Anti-nuclear Movements in Discursive and Political Contexts
Between expert voices and local protests

Ekaterina Tarasova
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Abstract
Energy policies which maintain and extend nuclear energy are often opposed by anti-nuclear movements. Ambitious plans for developing nuclear energy in Russia, constructing a first nuclear plant in Poland, and lifting the ban on nuclear energy while allowing the replacement of old reactors in Sweden are examples of such energy policies. In contrast to the massive anti-nuclear movements of 1970-1990s, recent anti-nuclear movements are not organized as national protest campaigns. This thesis examines repertoires of anti-nuclear movements in the alleged “Nuclear Renaissance” period.

Repertoires of anti-nuclear actions are analyzed from the perspective of discursive and political opportunities of anti-nuclear movements. Discursive opportunities are enabled or hindered in the ordering of nuclear energy discourses, making messages and actions of social movements legitimate or illegitimate. While discourses of anti-nuclear movements are complex, official discourses of nuclear energy featuring arguments about profitability, energy security and environmental security in connection to nuclear energy development, resonate more with broader socio-political developments. Ordering of discourses is established in such a way that expert rhetoric becomes a standard approach for discussing nuclear energy, while references to emotions and subjective matters are unacceptable.

Political contexts of anti-nuclear movements provide opportunities for environmental NGOs, one kind of actor in anti-nuclear movements, to pursue nonconfrontational strategies and engage in institutional channels, where they can contribute their expert knowledge. Concurrently, another actor in anti-nuclear movements, local anti-nuclear groups, on the one hand, share argumentative structures with environmental NGOs, and, on the other hand, attempt to mobilize local population and organize local protests. Due to limited opportunities for attention from the national media and focus on local issues, local protests are not featured in the national media, which is crucial for national protest actions.

The differences in repertoires between these two kinds of actors and absence of actors opting for mass engagement provide insight into repertoires of anti-nuclear movements as a whole. This thesis demonstrates how discursive opportunities of social movements, which result from competing discourses of movements and their counter-agents, and political opportunities structure repertoires of actions of these movements.

Key words: social movements, nuclear energy, discourse, action repertoires, protests, Nuclear Renaissance, Russia, Poland, Sweden
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Huddinge
10 January 2017
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<tr>
<td>C</td>
<td>The Centre Party, Sweden</td>
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<tr>
<td>CDA</td>
<td>Critical Discourse Analysis</td>
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<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<td>IAEA</td>
<td>International Atomic Energy Agency</td>
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<td>FmKK</td>
<td>People’s Campaign Against nuclear energy and nuclear weapons, Sweden</td>
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<td>FoE</td>
<td>Friends of the Earth, Sweden</td>
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<tr>
<td>Fp</td>
<td>The Liberal People’s Party, Sweden</td>
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<td>M</td>
<td>The Moderate Party, Sweden</td>
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<tr>
<td>MILKAS</td>
<td>The Swedish Environmental Movement’s Nuclear Waste Secretariat</td>
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<td>MKG</td>
<td>Miljöorganisationernas Kärnavfallsgranskning</td>
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<td>Mp</td>
<td>The Green Party, Sweden</td>
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<tr>
<td>NGO</td>
<td>Non-governmental organization</td>
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<tr>
<td>NPP</td>
<td>Nuclear Power Plant</td>
</tr>
<tr>
<td>OECD</td>
<td>The Organization for Economic Co-operation and Development</td>
</tr>
<tr>
<td>PGE</td>
<td>Polska Grupa Energetyczna</td>
</tr>
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<td>PGE EJ1</td>
<td>Polska Grupa Energetyczna Energetyka Jądrowa</td>
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<tr>
<td>S</td>
<td>The Social Democratic Party, Sweden</td>
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<tr>
<td>SEA</td>
<td>Strategic Environmental Assessment</td>
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<tr>
<td>SKB</td>
<td>Swedish Nuclear Fuel and Waste Management Co</td>
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<td>V</td>
<td>The Left Party, Sweden</td>
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Introduction

1.1 The period of alleged “Nuclear Renaissance”: nuclear policies and anti-nuclear movements

Electricity production from nuclear energy\(^1\) has been considered by many to be a valuable contribution towards addressing the shortage of energy resources, but at the same time it has also sparked public concerns and given rise to opposition movements. The shortage of energy resources due to the extensive exploitation of resources in industrialized societies has led to the situation sometimes referred to as the global energy crisis (Brown 2009, Diamond 2011). The report *The Limits to Growth* predicted that exponential economic growth would lead to running out of natural resources at some point (Meadows et al 1972). Even though amounts of potentially accessible natural resources remain unknown and new deposits of fossil fuels have been discovered since 1972, the gap between supply and demand of energy resources is predicted to only grow in the future (IEA 2010). Governments face the need to ensure a sufficient amount of energy resources are available. In order to do so, they have explored various options, one of which is electricity produced from nuclear energy.

The construction and exploitation of nuclear power plants worldwide have often been met with opposition from social movements that have not supported this development. Following Tarrow, who suggested that social movements, like any other social organizations and institutions, develop in cycles (Tarrow 1989), I argue that two waves of anti-nuclear movements can be observed. Anti-nuclear movements that proliferated from the 1970s-1990s is the first wave of opposition to nuclear energy. These movements

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\(^1\) The words “nuclear power” and “nuclear energy” are used interchangeably.
attracted considerable research interest (see for instance Kitschelt 1986, Rüdig 1990, Flam 1994, Kolb 2007), probably because of the mass protests character of these movements. In the 1990s, the expansion of the nuclear energy industry froze in the majority of countries for various reasons, and anti-nuclear movements dropped off accordingly. The second wave of anti-nuclear movements concerns the period from the year 2000 onwards and presents an intriguing and fairly unexpected state of affairs.

The period in which recent anti-nuclear movements occurred is sometimes referred to by the nuclear industry as “Nuclear Renaissance” (e.g. Ritch 2001). In this thesis, the expression “Nuclear Renaissance” is only used for specifying the historical period from 2000 onwards. Since the beginning of the 2000s, both energy companies and politicians in a number of countries have claimed that nuclear industries entered a period of nuclear energy revival. Although scholars are often skeptical about the revival of nuclear energy to the extent anticipated by the nuclear industry (e.g. Busby 2013), nuclear energy policies have been changed in many countries. These changes include the construction of new reactors and/or keeping existing ones in the countries where decisions to phase out nuclear energy reactors were previously made. Changes in energy policies are motivated from economic, political, geopolitical, environmental and social perspectives (e.g. Nuttal 2005, Busby 2013, Johnstone 2010). Sovacool and Valentine argue that subordination of opposition to political authority is one of the drivers for this “Nuclear Renaissance” (2012:12). Resonating with Sovacool and Valentine’s findings, Findlay considers increased public acceptance of nuclear power as an important aspect for recent developments in the nuclear energy sector (2011). The role of public reaction therefore matters for changes in the nuclear energy sector. However, Sovacool, Valentine and Findlay note that there are few studies focusing on the analysis of public reactions to recent nuclear energy policies.

Indeed, public reactions to changes in nuclear energy policies are to some extent puzzling. Ambitious nuclear energy plans have not been followed by mass national campaigns against nuclear energy, which was a common public reaction to nuclear energy policies in the 1970–1990s. Van Der Heijden notices that mass anti-nuclear mobilization in Europe has hardly taken place after the Fukushima accident, with the exception of Germany (2014:207). Elliott points at an absence of mass protest actions after the Fukushima accident, but his study is limited to the UK reaction (2012). Mass protests in Tokyo, Taipei and Seoul and other places in East Asia directly affected by the Fukushima accident as well as protests in
Germany are exceptions. At the same time, citizens have mobilized in the locations of planned nuclear construction, and civil society is actively engaged in discussing the future of nuclear energy. Anti-nuclear movements seem to have pursued other strategies than mass campaigns against nuclear energy in the countries where changes in nuclear energy policies took place. Mass national campaigns is a possible strategy, but not the only one in the repertoires of social movements (Taylor & Van Dyke 2004). The current developments in the nuclear energy sector and the choice of actions other than mass national campaigns against keeping and extending nuclear energy in countries known for their past anti-nuclear movements calls for an analysis of the repertoires of recent anti-nuclear movements.

Taylor and Van Dyke argue that both external sociopolitical conditions and internal movement processes shape the tactical repertoires of social movements (2004:271). While the role of internal factors has been covered to a significant extent in social movement studies with the development of resource mobilization theory (McCarthy & Zald 1977), the knowledge about external factors shaping the repertoires of social movements needs to be extended. Usually, sociopolitical conditions are understood as the political contexts of movements. Koopmans and Duyvendak (1995), and Ferree et al (2002) argue that not only political but also discursive contexts are crucial for social movements. Following them, I argue that how anti-nuclear movements act in contexts broader than just political contexts remains unknown. This thesis focuses on how these two contexts provide opportunities for recent anti-nuclear movements. It is crucial to study the discursive contexts of anti-nuclear movements because anti-nuclear movements react to specific formulations and justifications behind the plans to keep and develop nuclear energy. How society reacts to nuclear energy depends on what people see and imagine when they talk about nuclear energy, or in other words, on discourses of nuclear energy.

Social movements consist of different actors. Interaction of these actors is probably needed for organizing national campaigns against nuclear energy. Even though external conditions shaping repertoires of anti-nuclear movements are in focus, the capacities of different actors within the movements to build coalitions is of importance as well.

Similar repertoires of recent anti-nuclear movements seem to emerge in various contexts, making it possible to think that the processes in focus in this thesis are not unique to a particular region. At the same time, anti-nuclear movements have been previously examined either in Western European and North American regions or other regions, for instance
Eastern Europe. Research examining different regions together is hardly found (with the exception of Rüdig (1990)). To overcome this limitation of the research on anti-nuclear movements, this thesis looks at anti-nuclear movements in Russia, Poland and Sweden. Each country has experienced significant change in nuclear energy policies, which have been adopted as extending or maintaining nuclear energy in these countries recently. There have been policy documents such as Energy Strategy of Russia until 2020, Energy Strategy of Russia until 2030, Energy Policy of Poland until 2030, and Betänkande 2009/10:NU26 in Sweden. The Russian government together with the nuclear energy company Rosatom has announced plans to construct approximately 26 new reactors in 2006.² This is an extremely ambitious plan. The Energy Policy of Poland from 2005 and the detailed nuclear energy program from 2009 brought back the idea to construct the first nuclear power plant in Poland, something which had been buried after the transformation of the political regime. In Sweden, the amendment to nuclear energy law in 2010 lifted the ban on building new nuclear reactors. Instead of the planned phase-out of nuclear reactors by 2010, that year will instead be remembered for amendments to the existing law. Nuclear energy has been maintained for a longer time than was previously planned in Sweden after the referendum on nuclear energy in 1980. These countries are chosen because there have been changes in energy policies that have not been followed by national mass protest campaigns, as was previously the case in each of these countries. Studying the different contexts of Russia, Poland and Sweden – the varying political regimes, historical legacies and stages of development in nuclear energy industries – will provide deeper insights into the repertoires of anti-nuclear movements.

