likely one cause of the movement's decrease.

MacGregor (2009; 2010) has described changes to environmental politics and environmentalism as a "masculinisation", and I argue that a similar phenomenon has occurred within the Swedish anti-nuclear movement. The professionalisation can be seen as a part of this; the "expert voice" used by a large part of the movement prioritise rhetoric and arguments characteristic of the hegemonic masculinity (ecomodern masculinity), such as economic

(in)efficiency and technological development, while moral arguments and concerns characteristic of femininity are articulated to a lower extent. In the case of ecomodernism, it is already a masculinist discourse and therefore this hegemonic masculinity and ecomodernism as a discourse in many ways goes hand in hand.

I mean that this ecomodern masculinisation is double problematic: both due to the democratic failure in that women are underrepresented in masculine areas of science and thus have fewer opportunities to be heard in the nuclear debate than men; as well as since knowledge, traits and concerns labelled as feminine would have much to offer environmental movements and politics. Certain emotions are sources of mobilisation, and feminine areas of interests are more prone to prioritise human rights perspectives, discover social aspects of environmental problems and hinder reinforcement of social inequality tied to them. This is not to say that emotions should replace reason; such a contrast is merely a dichotomy (Plumwood 2002). Instead I argue in line with ecofeminists such as Val Plumwood (2002) who claim that what we need is a new type of reason, where ethics and emotionality are included.

My interest for the decline of the anti-nuclear movement to a large extent came out of the possible link between this decrease and the rise of climate change as an acknowledged environmental problem. During the research process this link was confirmed; however, it has become clear that it is only one part of a much broader story. Using one environmental problem as a reason for not addressing another one has happened before³⁴ and will likely occur again, as long as someone has something to gain on business-as-usual. Further, this antagonism between nuclear power and climate change is created by and maintained by hegemonic discourse, and hegemony can be countered. Identifying and elaborating on counter-discourses within the anti-nuclear movement as well as other social movements could be a start in reframing environmental problems as an embedded by-product of current political and economic system rather than a small defect in our choice of technologies.

To sum up, ecomodern values and structures have caused a loss of allies in terms of other social movements and driven a professionalisation of the anti-nuclear movement. These aspects I mean provide explanations to why the anti-nuclear movement has decreased in Sweden since the 1980s-1990s when ecomodernism became hegemony. Further, ecological

³⁴ See footnote 5.

modernisation implies a focus on masculine interests, while feminine concerns and traits are excluded. The movement has thus been subject to both an ecomodernisation and a masculinisation; or an ecomodern masculinisation, to emphasise both aspects. This means a turn away from emotionality, awareness of human rights and social aspects of environmental problems related to nuclear power. Since some emotions are sources of mobilisation, the (ecomodern) masculinisation is not “only” a gendered aspect of the decrease to the movement, but also serves another clue to *why* the anti-nuclear movement has decreased.

Returning to Wägner's quote; ecological modernisation has not taken us much further from the destructive human-nature relationship she is describing. The hegemonic masculinity has kept the masculine values from industrialisation, wrapped within a greener, ostensibly more caring package. Feminine coded demands and values are continuously ignored in politics, and seemingly, this has been leaking down to parts of the anti-nuclear movement. However, parts of the movement seem to be expressing counter-discourses and stress on the necessity of building solidarity with other social movements. I believe that rebuilding the strength of the anti-nuclear movement demands stepping out of the assimilation of ecomodern, neoliberal ideals and the return to radical arguments of ethics, justice and human rights; or in other words, bring back femininity on the anti-nuclear agenda.

Resources

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Appendix 1: Main actors within the anti-nuclear movement

The main anti-nuclear groups and organisations today are:

- **Folkkampanjen mot kärnkraft & kärnvapen, FMKK** (The Swedish Anti-nuclear Movement), an organisation that was founded in 1980 before the referendum, today with the main goals to stop all use of nuclear power and nuclear weapons, increase the use of renewable energy and promote a sustainable use of natural resources (Folkkampanjen mot kärnkraft & kärnvapen 2017).
- **Avfallskedjan** (The Waste Network), a network that was established in 1981 and consists of local groups protesting against and exchanging knowledge about plans to build nuclear waste storage sites in their vicinities (Avfallskedjan 2017).
- **Opinionsgruppen för säker slutförvaring, OSS** (Public Opinion Group for Safe Final Storage of Radioactive Waste), a non-profit association and a part of the Waste Network, formed in 1996 in reaction to plans to establish final repository for spent nuclear fuel in the municipality of Östhammar (OSS 2017).
- **Värmland mot kärnkraft** (Värmland Against Nuclear Power), a local non-profit association in Karlstad/Värmland, that is part of FMKK and is working towards the same goals (Värmland mot kärnkraft 2017).
- **Kärnkraftsfritt Bottenviken** (Nuclear Power Free Bothnian Bay), a network of groups and individuals who oppose nuclear power in the near of the Bothnian Bay (Kärnkraftsfritt Bottenviken 2017).
- **Other local groups** and individuals

Organisations involved in the review of SKB's application are:

- **Miljörelsens kärnavfallssekretariat, Milkas** (The Swedish Environmental Movement's Nuclear Waste Secretariat), an anti-nuclear organisation that was founded by Friends of the Earth and FMKK in 2004 and reviews projects for nuclear waste management in order to find the most sustainable solution (Milkas 2017).
- **Miljöorganisationernas kärnavfallsgranskning, MKG** (the Swedish NGO Office for Nuclear Waste Review), an organisation that was founded by the Swedish Society for Nature Conservation (SSNC) in 2004, with the main task to investigate nuclear waste management

projects and work for the most sustainable solution (MKG 2017). Apart from SSNC, MKG consists of OSS and Fältbiologerna (Nature & Youth Sweden).

- **Sveriges Energiföreningars RiksOrganisation, SERO** (Swedish Renewable Energies Organization), an NGO founded in 1980 which works to support the expansion of renewable energy (SERO 2017).

Actors that often collaborate with anti-nuclear groups are:

- **Kvinnor för fred** (Women for Peace), a non-profit association working for peace and democracy, also engaged in anti-nuclear struggles due to its connection to nuclear weapons (Kvinnor för fred 2017; interview with Isa).

- **Gröna kvinnor** (Green Women), a feminist women's organisation focusing on gender equality, economy and the environment, stressing upon the patriarchal structures in nuclear power (Gröna kvinnor 2017).

Other environmental NGOs officially against nuclear power are for example:

- **Greenpeace**

- **Naturskyddsföreningen** (The Swedish Society for Nature Conservation, SSNC)

- **Jordens vänner** (Friends of the Earth)

Political parties previously or today engaged against nuclear power:

- The Centre Party (C; Centerpartiet)

- The Left Party, previously the Communist Party (V; Vänsterpartiet; earlier VPK; Vänsterpartiet kommunisterna)

- The Green Party (MP, Miljöpartiet)