1.2 Aim and research question

This thesis aims to investigate why the repertoires of anti-nuclear movements have consisted of actions other than mass national campaigns during the “Nuclear Renaissance” period. In examining this, the thesis provides new explanations for the actions of anti-nuclear movements, doing so

from the perspective of political and discursive contexts. In order to address this aim, the following research question is examined: *in terms of political and discursive contexts, how have sociopolitical conditions shaped repertoires of anti-nuclear movements and their coalition building?*

To scrutinize the discursive contexts of anti-nuclear movements, the concept of discursive opportunities will be applied in this thesis. Before the concept of discursive opportunities can be applied, it needs to be further elaborated because it has been defined in a number of ways, and a more unified approach to this concept is needed. *The first task* of the four tasks of this thesis is thus to develop a definition of discursive opportunities that would establish common ground between previously introduced definitions.

In order to understand how discursive contexts shaped the repertoires of anti-nuclear movements, *the second task* of the thesis is to analyze how discourses of nuclear energy proponents and opponents have been ordered in 2005–2014 in Russia, Poland and Sweden, and what kind of discursive opportunities it established for anti-nuclear movements. To realize this task, discourse analysis of nuclear energy proponents and opponents will be conducted. On the basis of this analysis, conclusions about discursive opportunities of anti-nuclear movements will be made.

The crucial role of political opportunities for anti-nuclear movements has been discussed in research on anti-nuclear movements. As movements act on the basis of their perceptions of contexts, *the third task* of the thesis is to analyze how activists’ perceptions\(^3\) of political opportunities have shaped anti-nuclear actions in the three selected contexts. This is addressed through interviewing actors in the movements.

*The fourth task* of analysis will be to investigate the actions of anti-nuclear movements in order to analyze how they have become possible in discursive and political contexts in Russia, Poland and Sweden, and in regard to coalition building within movements. As it is known that anti-nuclear movements have not organized mass protests in recent times, an attempt to understand why this is so is also made.

\(^3\) Throughout the thesis I use the word “activist” in a broad meaning to refer to anyone engaged in social movements. While I acknowledge that different kinds of activism are possible, e.g. professional activists (that are involved through NGOs) and local activists, I do not make this distinction when using the word “activists”. When “activists” are mentioned, it means that all kinds of actors involved in movements are referred to, if no further specification is given. That means that NGO professionals are also referred to as “activists” because they are seen as such from the perspective of social movements.
1.3 Delimitations and limitations

Although this thesis aims to cover relatively broad developments in anti-nuclear movements and the nuclear energy industry, the time frame is delimited. This study focuses on the recent anti-nuclear movements in the period 2005–2014, within the current phase of nuclear energy development and nuclear energy opposition. The time frame begins in 2005 because the energy policy change took place that year in Poland, it was to be 2006 in Russia and 2009 in Sweden. The majority of the actions took place between 2008–2013 in Russia, 2010–2014 in Poland and 2009–2014 in Sweden. Although earlier events are not part of the analysis, there have been interesting developments before 2005. In that period, events leading to the several changes in nuclear energy policies took place, particularly in the rhetoric of politicians. For instance, Russian politicians started to make ambitious statements about nuclear energy in 1998 with the new energy policies. This thesis however only forwards an argument about anti-nuclear movements in the period of the “Nuclear Renaissance”, and not earlier.

The analyzed time frame is delimited to 2014. The analysis of Russian anti-nuclear movements stops in this thesis at the beginning of 2014, when the conflict in Ukraine had become the dominant event in the public discourse, and the discourse of modernization had received considerably less attention in official rhetoric. The study of Polish movements does not extend beyond April 2014, when the second field trip to Poland and material collection were finalized, just after the Council of Ministers adopted a revised program and schedule for a nuclear energy plant in Poland in January of the same year. Swedish elections in September 2014, serve as the final line for collecting material due to the changes in the government. The year 2014 is when significant changes in the political landscapes took place and thus could be considered a borderline for a potentially new period for nuclear power development and nuclear power opposition. This is also the year when the collection of the material for the analysis was completed. Although specific months when analysis stops vary between the three countries, the difference in 4–6 months is not significant enough to be considered a burden for the analysis.

This thesis focuses only on anti-nuclear movements dealing with policies and projects keeping and extending the civil use of nuclear energy. It does not focus on anti-nuclear movements that primarily arose for dealing with other nuclear issues, such as nuclear waste, uranium mining, and others, and this is because movements opposing uranium mining or nuclear waste
repositories are often not the same as anti-nuclear movements engaging in the discussion of new reactors, although these groups know about each other and sometimes interact. However, in cases where some organizations have been active in connection to both new reactors and other issues such as nuclear waste and decommissioning, these actors are included in the analysis.

Since this thesis analyzes how movements act in their political contexts, their perceptions of these contexts are in focus. Another possible approach to studying the political opportunities of social movements would be a full-scale analysis of legal and political systems, but this is less relevant to the aim of this thesis. This thesis is limited by focusing only on perceptions; the results of an analysis of legal and political systems could be different from an analysis of perceptions.

1.4 Defining the object of study: anti-nuclear movements

Since social movements addressing concerns related to nuclear energy have been called anti-nuclear movements, this label is applied herein. However, this label is not straightforward. Giugni and Grasso argue that the concept of social movement is more empirical than analytical (2015). The label anti-nuclear movements presupposes that these movements oppose nuclear energy, although it does not specify to what extent. Involved groups and organizations share a common identity, although their interpretations of shared identity may vary, as well as their goals and values. Groups and organizations that stand for the immediate phase-out of nuclear energy, or those that want to abolish nuclear energy gradually, could both be considered part of anti-nuclear movements. There is no precise line determining which values and goals should be considered anti-nuclear. Thus, the demarcating line for delineating the object of study is the involvement in the discussions of nuclear energy development and to some extent opposing the current policies.

In order to avoid the unnecessary exclusion of any civil society actor that is involved in the public discussion about nuclear energy, I follow the broad definition of social movements that “a social movement is not so much a concrete group as a continuing, confrontational interaction between challengers and authorities” (Tilly (1984) referred in Tarrow (1989:37)). Tilly’s definition of social movements as confrontational interaction presupposes the presence of a social conflict between several actors in
society as a core factor for the existence of a social movement. The conflict in this thesis is related to nuclear energy development or prolongation of life-span or replacement of old reactors with new ones which is arguably part of the same process. This broad definition allows for the drawing of contours of anti-nuclear movements schematically, including all kinds of civil society groups and organizations with identities linked to political and social challenges.

Although specific actors are not the core defining characteristic of a social movement according to Tilly’s definition, where involved groups could change, and other actors can become more important in the movement, social movements do consist of some actors. I employ a definition of a social movement by Diani in order to describe the nature of relations between actors in social movements. According to Diani, 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). The studied anti-nuclear movements consist of non-governmental organizations (NGOs) dealing with nuclear energy and local anti-nuclear groups. Involved non-governmental organizations are of two kinds. There are environmental NGOs dealing with various agendas, including nuclear energy, but there are also NGOs that focus specifically on nuclear energy. Since even those that deal with nuclear energy approach this issue from an environmental perspective, I refer to all NGOs as environmental NGOs. There are a couple of NGOs on the border of being called environmental, but I still choose to call them environmental for the purpose of not identifying them explicitly in the text (anonymity is crucial for some activists who took part in this study). Environmental organizations that deal with nuclear energy are not necessarily part of anti-nuclear movements, although since some environmental organizations strive to engage in dialogue with decision makers on nuclear policies and oppose these policies, I consider them part of the movements. While environmental NGOs have a broad environmental focus, including nuclear energy, and they engage in discussions of different nuclear energy projects on different levels, local anti-nuclear groups focus only on nuclear energy projects in their regions and localities. The focus and scope of activities are the main differences between these kinds of actors in anti-nuclear movements.

Tarrow argues for considering some political parties temporarily as a part of social movements (Tarrow 1989:38), in case some actors have double identities of an activist and a politician. I argue that other situations
when activists have double identities, such as that of an activist and an expert, also have to be included in the analysis. To sum up, I use a definition of anti-nuclear movements that includes environmental NGOs and local grassroots groups. This definition includes not only those calling to phase out nuclear energy immediately, but also civil society actors involved in discussing a variety of issues related to nuclear energy.

1.5 Russia, Poland and Sweden: diverse faces of “Nuclear Renaissance”

In order to specify the object of study in this thesis I selected movements that oppose keeping and developing nuclear energy in Russia, Poland and Sweden. New energy strategies and nuclear policies that extend the development and maintenance of nuclear energy (if not previously planned) have been adopted in these countries. Even though the extension and maintenance of nuclear energy have specific features in each country, repertoires of anti-nuclear movements seem to have nevertheless developed along similar lines.

The nuclear industry and anti-nuclear movements in Russia

The Russian nuclear energy industry is one of the oldest in the world. There are 10 nuclear power plants in operation employing 33 power generating units. The late Soviet period and the beginning of the 1990s was a time of mass civic mobilization including environmental movements and anti-nuclear protests (see for instance Yanitsky 1998, 1999, Haliy 2008). Environmental movements were thematically broad and could mobilize not only because there was finally freedom of speech and gatherings, but also because there was a manifestation of opposition to the Soviet regime in the perestroika period (Dawson 1995). In the countries of Eastern Europe and the former Soviet Union, environmental movements brought together “environmental demands with national sovereignty claims” and public health claims (Van der Heijden 1999:204-205). One of the largest mobilizations of the anti-nuclear movement was the campaign against importing

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4 Van der Heijden refers to Poland as East European country. Although other conceptualizations of region exist, e.g. Poland as Central East European country, I follow the literature on environmental movements in conceptualizations of the region.
spent nuclear fuel from abroad, which was discussed by the State Duma in 2001. This campaign gained wide publicity. In general, Haliy argues that the environmental movement has been one of the most developed sectors of Russian civil society (2015).

As far as can be determined, recent anti-nuclear groups and environmental NGOs dealing with nuclear energy development are located in the following cities and towns: Moscow, Saint Petersburg, Sosnovy Bor (Leningrad region), Murmansk, Nizhny Novgorod, Murom (Vladimir region) and Kaliningrad. Most of organizations and groups based in Moscow and Saint Petersburg are national organizations. The organizations in other regions are local anti-nuclear groups and regional environmental NGOs; one exception is the NGO Dront, based in Nizhny Novgorod. The organizations in Sosnovy Bor in Leningrad region work on the issues related to the Leningrad nuclear power plants, with one in operation and one under construction. The organizations in Murmansk are occupied with the Kola nuclear power plant, which is in operation. The organizations in Nizhny Novgorod and Murom (Vladimir region) are concerned with the same plan for the construction of a nuclear power plant in Nizhny Novgorod, but on the border with Vladimir region, just several kilometers away from the town of Murom. The organizations in Kaliningrad deal with the planned construction of the Kaliningrad nuclear power plant. Most of the nuclear power plants in operation and planned reactors are located or planned to be located in the European part of Russia as other energy sources are scarce here. This also explains why most organizations and groups in anti-nuclear movements are found in the European part of Russia.

The nuclear industry and anti-nuclear movements in Poland

The plan to introduce a nuclear power program in Poland reappeared in 2005. The Ministry of Economy and Labor mentioned nuclear energy as one of the possible sources in Energy Policy of Poland until 2025 (2005). The official return to nuclear power occurred on 13 January 2009, when the Council of Ministers of Poland adopted resolution Nr. 4/2009 on the development of nuclear power in Poland. A shortlist of possible construction sites was announced, but the final decision about a site for a nuclear power plant is pending.

Previous anti-nuclear protests in Poland took place in the 1980s when there were plans to construct a nuclear power plant near Żarnowiec Lake. Groups protesting against nuclear energy were intertwined with other
oppositional groups in the broad public mobilization during the second half of the 1980s. Anti-nuclear movements have been investigated as a part of environmental movements in Poland (Marples 1986, Gliński 1996, Hicks 1996) and also as part of the Freedom and Peace movement (Ruch Wolności i Pokój (WiP)) (Smółka-Gnauck 2012, Waluszko 2013). Most of the actions took place in Gdańsk, which is close to the Żarnowiec Lake, but also in other places (Waluszko 2013, Piotrowski 2015). Szulecki et al note that the anti-nuclear movement used varied methods, among them marches, hunger strikes, and blockading streets (2015:42). The plan to build a nuclear power plant was later abandoned and it was decided to close the nuclear energy program for at least 15 years. Szulecki et al, arguing that previous anti-nuclear movements in Poland linked the nuclear energy project of that time with the non-democratic regime, consider that nowadays there are more people who believe that “environmental issues will somehow fix themselves automatically and rationally” (2015:44). Szulecki et al refer to how former WiP affiliates sought support for a new anti-Żarnowiec protest and found people often opposed nuclear energy while under communist rule but felt contemporary circumstances were very different (2015:44).

The anti-nuclear groups and environmental NGOs dealing with nuclear energy development are located in several regions in Poland. They have appeared in the northern part of Poland on the Baltic Sea coast, where the three potential sites for a first nuclear power plant were shortlisted. The sites at Gąski (municipality Mielno) and Lubiatowo (municipality Choczewo) have access to the Baltic Sea, and Żarnowiec is situated near Żarnowiec Lake. Local anti-nuclear groups in Gąski are located near Koszalin, while groups in Żarnowiec and Lubiatowo are both near Wejherowo. The national organizations are located in the capital city of Warsaw. The groups and organizations that oppose the nuclear energy program are based in Gdańsk, the largest city in the northern region of Poland. There is also an environmental NGO with nuclear energy on the agenda in Wroclaw.

The nuclear industry and anti-nuclear movements in Sweden

There are 10 nuclear reactors in operation in Sweden. Anti-nuclear movements in Sweden have had a long history, the referendum on nuclear energy being held in 1980. The majority of votes supported state ownership of nuclear plants and the gradual phase-out of nuclear energy (the second alternative) (Nohrstedt 2005:1048). The Parliament later decided to phase
out the reactors in operation by 2010. The accident in Chernobyl did not have the same mobilizing power in Sweden as in Russia or Poland because nuclear policies had already incorporated nuclear phase-out by that time and nuclear energy was depoliticized (Nohrstedt 2008:264). Two reactors in Barsebäck nuclear power plant were shut down in 1999 and 2005 respectively. The political landscape for nuclear energy started to shift later on. Even though the government in 2006 “declared it will not decide on phasing out any nuclear reactors, nor will permit building new ones” (IEA Sweden 2008:119) this plan was altered. After the official line of the Centre Party changed about nuclear energy phase-out in the near future, the Alliance, consisting of four center-right parties, initiated the Parliamentary debates on nuclear energy that resulted in abolishing the phase-out plan and lifting the ban on building nuclear reactors. The Parliament, ruled by the Alliance, voted in 2010 for amendments to the law that permitted replacement of old reactors with new ones. This gradual shift in the attitudes of the politicians is observed in the study of Holmberg and Hedberg (2011:5).

The People’s Campaign against Nuclear Energy – Nuclear Weapons (Folkkampanjen mot Kärnkraft-Kärnvapen/ FmKK) is an umbrella organization for anti-nuclear movements in Sweden established since the protests in the late 1970s. The recently emerged local anti-nuclear group that is against maintenance and development of nuclear energy associated with FmKK operates in Karlstad, Värmland region. Other regional organizations include a coalition of local groups in the Västerbotten region called the Nuclear Free Gulf of Bothnia, which is concerned with the planned Finnish nuclear power plants close to the Swedish border. Several environmental organizations that have participated in discussions on a nuclear waste storage site expressed their opinions about keeping and developing nuclear energy in the Uppsala region, where Östhammer nuclear power plant is located. The environmental organizations acting at the national level are based in Stockholm. A study of public opinion by Hedberg and Holmberg shows that Swedish citizens have become, albeit a bit reluctantly, more willing to accept nuclear energy because of the overarching goal of climate change mitigation (2010; also see Anshelm & Hultman 2015).
1.6 Previous research and intended contribution

This thesis aims to contribute to social movement studies. Previous research on anti-nuclear movements and on discourses of nuclear energy is briefly presented in order to describe what is already known in this field. However, the aim is not to present volumes of previous research on anti-nuclear movements, but to highlight external sociopolitical conditions of movements and formulation of grievances.

On anti-nuclear movements

The first studies of opposition to nuclear energy focused on relations between policy making procedures and conflicts about nuclear energy, without explicitly relating to social movement studies (Nelkin & Pollock 1981, Camilleri 1984). These studies often applied a state-centered approach. Later, when opposition to nuclear energy became referred to as anti-nuclear movements, the focus was on the interrelations between the institutional contexts, decision-making procedures and social movements of anti-nuclear movements (see for instance in Camilleri 1984, Byrne & Hoffman 1996). The main questions at this time were how and under what conditions anti-nuclear movements were able to influence policies or, in other words, outcomes of movements’ activities (see for instance Jasper 1990, Rüdig 1990, Flam 1994, Kolb 2007). That is why the main interest of the research on anti-nuclear movements has been on the political contexts of anti-nuclear movements. The research emphasizes that political opportunities of social movements in their political contexts are crucial for the movements’ choice of repertoires and actions. This line of research became known as the political opportunities structure approach.

The political opportunities structure approach has become widespread among scholars of anti-nuclear movements. It focuses on differences in institutional structures and the responsiveness of a state to take concerns of movements into account, and opportunities of public opposition to find allies in the political systems. Kitschelt (1986) through studying political opportunities of these movements investigated how political contexts led movements to adopt nonconfrontational and confrontational strategies. Similar inquiries are posed in the studies of recent anti-nuclear movements in the countries where these movements have gained significant publicity, such as Japan (Ogawa 2013), Taiwan (Ho 2014) and South Korea. For instance, Ho explains how the attitude changes of political parties have been important for the progress of movements, applying the perspective of political opportunities
(2014). It is evident that political opportunities of anti-nuclear movements are important for the movements’ choice of actions. Therefore, the political opportunities of recent anti-nuclear movements are to be analyzed in order to understand their repertoires of actions.

Repertoires of environmental movements have been changing (della Porta & Rucht 2002), with the trend of professionalization unfolding in the last couple of decades (Dunlap & Mertig 1991, Dalton 1994, 2015). Professionalization means institutionalization of activities of environmental organizations. Environmental movements are becoming professionalized due to a number of aspects: one of them is a change in who is involved in setting the environmental agenda. Issues raised before by environmental movements are nowadays also part of governmental agendas (Dalton 2015:547). Environmental movements are no longer the only actor setting the environmental agenda. Mol argues that environmental organizations have “lost their monopoly on agenda setting and the representation of environmental interests” (2000:49), since such actors as public authorities, businesses and other interest groups have started to bring up the environmental agenda as well. Environmental movements become part of negotiation processes about environmental problems together with other interest groups, rather than as challengers of state policies. This has re-shaped the political contexts of environmental movements. As movements would like to be included and heard during the negotiation of an environmental agenda, they have had to change their modus operandi and become more professionalized. Professionalization of environmental movements is in turn connected to de-mobilization and de-radicalization of movements (Dalton 2015:546). Environmental organizations in the selected countries to a large extent follow the trend of professionalization of the environmental organizations that have been taking place for a couple of decades by now (for instance for Russia see Haliy 2008; for Polish civil society see Saxonberg & Jacobsson 2013; for Sweden see Anshelm & Galis 2009, Anshelm & Hansson 2011). This trend has presumably influenced the sector of environmental movements engaged in discussing nuclear energy issues as well as other branches of environmental movements. However, no studies illustrating this trend in the case of anti-nuclear movements have been found. It is unknown how the trend of professionalization interplays with recent anti-nuclear movements.

Apart from political contexts, the formulation of a problem and identities of social movements have been considered influential to movements’ actions. These aspects have been covered to some extent by the approach of
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new social movements (Melucci 1985, 1996, Touraine 1981). This approach presupposes that social movements of the 1960-70s, such as, for example, environmental movements and anti-nuclear movements, have promoted other values than social movements have in the past. Melucci and Touraine argue that new social movements put forward non-materialistic concerns, replacing materialistic concerns of the past. The scholars of the approach of new social movements have often placed the focus on identity. However, the assumptions of the approach of new social movements have been questioned. For instance, Pichardo questions the connection between movements that are very much focused on identity issues and post-industrial societies, asking whether indeed a different historical phrase is observed and new movements are distinct from other movements (1997). Despite this criticism, he does acknowledge the importance of paying attention to the identity of social movements.

Grievances of social movements are not only expressed in movements’ identities but also in the arguments, ideas and worldviews of actors within movements. By representing cultural norms, values and clashes in societies, anti-nuclear movements perform “cultural politics” (Fischer 2000). The analysis of claims, arguments and worldviews of anti-nuclear movements, in other words, their “cultural politics”, could add to the understanding of the alleged revival of nuclear energy. However, it appears not much research has been undertaken on how anti-nuclear movements argue against nuclear energy nowadays, what kind of discourses of nuclear energy they put forward and what kind of “cultural politics” they carry out. Therefore, this is placed in focus in this thesis.

Both competing discourses and political opportunities matter for actions of social movements. Koopmans and Duyvendak argue that development, mobilization and outcome of anti-nuclear movements could be approached by the analytical framework combining competing discourses and political opportunities, but not each of these factors separately (1995). While Koopmans and Duyvendak analyze the first wave anti-nuclear movements from the 1970-1990s, no studies of recent movements from this analytical perspective have been found. The study of anti-nuclear movements from the perspective of competing discourses and political opportunities is a contribution of this thesis. While, on the one hand, the role of competing discourses relating to the actions of recent anti-nuclear movements has not been explored, on the other hand, discourses of nuclear energy have received considerable attention. The next section presents what is already known about discourses of nuclear energy.
On discourses of nuclear energy

There have been several developments in public discourse that concern competing discourses on nuclear energy. Hajer (1995) and Dryzek (2013) consider ecological modernization to be an environmental discourse that has been widespread in recent decades. Ecological modernization is summarized as the integration of policy orientations on economic growth and sustainable development (Van der Heijden 1999). The discourse of ecological modernization is a general trend which appears in multiple ways in different contexts and thus cannot be considered as a single discourse. According to Mol, this discourse has affected environmental movements and the ways in which movements shape their agendas (2000). In particular, Mol argues that ideologies of environmental movements have been changing under the pressure of ecological modernization discourse. If previous environmental movements rather suggested different kinds of lifestyles promoting non-materialist values, now they work pragmatically on solving environmental problems. In a similar vein, Van der Heijden argues that while agendas of environmental movements shifted from local issues to global environmental problems, ecological modernization has become the predominant environmental discourse (1999). The spread of ecological modernization discourse is reinforced by professionalization of the environmental sector of civil society. To be able to participate in agenda setting together with other actors, environmental NGOs professionalized in how to discuss the environment. These developments in environmental discourses have shaped the conditions for environmental movements, and potentially anti-nuclear movements as well. This needs to be investigated because no studies that address relations between environmental discourses and action repertoires of anti-nuclear movements have been found.

Previous research on discourses of nuclear energy suggests that nuclear energy has been envisioned as contributing to technological progress and the advancement of society (Gamson & Modigliani 1989). This kind of rhetoric existed from the beginning of programs on civil nuclear energy use, possibly emphasized more in the 1950s and 1960s with the slogan of “too cheap to meter”, implying that the problem of energy shortages would be solved with nuclear energy. More recent research demonstrates that progress is still the most used framing for nuclear energy. For instance, Sovacool and Valentine consider technocratic ideology, which the notion of progress could be seen as a part of, as one of the drivers for the “Nuclear Renaissance” (2012:12). Technocratic ideology implies the high degree of
expert involvement in decision making. They argue that technocratic ideology contributes to an expansion of these kinds of policies.

Apart from progress, there are also other developments in discourse. Baigorri et al. point out the crucial role of climate change mitigation in arguments supporting the revival of nuclear energy (2012). Framing nuclear energy as contributing to climate change mitigation gives positive connotations to nuclear energy. While climate change is usually viewed as a catalyst for the “Nuclear Renaissance” (Bickerstaff et al. 2009), Socolow and Glaser notice that nuclear energy development will not necessarily be the best option for mitigating climate change since opting for more renewable energy development and energy efficiency could be a more sustainable path (2009). It remains unclear whether nuclear energy program development would indeed contribute to mitigating climate change. Despite these considerations, the rhetoric about climate change mitigation has already transformed the public debates on nuclear energy, and it could prevent the rise of strong oppositional attitudes towards nuclear energy (Rüdig 2013:90). Arguments about the connection between nuclear energy development and climate change mitigation are characteristic for the period that started from the early 2000s, since they did not exist in the period of previous anti-nuclear movements, because climate change did not enter the global agenda until later.

Together with climate change mitigation, the image of a seemingly solved problem of nuclear waste storage contributes to the argument for keeping and developing nuclear energy. Darst and Dawson argue that some countries, such as Finland and Sweden, present their solutions for nuclear waste storage as reasonable and advanced (2010), thus portraying the problem of nuclear waste storage as almost solved. However, nuclear waste storage still raises a lot of questions.

Current discourses of nuclear energy are also characterized by more references made to energy security, as Teräväinen et al. demonstrate through the examples of Finland, France and the UK (2011). Providing a broad account of relations between authorities and the public regarding nuclear energy, Blowers comes to similar conclusions about energy security (2010). He defines the period from the 1950s as “Discourse of Trust in Technology”, then the 1960s as “Discourse of Danger and Distrust” with rising anti-nuclear movements, and finally the end of the twentieth century is characterized as “Discourse of Consensus and Cooperation”. He defines the current period as developing under a “Discourse of Security”. He argues that “…in this context nuclear energy has been reborn as a secure and low-
carbon answer to both the threat of energy security and climate change” (2010:166).

Both climate change mitigation and a stronger emphasis on energy security are new themes in discourses of nuclear energy that may influence anti-nuclear movements. As discourses of nuclear energy and their recent changes constitute contexts of anti-nuclear movements, they have to be studied in order to understand how anti-nuclear movements construct their strategies reacting to these new and remaining representations of nuclear energy.

On studied countries and regions

Studies of present-day discourses and framing of nuclear energy are generally limited to countries with established democratic regimes and developed economies. This includes Switzerland (Windisch 2008), the United States (Kinsella 2001, 2005), a few studies available on the UK, France and Finland (Blowers 2010, Teräväinen et al 2011), the EU level (Schwabecker 2015) and South Africa (Death 2006). Some framings of nuclear energy are explored in studies of climate change discourses, such as in a study of Sweden by Anshelm and Hultman (2015). I argue that it is not only one country that undergoes similar discourse shifts, but in fact the bulk of countries. However, since the findings of the research on discourses of nuclear energy are limited in scope, with the analysis usually based on one country, it is yet to be seen whether the same arguments are employed for justifying nuclear energy developments in other countries and contexts. For instance, no studies of nuclear energy discourses in Eastern Europe have been found. Without prior analysis, it is not possible to say that public discourses of nuclear energy are indeed similar in different contexts and across regions.

The studies of anti-nuclear movements are limited to focusing a particular group of countries, while other countries have not been rigorously studied. Rüdig points out that the research on anti-nuclear movements has concentrated on the United States and a select number of Western European countries (Rüdig 2013:90). The same group of countries is repeated from one study to another. Most of the research on anti-nuclear movements has been focused on political opportunities and outcomes of movements in the West European and North American contexts in the 1980s (e.g. Kitschelt 1986, Flam 1994). These countries are France, Sweden, West Germany, Austria, Britain, and Italy in different combinations (see for instance Nelkin & Pollock 1981, Flam 1994, Jasper 1990). For example, the
history of Swedish anti-nuclear movements has been studied to a significant extent (see for instance Flam 1994, Nohrstedt 2008). Although these studies have brought attention to the role of open and closed political contexts for actions and outcomes of anti-nuclear movements, they have focused on political systems with similar characteristics: old democracies with established and well-functioning state mechanisms. The focus on similar contexts is a significant limitation of the previous studies of anti-nuclear movements.

The research on anti-nuclear movements in other regions, for instance, in Eastern Europe and Russia, is scarce. Moreover, scholars studying anti-nuclear movements in that region focus more on the function of anti-nuclear movements as oppositional movements striving for democratic changes (Dawson 1995, 1996, Hicks 1996). Dawson claims that anti-nuclear movements in the late Soviet states, such as Lithuania, Ukraine and some regions in Russia, served as substitutes for political movements opposed to the Soviet authorities (1995, 1996). Dawson’s argument about ideas of national sovereignty or regional self-determination driving anti-nuclear movements could be contested because their primary focus was on nuclear energy, although they contributed to the general oppositional movements of that time. According to Dawson, the Soviet anti-nuclear movements failed to keep mobilized under new political circumstances (1995:442), which exposes the importance of studying political contexts. Research studying anti-nuclear movements in Western and Eastern Europe at the same time has not been found, with the exception of Rüdig’s book Anti-nuclear movements: a world survey of opposition to nuclear energy, which introduces anti-nuclear movements in most of the regions in the world (1990).

The findings of research on anti-nuclear movements and discourses of nuclear energy are thus limited to the regional contexts of these movements. There is little possibility to make broader statements about anti-nuclear movements in Europe on the basis of these findings, including both Western and Eastern Europe with their different historical legacies. Studies of Western European anti-nuclear movements have mostly focused on political opportunities, and studies of Eastern European anti-nuclear movements have concentrated on claims and values of movements and their role in democratization. In this thesis, Russian, Polish and Swedish anti-nuclear movements are chosen for analysis in order to overcome the described limitations in previous research.

The empirical contribution of this thesis is filling some of the knowledge gaps on repertoires of the second wave of anti-nuclear movements from
different regions. The study of discourses of nuclear energy will provide knowledge about arguments concerning nuclear energy development and how nuclear energy is currently approached by various actors in society. This thesis also provides knowledge about the trend of professionalization of civil society and insights into what this trend means for repertoires of anti-nuclear movements. Although some knowledge about studied processes has already been accumulated, the main contribution of this thesis is to connect studies of anti-nuclear movements and discourses of nuclear energy in order to provide a more nuanced picture.

Apart from empirical contributions, this thesis also contributes to an elaborated definition of discursive opportunities. The definition of discourse has not been found in the literature that uses the concept of discursive opportunities. In order to introduce the definition of discourse to discursive opportunities, the definition of discourse from Critical Discourse Analysis (CDA) is applied in this thesis (Fairclough 1995, 2003, Fairclough & Wodak 1997). CDA studies relations of power between discourses. This focus will be useful for analyzing power relations among discourses and emerging opportunities as a result of these power relations. Critical Discourse Analysis has not been used as a theory or a method for investigating discursive opportunities of social movements. Application of CDA will broaden methods of studying discursive opportunities and could be relevant to other studies. The development of discursive opportunities with the aid of CDA is thus a theoretical and methodological contribution of this thesis.

1.7 Outline of the thesis

This study proceeds in the following way: Chapters 2 and 3 continue the overall introduction, with Chapter 2 discussing the analytical framework and analytical concepts. Action repertoires are conceptualized as based on nonconfrontational and confrontational actions. Political and discursive opportunities are introduced as contexts for anti-nuclear movements, and the concept of discursive opportunities is also included. The Critical Discourse Analysis approach is applied, including the concept of the order of discourse. Chapter 3 argues for the selection of Russia, Poland and Sweden as contexts for studying recent opposition to nuclear energy. This chapter also discusses the method of data collection, including text sources, semi-structured interviews and methods of data analysis such as discourse and content analyses.
Chapters 4–6 examine the discursive opportunities of anti-nuclear movements. Chapter 4 presents a discourse analysis of official discourses of nuclear energy put forward by politicians and energy companies. The following chapter presents a discourse analysis of anti-nuclear discourses as forwarded by environmental organizations and anti-nuclear groups. Chapter 6 brings these two groups of discourses together, discussing power relations, ordering between them and discursive opportunities of anti-nuclear movements.

Chapter 7 investigates how environmental NGOs and local anti-nuclear groups perceive their political opportunities. In Chapter 8, the repertoires of anti-nuclear movements conditioned by political and discursive opportunities are analyzed, based on the findings from Chapters 4-7. Finally, Chapter 9 concludes with a brief summary, not only answering the research question, but also offering reflections on the findings of the analysis and suggestions for further research.
This chapter introduces the analytical framework, which is based on the concepts of repertoires and strategies as well as political and discursive opportunities. The capacity for coalition building in social movements may be crucial for organizing national campaigns and thus is also discussed. First, I argue for this analytical framework through assessing theories in social movement studies. Then I discuss each of these concepts in detail. This chapter finishes with the overview of the analytical framework.

2.1 Arguing for analytical framework

The focus here is on political and discursive opportunities of anti-nuclear movements together with their capacity for coalition building in understanding their repertoires of actions. The basis for the analytical framework is constructed through discussing social movement theories. Zdravomyslova states that there are three paradigms in social movement studies: collective behavior, collective action and new social movements (1993). I discuss each of these paradigms and argue that both collective action and new social movement paradigms are relevant for the thesis at hand while the collective behavior paradigm is less relevant.

The collective behavior paradigm was developed in the 1950-1960s, and focused on instances of relative deprivation and moral breakdown resulting in spontaneous mobilization (Smelser 1963, Turner & Killian 1972). At that time, researchers aimed to understand spontaneous and unorganized behaviours of the masses, such as social movements, crowds, riots, and mass hysteria that took place in the 1930s-1950s. Ravaging crowds bursting into streets following charismatic leaders was a common perception of collective behaviour. This paradigm particularly highlighted socio-psychological fac-
tors that push people to the streets. The theory of relative deprivation, which is sometimes applied to analysing social movements from the perspective of the collective behaviour paradigm, argues that it is not the most established deprived groups that tend to act, but those that lost some part of what they had before and became deprived. They are deprived *in relation to* what they had before or to what other groups have.

Although the paradigm of collective behaviour could be used for studying some aspects of present-day social movements, it is not fully adequate for the study of the repertoires and strategies of recent anti-nuclear movements because it does not consider the actions to be planned. Strategies of social movements are not part of the conceptual vocabulary of the collective behaviour paradigm. Actions of anti-nuclear movements do not resemble acts of moral breakdown and mass emotional outbursts, but consist of groups and organizations that are known to plan their activities.

Although the paradigm of collective behaviour has been challenged on empirical grounds, after social movements of the 1960s demonstrated the high level of organization through strategic actions, there is one aspect of this paradigm that deserves special attention – meaning making in social movements. Crossley argues that the collective behaviour paradigm examines the construction of meanings in the process of interaction. He connects it to symbolic interactionism, which means that social movements create meanings, norms and values in the course of actions (2002). He then argues that this aspect of the collective behaviour paradigm has been neglected. Crossley, critical towards understanding social movements as rational actors, considers it important to study the identities, culture and emotions of social movements in order to understand why they mobilize (2002:13). Anti-nuclear movements arising in opposition to nuclear energy policies and projects react to arguments for nuclear energy given by their opponents. In other words, movements are shaped by interaction with their counter-agents. I agree with Crossley that it is crucial to examine meaning making, identities, norms and values of social movements in order to understand their actions, but it is strategies and not unorganized behaviour that should be scrutinized. To sum up, while the collective behaviour paradigm is not fully adequate to this study, it raises an issue of how social movements make meanings in the course of interaction, which will be addressed in this thesis through studying discourses of anti-nuclear movements in relation to discourses of their counter-agents.

From the 1960s-1970s the number of social movements grew. As movements demonstrated their capacity to plan and organize their actions,
scholars began to argue that social movements organize their actions with respect to available resources and opportunities. This approach to social movements became known as the collective action paradigm. Theories of resource mobilization (McCarthy & Zald 1977), and political opportunity structure (McAdam 1982, Tarrow 1989) constitute the collective action paradigm. The theories of the collective action paradigm study resources and political opportunities of social movements in order to understand how movements develop by mobilizing resources and dealing with opportunities and hindrances in the political system. The assumption of the collective action paradigm is that although there are numerous grievances in society, their presence does not lead necessarily to mobilization, but availability of resources and opportunities does.

Resource mobilization theory focuses on how movements mobilize moral, cultural, financial, leadership and other kinds of resources. In other words, resource mobilization theory applied organizational theories to social movement research. The importance of resources for social movement development has already been demonstrated in numerous studies applying this theory (see for instance McCarthy & Zald 1977). One kind of resource that shapes strategies of social movement is leadership. Morris and Staggenborg argue that leaders with different backgrounds “shape organizational structures in accordance with their previous experiences, influencing the mobilization, strategies, and outcome of movement” (2004:173). Following this logic, experienced and permanent leaders and activists with a background in natural sciences could contribute to movements in a different way than passionate but temporary activists would. Some aspects of resource mobilization are useful for the purpose of this thesis, in particular those that provide insights into how relations between different actors in movements result in different actions and some potential for coalition building. However, resource mobilization theory is not the most relevant theory to address the aim of this thesis. While it concentrates on internal conditions, namely resources of movements, the focus of this thesis is placed on external conditions shaping repertoires of anti-nuclear movements, such as political and discursive contexts of anti-nuclear movements.

The other theory in the collective action paradigm, political opportunities structure, is the re-conceptualisation of resource mobilization theory (McAdams 1982) that puts forward the importance of the political context for social movements. Tilly claims that apart from organizational aspects of social movements, political systems and power relations among actors matter for mobilization and outcomes of social movements (1978).
This theory emphasizes that social movements are conditioned by political systems where they appear. Political contexts shape actions, tactics and strategies of social movements. The numerous studies of anti-nuclear movements have demonstrated the importance of political contexts for movements’ developments and outcomes (e.g. Kitschelt 1986, Kolb 2007); therefore this perspective is included in the conceptual framework.

As much as political opportunity structure is a relevant approach for studying contemporary anti-nuclear movements, it has a limitation. Political opportunity structure is prone to study a question of how social movements develop, and grievances that push citizens to form social movements are much less in focus than resources and opportunities. This approach considers that there are many issues that social movements may pick up, but social movements are able to mobilize because they have resources and opportunities. Political opportunity structure thus does not cover sociocultural aspects of social movements, a perspective that has received considerable scholarly attention since the 1990s; for example, it does not cover political ideologies. There is an approach in the collective action paradigm that aims to cover sociocultural aspects: the frame alignment model, which studies how an issue is conceptually “packaged” by social movements (Snow et al 1986). This approach is one of the first that brought a sociocultural approach to social movement studies within the collective action paradigm. However, the frame alignment model does not draw on the interactive character of meaning making between social movements and their opponents. This and other limitations of the frame alignment model is discussed further in this chapter.

The third paradigm of social movement studies - new social movement theory - addresses issues of identity, but it does not emphasize the political contexts of social movements in the same way as it is done in political opportunity structure. New social movement theory, introduced after the contentious 1960s and the same time as the collective action paradigm, highlights new sociocultural movements which foster new identities, such as environmental movements (Melucci 1985, 1996, Touraine 1981). Melucci argues that identity of movements, the uniting and motivating element for individuals and groups in a social movement, is an interesting theme in itself (1996). This paradigm assumes that new movements promote non-materialistic values based on identities. The main premise of this theory is the structural transition from class-based conflict to identity-based conflict in society. A study of identity of a social movement gives insights into why movements emerge, as identity is a common ground for mobilization that
unites individuals in a movement. Identity is defined as “the shared definition of a group that derives from members’ common interests, experiences and solidarity” (Taylor & Whittier (1992:105) cited in Flesher Fominaya (2010:394)). Focusing on identities suggests that it is not only important to understand what makes movements succeed in their actions and what kinds of outcomes social movement actions are, but the emergence of a social movement in society demonstrates a reaction to some developments in society, according to this theory. By questioning meanings and values, social movements carry out “cultural politics” (Fischer 2000:120). Fisher understands culture as “a set of material practices that constitute the meanings, values, and identities of a social order” (2000:120).

It is important to understand what social movements strive for, what kinds of values and meanings of social life they promote. Carrying out some kind of actions and responding to new energy policies, anti-nuclear movements contribute to society together with other actors and in the course of their interaction. “Cultural politics” of anti-nuclear movements are important because they provide insights to contemporary society, such as what is legitimate to say and how it is legitimate to act.

Although the assumption of new social movement theory about the changing nature of structural conflict in society has been contested (Pichardo 1997), this theory is still relevant because it brings forward an important focus on identity that seems to be missing in the political opportunity structure theory. The focus of new social movement theory on identities of movements provides an important contribution to the analytical framework. The concept of identity will be covered in discursive opportunities as identities are manifested through language.

This discussion of social movement theories leads to constructing the analytical framework built on political and discursive opportunities in order to understand repertoires of recent anti-nuclear movements in Russia, Poland and Sweden. The next section discusses the concept of repertoires.

2.2. Repertoires of contention: nonconfrontational and confrontational actions

Tilly proposed a concept of “repertoire of contention” (1995) in order to understand sets of actions that social movements carry out, since they realize only a limited set of actions in a specific point in time. Tilly defines repertoire of contention in the following way:
The word *repertoire* identifies a limited set of routines that are learned, shared and acted out through a relatively deliberate process of choice. Repertoires are learned cultural creations, but they do not descend from abstract philosophy or take shape as a result of political propaganda; they emerge from struggle. People learn to break windows in protest, attack pilloried prisoners, tear down dishonored houses, stage public marches, petition, hold formal meetings, organize special-interest associations. At any particular point in history, however, they learn only a rather small number of alternative ways to act collectively (Tilly 1995:26).

As repertoires are learned cultural creations, they could be either spontaneously or strategically formed. Both repertoires of contentions and strategies are used in this thesis. Although social movements are often divided into strategy-oriented and identity-oriented movements (Kriesi 1995:84), Taylor and Van Dyke note that such division is limited because some movements may have both orientations (2004). For instance, the argument of Bernstein that movements may use their identity in a strategic way illustrates the complexity of identifying actions as identity or strategy-oriented (1997). I consider anti-nuclear movements as both strategy- and identity-oriented movements. Anti-nuclear movements are strategy-oriented movements because their interest is in influencing nuclear energy projects. They are also identity-oriented because they express the unacceptability of nuclear energy.

I follow a distinction between nonconfrontational (non-protest) actions and confrontational (protest) actions proposed by Taylor and Van Dyke (2004). The categorization of nonconfrontational and confrontational actions is useful for analyzing repertoires of anti-nuclear movements because it provides the possibility to distinguish between protests (including protests at the national level) and non-protest actions. Taylor and Van Dyke characterize nonconfrontational actions as “insider tactics”. Nonconfrontational actions are public actions that do not involve protests. Nonconfrontational actions refer more to actions performed through institutional channels, such as lobbying or lawsuits. Actions that are conducted through institutional channels, which Dalton calls conventional political activities, are “informal contacts with civil servants or ministers, contacts with MPs/parliamentary committees, contacts with local government authorities, participation in the work of government commissions and advisory agencies, formal meetings with civil servants or ministers, contacts with the leaders of political parties” (Dalton 1994:183). There is also another kind of
nonconfrontational action that is not related to institutional channels. This kind of action is aimed at influencing public opinion which not only takes place through media but also through actions aimed at engaging new supporters (e.g. Dalton et al 2003).

Taylor and Van Dyke view confrontational actions as “outsider tactics” (2004). Confrontational actions such as protests are actions conducted outside of institutions. They are often divided into conventional and disruptive actions (Taylor & Van Dyke 2004). Tarrow argues that there are three kinds of protest actions: conventional, disruptive and violent protests (1998:104). By conventional collective action, he refers to strikes and demonstrations, stating that “like the strikes, the demonstration began as a disruptive direct action that was eventually institutional” (1998:100). Tarrow describes disruptive actions in the following way:

Disruptive and conventional actions require a substantial support base. Tarrow considers that conventional action has “the advantage of building on routines that people understand and that elites will accept or even facilitate”, while disruptive action “breaks with routine, startles bystanders, and leaves elites disoriented, at least for a time” (1998:104). There is a thin line between conventional and disruptive actions: for instance, conventional demonstrations organized without permission (if required) could become disruptive. Tarrow considers violence to be the easiest strategy in terms of carrying it out because it needs a smaller number of protesters to be carried out and thus smaller costs of coordination (1998:104). However, the risks that violent actions will be repressed are higher than conventional and disruptive actions. Della Porta argues that activists are more prone to carry out violent actions (or at least a radicalized branch of the movement), when their actions have been repressed by police (1995). While Giugni and Grasso argue that protest actions generally receive more attention than
non-protest actions (2015), it does matter whether protests are violent or nonviolent since violent actions seem to gain more public attention (Barkan 1979:33). Table 1 summarizes types of actions and provides examples.

Table 1. *Types and examples of actions*

<table>
<thead>
<tr>
<th>Types of actions</th>
<th>Examples of actions (from Taylor &amp; Van Dyke (2004:267))</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nonconfrontational actions</strong></td>
<td>- Lawsuits, lobbying</td>
</tr>
<tr>
<td>- Institutional channels</td>
<td>- Leafleting, letter-writing campaigns, petitions, and press conferences</td>
</tr>
<tr>
<td>- Influencing public opinion</td>
<td></td>
</tr>
<tr>
<td><strong>Confrontational actions</strong></td>
<td>- Demonstrations, strikes, symbolic actions</td>
</tr>
<tr>
<td>- Conventional protest actions</td>
<td>- Blockades, illegal actions</td>
</tr>
<tr>
<td>- Disruptive protest actions</td>
<td>- Bombing</td>
</tr>
<tr>
<td>- Violent protest actions</td>
<td></td>
</tr>
</tbody>
</table>

Taylor & Van Dyke argue that both sociopolitical conditions and internal movement dynamics matter for types of actions undertaken by social movements (2004:271). As this thesis deliberately focuses on external sociopolitical conditions shaping repertoires of anti-nuclear movements, internal movement dynamics fall outside the focus of this thesis. There is, however, one aspect of internal movement dynamics that is important for the study at hand. In order to understand what repertoires of social movements as a whole look like (and not only repertoires of some organizations and groups involved in the movements), the capacity for coalition building between these actors is of importance. The remainder of the chapter discusses coalition building in movements and then the concepts of political and discursive opportunities.
2.3 Coalition building in social movements

Social movements can be understood as networks of different kinds of actors (Diani 1992:13). In the studied anti-nuclear-movements, these actors are environmental NGOs and local anti-nuclear groups. Relations between these actors can be linked to the choice of actions. Actors in movements can choose to organize some actions together, as in building a coalition, or act on their own or in smaller groups. In order to understand why recent anti-nuclear movements do not choose mass national campaigns against nuclear energy, their capacity for coalition building in movements needs to be understood. Organizing mass national campaigns could require a particular kind of relations between different actors in movements, relations that would foster cooperation. Relations between actors in movements formed in one way can provide some opportunities for nonconfrontational and confrontational actions, while relations shaped in another way may provide other opportunities for nonconfrontational and confrontational actions. Their capacity for coalition building is crucial because it provides some potential for these actors to act together. Social movements, and particularly their mass actions that require engagement of various actors in movements, are much more than just the sum of all actions carried out by each actor in movements.

Social movements differ in terms of kinds of involved actors, more organizations or more grassroots initiatives, and the levels that these actors target: local, national, global (Rootes 1999). Actors with access to institutional channels of communication with political elites would choose non-confrontational actions, such as lobbying, through these channels, rather than select confrontational actions (Piven & Cloward 1979, Taylor & Van Dyke 2004). This means that actors without access to these channels would rather engage in confrontational actions.

It has been noticed that environmental movements have been professionalizing (e.g. Mol 2000, Dalton 2015). This trend is crucial since it refers to a qualitative change in terms of involved actors in movements – the rise of more professionalized actors. Professional movement members mean those that have “a paid occupation, especially one that involves prolonged training and a formal qualification.”¹ The process of professionalization in relation to environmental movements means that workers

¹ The definition of profession is given according to the English Oxford Dictionaries, Available at https://en.oxforddictionaries.com/definition/profession accessed 24 November 2016
of environmental organizations have become professional; they are paid for their work and their work requires often long-term training. Professionalization is important because different types of actors in social movements have different degrees of flexibility in terms of choice of actions. Professionals usually specialize in a narrower field of operation while at the same time they perform in a more comprehensive way due to their broad knowledge of that field. In general, professionalization of social movements means formalization of some actors within these movements. Staggenborg explains this connection through two processes: “(1) professional managers tend to formalize the organizations that they lead; and (2) the SMOs [Social Movement Organizations] that have the resources to hire professional managers are those with formalized structures” (Staggenborg 1988:594). Thus, professionalization is connected to the formalization of an organization and its professional staff.

McCarthy and Zald hypothesized that hiring professional staff to social movement organizations is connected to the increased income flow. They consider that a social movement organization “will be confronted with the diverse problems of organizational maintenance, and as resource flows increase these will become more complex” (McCarthy & Zald 1977:1234). The more specialized operation of an organization which becomes possible due to the increased financial resources will require “skills in lobbying, accounting, and fund raising” which would lead to professionalization (McCarthy & Zald 1977:1234). While McCarthy and Zald imply that specialization in operation is connected to increased income flow, it is also possible to imagine the situation when the mode of discussion changes and some issues become discussed in a more detailed way, compelling actors within movements to adjust to these changes. Another reason for specialization in operation could be connected to the admittance of actors in movements to new forums, where discussions are highly specialized. This creates a sort of dialectic relation with more professional staff having more access to new specialized forums, with more forums leading to more professionalization. This means that not only are there more financial resources but there is also more specialization in terms of discussed issues; this in turn may push actors in movements towards professionalization, which implies a more formally structured and professional staff. While professionalized organizations have more adaptive capacity because of their knowledge and wider spectrum of resources and opportunities, grassroots organizations have less flexibility in terms of their actions. This suggests different kinds of actors may have different opportunities for nonconfron-
tational and confrontational actions. Similar kind of arguments applies to framing processes: environmental NGOs (professionalized organizations) could be engaged in constructing frames of conflicts more than grassroots organizations because they have more resources to develop arguments due to their expertise and accumulated knowledge (Yanitsky 2011).

Repertoires of movements seem to depend on what kind of actors are involved in movements. Although Piven and Cloward argue that involvement of non-grassroots organizations leads to less disruptive actions through institutional channels and tends to “defuse protests”, Staggenborg disagrees with this argument (1988:597). She claims that organizations carry out other important functions, such as keeping movements afloat longer than grassroots movements would last. In a similar line of thought, Kriesi states that professionalized organizations are able to pursue different strategies than informal organizations:

Formalized and professionalized SMOs [social movement organizations] tend to engage in institutional tactics and typically do not initiate disruptive direct-action tactics. They prefer institutional tactics, because they are more compatible with a formalized structure and with the schedules of professionals. Moreover, the internal structuration also contributes to the integration into established systems of interest-intermediation: SMOs with formalized and professionalized structures tend to have easier access to public authorities, because government bureaucrats prefer to deal with organizations with working procedures similar to their own (1996:18).

The institutional structures that organizations interact with prefer more formalized organizations and professional leaders. Without professionalized organizations, movements would have less access to institutional channels to deliver their ideas and opinions (Staggenborg 1988:597). Following this logic, the involvement of organizations could lead to more nonconfrontational actions while the involvement of grassroots groups could lead to more confrontational actions.

The capacity for coalition building within movements that would foster collaboration depend on a number of factors. Summarizing previous research in this field, Van Dyke and McCammon demonstrate that cooperation among actors in movements depends on shared goals, values, beliefs, identities, similar framing of arguments as well as political contexts (2010). If actors in movements have similar ideologies and share at least some goals, they have more grounds for cooperation (Staggenborg 1986, McCammon &
Similar values, beliefs, identities and framing of arguments do not necessarily imply that actors in movements share goals as well as similar ideologies, and thus would not necessarily lead to cooperation between them (Barkan 1986). These are two interrelated but somewhat dissimilar processes. The presence of political opportunities also matters for cooperation between actors in social movements (Van Dyke & McCammon 2010). McCammon and Campbell argue that fear of not achieving goals may push actors in movements to cooperate more than political opportunities would do; this is because even though actors could have political opportunities, they may consider their strategies to be functioning and thus be reluctant to change them (2002:235). In other words, actors’ perceptions that cooperation is strongly needed is necessary for cooperation. In order to understand repertoires of anti-nuclear movements it is thus necessary to assess opportunities for cooperation arising in political contexts as well as discursive contexts, the latter including ideologies, values, beliefs, identities and framing of arguments. Different actors engaged in anti-nuclear movements may have different political and discursive opportunities which would then be reflected in their collective actions.

Cooperation among actors in movements should be assessed in respect to the levels where different actors operate. Organizing national campaigns could depend on whether local grassroots groups are interested in cooperation with other groups and actors. Local grassroots groups could be NIMBY (not-in-my-back-yard) or NIABY (not-in-anyone’s-back-yard) (Fischer 2000). Fischer argues that local groups are often against construction in any region (2000:122), which means they may be interested in actions beyond their regions. In case local grassroots groups are NIMBY, they would probably have limited interest in cooperation with other regions. Collaboration between actors at different levels matters for organizing national protest campaigns. Rüdig states that local protests are not enough for accelerating national anti-nuclear movements (1990), and that actors at the national level are needed for organizing national campaigns or local actors should have resources and interests in organizing national campaigns. Van Dyke and McCammon show how cooperation of actors in movements could be facilitated by bridge builders, actors who would be engaged in establishing cooperation between different actors in movements (2010:xvii). Actors at the national level could serve as connecting nodes between grassroots organizations in different regions. Relations between local groups and nationally operating organizations either enable or hinder collective actions organized by these different kinds of actors together.
To sum up, this thesis scrutinizes the capacity for coalition building in anti-nuclear movements, professionalization among actors in movements, and also looks at actors who have access to institutional channels of actions (e.g. lobbying). Actors in social movements may have different access to varying channels of influence, different levels of acting, different relations between each other. The scrutiny of these relations will illuminate how the trend of professionalization shapes collective actions of anti-nuclear movements as a whole. Deradicalization of professionalized organizations, on the one hand, and little access to institutional channels and a focus at the local level among grassroots groups on the other hand, could lead to different repertoires of these actors, and little collective action organized by these actors together. Now the chapter turns to discussing the concept of political opportunities and how political opportunities shape repertoires of social movements.

2.4 Defining political opportunities

Political opportunities are among the most well-known concepts in social movement studies (e.g. McAdam 1982, Kriesi 1995). Meyer and Minkoff define political opportunities as exogenous factors that “enhance or inhibit prospects for mobilization, for particular sorts of claims to be advanced rather than others, for particular strategies of influence to be exercised, and for movements to affect mainstream institutional politics and policy” (2004:1457-1458). Political opportunities structure theory examines political processes and institutional politics in order to understand strategies and outcomes of social movements (McAdam et al 1996:3). In other words, this approach examines the political contexts of social movements.

There is a broad spectrum of sociopolitical aspects that could be considered as a political opportunity (see for instance Kitschelt 1986, Meyer & Minkoff 2004). Although different definitions of political opportunities exist, there are a number of aspects generally included: openness/closure of political system, state capacity for repression, presence of allies within the political system and stability of power balance (McAdam 1996:27). Zdravomyslova suggests the same aspects, but includes state capacity for repression in the first element of openness/closure of political system (1993) because openness and repression are interconnected. I apply Zdravomyslova’s three aspects in the analysis of political opportunities of anti-nuclear movements.
Gamson and Meyer observe that political opportunities are perceived by activists and interpreted as such before any action unfolds (1996). Kurzman claims that perception of opportunities is more important for the actions that movements pursue than structural opportunities (1996), while structural opportunities could provide insights into the outcomes of these actions, and to what extent conducted actions actually led to the desired result. Structural political opportunities are opportunities incorporated in political systems, policies and laws that provide mechanisms for movements’ participation. As movements do not act upon political systems, policies or laws, but on their perceptions of them, it is more important to examine how anti-nuclear movements perceive their political opportunities in order to understand how they act. The emphasis on perceived opportunities matters mainly for the choice of method, and a method that provides direct access to perceptions of anti-nuclear movements is required. Perceived political opportunities will be studied through interviewing actors in anti-nuclear movements.

Since I examine perceived political opportunities, I reconsider the common aspects of political opportunity structure from that perspective. The openness and closure of a political system is in general characterized by: (a) a number of political parties, factions and groups able to translate the demands of social groups into official parliamentary language; (b) separation of the executive and legislative branches; (c) the nature of interaction between the executive branch and interest groups; and (d) the existence of a mechanism linking the demands of various social and political groups (Kitschelt 1986, Zdravomyslova, 1993). Since (a) and (b) are facts and do not refer to perceptions, they will not be addressed.

Among the aspects categorizing the openness of political systems suggested by Kitschelt and Zdravomyslova, anti-nuclear movements can have perceptions about (c) the nature of interaction between the executive branch and interest groups (relations with political parties), and (d) the existence of a mechanism linking demands of various social and political groups (institutional channels). The aspect of a political system’s openness leads to a question about anti-nuclear movements’ experiences of various mechanisms.

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2 Kurzman bases his analysis on the study of Iranian revolutionary movement in 1977–1979 where he comes to the conclusion that “the monarchy was not structurally vulnerable” but yet the movement interpreted the political situation as possible to change. According to Kurzman, this perception arose from the changes in the movement but not in the structural opportunities embedded in the political system.
for public involvement in decision-making procedures. Cooperation with political parties is included in the aspect of movement allies. The openness of a political system relates to the degree of repression that can be exercised by a state. To repress collective actions means to “apply sanctions that increase costs of collective actions” (Kriesi 2004:78). Repression also implies an increased vulnerability of the actors (Buechler 2004:68). For instance, in a rather closed context (e.g. authoritarian regime) movements may not only have limited opportunities to intervene, but the state can also put additional pressure on movements. Perceptions about a state’s capacity for repression may affect activists’ trust in the political system. State capacity for repression will be analyzed through movements’ perceptions of their contexts, when they talk about openness of political systems.

Presence of movement allies is the second aspect of political opportunity structure. Opportunities arising from constructing alliances concern cooperation with different kinds of actors, such as political parties, experts, other social movements and public figures. These actors could be domestic or from abroad in the sense of international cooperation, as in cooperation with similar movements in other countries. McAdam (1996) argues that public opinion can be seen as an ally within the political system. Kolb arrives at a similar finding as McAdam, arguing that anti-nuclear movements could achieve their goals if there were anti-nuclear attitudes in the public combined with a strong elite conflict (2007). Rüdig shows that public attitudes, including local opposition and expert dissent, could be seen as opportunity for anti-nuclear movements (1990). Following Rüdig, Kolb and McAdam in their claim on the importance of anti-nuclear attitudes among the general public, I include perceptions about public opinion in the aspect of movements’ allies. Depending on their perceptions about public support, anti-nuclear movements may choose to mobilize citizens or to act on their own.

Apart from other actors in the political system and public opinion, relations with the media are also important for social movements. As the lack of media coverage of an event leads to its oblivion in the political process (Klandermans & Goslinga 1996, Carroll & Ratner 1999), the media is a crucial partner for social movements. Freedom of the media and its ability to raise critical voices is also vital. The different types of media that movements use may have also some significance for their actions. Apart from the conventional media such as television, radio and newspapers, movements may use media that Downing calls radical. He defines radical media as platforms for an alternative vision to hegemonic policies.
priorities, and perspectives (Downing, 2001:v). Media opportunities are also included in the concept of a movements’ allies.

**Stability of power balance** is the third aspect of political opportunity structure (McAdam 1996). It relates to the possibility to change a situation regarding an issue through a shifting balance of power. Zdravomyslova states that the presence of a political split in government and political leadership turnover influence the power balance (1993). The more possibilities there are to change the power balance, the more there are opportunities for social movements to promote their agenda. One of the possibilities for changing the balance of power is through emphasizing elite dissent, including experts and politicians (Rüdig 1990, Kolb 2007). Rüdig claims that a monolithic vision of nuclear power among experts and ruling elites narrows down opportunities for social movements to change the power balance, while dissent among experts could give opportunities for movements. Rüdig also demonstrates that local opposition and expert dissent are preconditions for the rise of a national protest movement (1990). This aspect of political opportunity structure is studied by asking activists how they see possibilities of changing the situation with nuclear energy.

Although the political opportunity structure approach studies movements in their political contexts, focusing on relations between authorities and movements, there are sectors where business companies are a significant part of the political contexts of social movements (Gustafsson 2015). The research of Gustafsson demonstrates that large-scale companies could sometimes be crucial actors for mobilized groups (2015). Since nuclear energy industries consist of one or several large-scale energy companies, they are influential in the politics of nuclear energy due to their large share of responsibility over the nuclear industry. The focus here is placed on these companies as much as on the authorities that anti-nuclear movements engage with.

Political opportunities matter for the choice of nonconfrontational or confrontational actions. Kitschelt argues that while more open political contexts provide opportunities for nonconfrontational actions, anti-nuclear movements radicalize and pursue confrontational actions in more closed structures (1986). Closed and open political contexts are only ideal types, and there is no context that could be called completely open or closed, only gradation between different contexts. Nonconfrontational strategies take place when there are opportunities to act through institutional channels and more open political systems. Confrontational strategies occur when there are less possibilities to deliver opinions through institutional channels. For
instance, Kitschelt regarded the French nuclear sector as a sector with quite closed political contexts (1986). Anti-nuclear movements in the context of the French nuclear sector had limited access to institutional channels for interaction with authorities. Differences may appear when the matter of political regimes is brought up. Open or closed political contexts do not necessarily refer to the state of political regimes. The interplay between political contexts and types of actions is summarized in Table 2.

Table 2. *Interplay between political contexts and types of actions*

<table>
<thead>
<tr>
<th>Type of political contexts</th>
<th>Open political contexts</th>
<th>Closed political contexts</th>
</tr>
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</table>
| Types of actions carried out | **Nonconfrontational actions** (non-protest actions):  
- Acting through institutional channels  
- Influencing public opinion | **Confrontational actions** (protest actions):  
- Conventional protest actions  
- Disruptive protest actions  
- Violent protest actions |

Perceptions of the following aspects will be examined in order to determine whether political contexts suggest nonconfrontational or confrontational strategies for anti-nuclear movements:

- Openness/closure of political opportunity structures (including state capacity for repression)
- Movement allies: cooperation within and beyond the anti-nuclear movement (including public opinion and access to media)
- Stability of the power balance

With political opportunities now more fully laid out, this leads to covering its counterpart, discursive opportunities.
2.5 Defining discursive opportunities

Although political opportunities shape strategies and repertoires of social movements, they are not the only socio-political condition that shape actions of social movements. Sociocultural aspects, such as identities of movements and representation of issues that these movements deal with, also have a role to play, both in regard to their choice of actions as well on sociocultural perspective of social movements, see for instance Johnston & Klandermans 1995, Gamson & Mayer 1996, Zald 1996).

Opportunities for political mobilization and participation stem not only from the openness or closeness of the institutional setting or the policies enacted by political authorities, defining the conditions that impinge upon the costs of different forms of mobilizations and their chances of success (Koopmans 1995, Tilly 1978), but also from the discourses which prevail in the public domain ...these discourses, in turn, determine which collective identities and substantive demands have a high likelihood to gain visibility in the mass media, to resonate with the claims of other collective actors, and to achieve legitimacy in the public discourse (Koopmans et al 2005) (Cinalli & Guigni 2011:46).

Koopmans and Duyvendak suggest that “instead of focusing exclusively on discourse and meaning, it seems more fruitful to combine the framing and political opportunity perspectives and to look at the political conditions under which specific discourses become imaginable” (1995:249).

Although the framing approach has been one of the most common approaches in social movement studies, it is not fully adequate for the aim of this thesis. There are several theoretical assumptions in the framing approach that prevent the analysis of actions of social movements as the result of interaction between social movements and their opponents. Steinberg summarizes fundamental problems of the framing approach coming from these theoretical assumptions, as follows: (1) scarce attention to meaning-making processes in social contexts; (2) depiction of frames as stable reference points; (3) ignoring potentially multiple interpretations of a frame; and (4) assumption that the act of framing is a strategic action (1999). To put it another way, in the framing approach social movements are seen as rational actors that construct their framing strategically and everyone understands

these frames in the same way. Arguments about the strategic character of framing do not hold because “people exercise little direct control over systems of meaning in culture” (Swidler 1995:38), and the role of individuals is overestimated since “instances of individual-initiated changes to cultural frame structures rarely occur” (Fischer 1997:326).

I argue that the concept of discursive opportunities covers competing discourses more accurately than the framing approach, since it does not only examine ideas and views of social movements but also their opponents. Although the concept of discursive opportunities is relevant for the study at hand, this concept is formulated differently by researchers because it has only recently been established (McCammon 2012). In order to be able to apply this concept, I discuss common ground among existing definitions of discursive opportunities and elaborate a definition based on this common ground. The definitions of discursive opportunities hardly specify the concept of discourse with the exception of Steinberg (1999) who develops dialogical analysis of discourse on the basis of the discourse theory of the Bakhtin Circle. I find this problematic because discourse is not an uncontested concept. To address this gap, I construct a definition of discursive opportunities on the basis of the Critical Discourse Analysis approach (Fairclough 1992, Fairclough & Chouliaraki 1999).

Core aspects of discursive opportunities

The development of the concept of discursive opportunities in this direction is a novel approach of this thesis since it has not been done before. This contributes to a new understanding of how the concept of discursive opportunities can be defined and applied in social movement studies. First, the existing definitions of discursive opportunities and developing the one to be applied in this thesis are explored. Koopmans and Olzak consider discursive opportunities to be “the aspects of the public discourse that determine a message’s chances of diffusion in the public sphere” (2004:202). Bröer and Duyvendak see discursive opportunities as maps of legitimate actions (2009), meaning that discourses shape how it is legitimate to act. For Steinberg, “discursive fields are grounded in ongoing contention with institutional histories [meaning structures here] that define both the opportunities for and limits to the expression of injustice” (1999:749). He continues, “mapping of the discursive field is thus a grounded product of the dialogues” between actors in the course of interaction (1999:755).
McCammon et al argue that discursive opportunities are socially constructed to a large extent (2007).

For Ferree, “discursive opportunity structure is limited to the framework of ideas and meaning-making institutions in a particular society” (2002:62). Discursive opportunities are opportunities at the sociocultural dimension, defined as “worldviews and values, and the more specific norms, ways of thinking, practices, resources, and rules that support them, provide a pool of potential legitimating devices for particular ways of framing an issue and justifying one’s position in it” (Ferree 2002:10). That discursive opportunities of social movements are found in the public discourse (sociocultural dimension) is illustrated with the following example: if politicians, the media and other public actors present climate change as the most important problem, the public will become aware of this problem in this specific connotation. A homogeneous public discourse of climate change bridged between decision-makers and public would be hard to challenge rhetorically for social movements. To sum up, besides these definitions pointing to a public sphere (public discourse) where different types of messages meet, what is notable is how the interaction between the messages legitimize and hinder some kinds of message diffusion or some kind of actions. A legitimate map of actions for a movement is shaped by these interactions.

McCammon et al explain, “some discursive opportunity structures provide fertile ground for only a narrow range of collective action frames, perhaps even just one type of frame, while other discursive opportunities select a wider range of frames as persuasive” (2007:732) (authors italics). According to them, “groups responding to discursive opportunities...are more likely to be politically effective” (2007:732). That seems to imply that actors are likely to follow their discursive opportunities. Legitimate maps of action for activists or diffusion of movements’ messages in the public sphere are results of broader competing discourses in the public sphere. While researchers who have used the concept of discursive opportunities have often studied discourses in the media rather than discourses put forward by involved actors, it is not relevant to this study. To understand how anti-nuclear movements construct their actions on the basis of their discourses, a mediated picture of discourses is not suitable. When anti-nuclear activists construct their messages, they rather look at what their opponents say, including how they communicate, instead of just relying on ideas regarding nuclear energy communicated in the media. Interaction between various discourses is reflected in the media, but it does not provide a comprehensive
picture. To be able to answer the research question in this thesis, it is important to consider how discourses in the course of interaction establish discursive opportunities for social movements.

The concept of discursive opportunities does not necessarily focus on power relations. For instance, Bröer and Duyvendak are skeptical towards Koopmans and Olzak’s approach to discursive opportunities because such approach is not complete in its understanding of political power (2009). Bröer and Duyvendak consider that such approach does not fully cover influence of political power on what is legitimate to say, to think and to feel (2009). The focus on power is important in order to be able to reconstruct order between discourses. I see public discourse as relations of order between various discourses, some of them becoming dominant and others marginal. In this I follow Bröer and Duyvendak (2009), who emphasize the role of power within discursive opportunities, and then Fairclough, who states that the result of discursive struggle is the construction of power relations. While the concept of discursive opportunities does not include a concept that would cover ordering between discourses, Critical Discourse Analysis includes a concept called order of discourse (Fairclough 2003), borrowed from Foucault (1981), which is described subsequently. Power relations between messages of various actors in society may change in the course of their interaction and also in broader sociocultural context changes. For instance, several studies demonstrate that discourses of nuclear energy changed after the issue of climate change became firmly established in the public discourse (Bickerstaff et al 2009, Rüdig 2013).

The concept of discursive opportunities is thus defined as the capacity of the public sphere, which is based on power relations between discourses, to make the messages and actions of social movements legitimate or illegitimate, and to create conditions for movements to act in one or another way. Power relations between discourses are subject to change during their interactions and when broader sociocultural discourses change. In the next section I define the concept of discourse in discursive opportunities.

Defining discourse in discursive opportunities

I apply the notion of discourse from the approach of Critical Discourse Analysis to the concept of discursive opportunities. The definition of discourse introduced in Critical Discourse Analysis (CDA) is used because it is compatible with the concept of discursive opportunities on several grounds. First, CDA analytically distinguishes discursive and sociopolitical dimensions
similar to Ferree’s definition of discursive opportunities (2002). Ferree distinguishes these dimensions, but at the same time sees them as parts of the same dynamic. This is similar to how CDA researchers see relations between these dimensions. Second, the concept of discursive opportunities and CDA share a focus on ways of acting (genres in CDA, repertoires and strategies in social movement studies) and on identities (styles in CDA, identities in social movement studies). CDA provides a coherent framework for studying discourses and ordering between discourses, which is crucial for investigating discursive opportunities (Fairclough & Wodak 1997, Fairclough 2003).

Critical Discourse Analysis is an analytical approach that studies power relations within language in order to understand power reproduction in social processes (Blommaert & Bulcaen 2000). It also scrutinizes “the way how social power abuse, dominance, and inequality enacted, reproduced, and resisted by text and talk in the social and political context” (Van Dijk 2001:352). Van Dijk continues, saying that “discourse analysts take explicit position, and thus want to understand, expose, and ultimately resist social inequality” (Van Dijk 2001:352). Fairclough and Wodak define discourse as

socially constitutive as well as socially conditioned - it constitutes situations, objects of knowledge, and social identities of and relationships between people and groups of people. It is constitutive both in the sense that it helps to sustain and reproduce the social status quo, and in this sense that it contributes to transforming it. Discursive practices may have major ideological effects – that is, they can help produce and reproduce unequal power relations between (for instance) social classes, women and men, and ethnic/cultural majorities and minorities through the ways in which they represent things and position people (Fairclough & Wodak 1997:258).

Fairclough provides a three-dimensional framework of discourse analysis. These dimensions include text, discourse practices, and then social practices and social structures (2003:22-23). Discourses can only be studied through texts and from a broader societal perspective, meaning that conclusions are based on textual evidence but are closely connected to social structures and practices. These dimensions function as the analytical steps of discourse analysis.

The first step is the analysis of collected texts. Each text is a single event of representations of an issue. To find patterns in representations, a sufficient number of texts, depending on research design, needs to be studied. These patterns, commonly occurring representations of an issue, are discourses. The
definition of text includes written texts (e.g. brochures and placards) but also speeches; in other words, anything with a semiotic component. Fairclough argues for systematic textual analysis in discourse analysis (1992), claiming that “discursive practice is manifested in linguistic form” (1992:71). At the dimension of text, Fairclough suggests examining semantic relations, modality, grammatical relations, vocabulary and phonological relations (1992). In the analysis I pay attention to grammatical structures and modality to some extent, but much more to vocabulary and formulations as they put forward more concise and clear visions of nuclear energy while grammatical structures are often less indicative of implicit meanings.

The second step is the analysis of discourse practices on the basis of findings from the analysis of each text. Discourse analysis responds to the questions of “what is said” (themes), “who says” (identities) and “how it is said” (genres). First, the analysis of themes and implicit meanings inherent in discourses is carried out (what is said in discourse, ways of representing). Second, the examination of who are the actors behind these representations is conducted. Fairclough calls it style (ways of being in discourse, “who says”) and social movement studies call it identities of actors. This step is carried out through reconstruction of relations between actors and through analyzing processes of inclusion/exclusion, foregrounding/backgrounding and activization/passivization of actors (Fairclough 2003:134, Kress & van Leeuwen 1996). Third, the analysis of genre, which is defined as a way of acting and interacting linguistically, is carried out. This is done, for example, through reports, banners in the streets, leaflets or newspaper articles, which represent how it is said. According to Fairclough, “a genre is a way of acting in its discourse aspect - for instance, there are various genres of interview such as job interview” (Fairclough 2003:216). Genres guide the production of texts. For instance, a genre of report presupposes some specific grammatical relations between sentences (logical clear sentences with neutral expressions). The concepts of repertoires, strategies and genres could be seen as closely related. I use repertoires/strategies for actions of movements, and the concept of genres for analyzing discourses (ways in which arguments about nuclear energy are presented).

Discourses of nuclear energy are ordered, thus establishing public discourse. As the definition of discursive opportunities suggests, discursive opportunities arise in public discourse. Therefore, discursive opportunities of anti-nuclear movements will be studied at the discourse dimension, the second dimension in Critical Discourse Analysis.
The third step contextualizes texts and discourses in social practices and structures. For instance, actions of social movements or their opponents are social practices. These actions are conditioned by anti-nuclear discourses. Social practices can be changed, for example, if discourses change. Thus, if something changes in terms of practices, such as new participatory practices become established, then it means that the discourse on public participation has changed as well. It is important to note that social structures are less prone to change than social practices. Social structures are social practices that became established and are taken for granted. For instance, public participation mechanisms in Environmental Impact Assessment (EIA) procedures are social structures. As EIA procedures are formalized in law, then for anti-nuclear movements the EIA procedures are part of the structures within which they act. Political opportunities are sociopolitical contexts of anti-nuclear movements. Ferree defines relations between discursive and political opportunities in the following way:

The discursive opportunity structure is part of the broader political opportunity structure. The latter concept refers to all of the institutional and cultural access points that actors can seize upon to attempt to bring their claims into the political forum, and it has been used to explain the frequency and timing of protest events such as demonstrations and rallies. The discursive opportunity structure is limited to the framework of ideas and meaning-making institutions in a particular society (2002:62).

Following the distinction between discursive and social practices in CDA, I attribute discursive opportunities to dimension of discourses, and political opportunities to dimension of social practices and structures. This is an analytical distinction because in fact these dimensions are in dialectic relations and are interrelated. Both of these kinds of opportunities constitute a social reality for anti-nuclear movements and influence the way movements act. It is important that a similar logic of relations between discursive and political opportunities is visible in the research that applies the concept of discursive opportunities. The separation of dimensions, where discursive and political opportunities are located, indicates different ways of studying these contexts of anti-nuclear movements. Since this concept addresses social practices and structures that constitute contexts of anti-nuclear movements, the third dimension of CDA will be addressed by the concept of political opportunities. Political opportunities will be approached through studying perceptions of political contexts by actors in
anti-nuclear movements. This is also why I conduct discourse analysis first and then turn to the analysis of perceived political opportunities of anti-nuclear movements.

Overall, the application of CDA to the analytical framework clarifies relations between discursive and political opportunities, and also provides a method for studying discourses. To scrutinize discursive opportunities, I first consider discourses put forward by various actors. From that follows a discussion on the order of discourse.

Discursive opportunities and order of discourse

The order of discourse can be understood as the relations between various discourses in public discourse. There is competition among discourses for the same public space. Fairclough defines the order of discourse as the range of discourses in the public sphere (Fairclough 1995:66). “Orders of discourse can be seen as one domain of potential cultural hegemony, with dominant groups struggling to assert and maintain particular structuring within and between them” (Fairclough 1995:56). Fairclough defines the order of discourse as “a particular social ordering of relationships amongst different ways of making meaning, i.e. different discourses and genres and styles” (2003:206). Foucault, from whom Fairclough borrows the concept of the order of discourse, argues that there is “a kind of gradation among discourses: those which are said in the ordinary course of days and exchanges, and which vanish as soon as they have been pronounced” (1981:56). The order of discourse presupposes that relations of dominance between these discourses are constructed. Foucault observes that there is a hierarchy between dominant and marginal discourses. He also emphasizes that discourses are being refined in the course of texts repeating each other. According to Linell, “subordinated discourses or “voices”, in turn, may be suppressed (but implied due to contextual interpretation), backgrounded or clearly visible” (2009:249). So marginal discourses are not always hidden from the public, they could be considered unimportant, according to this perspective. Linell thus broadens Foucault’s definition of the order of discourse, demonstrating that it is not about marginal discourses disappearing, but about these discourses considered to be not legitimate or less relevant.

The first aspect of order of discourse is power over discourse – who among actors have more power for promoting their ideas? This is the first aspect of order of discourse that lies in the power positions of actors who put forward these discourses in social structures. “Power over” refers to
Dahl’s definition of power that power relations “seemed to involve a successful attempt by A to get a to do something he would not otherwise do” (1957:204). Defining power over discourse, Fairclough and Fairclough give a similar definition, noting that power relations have asymmetrical relations (2012:113). In the case of nuclear energy, power over discourse means having power to impose some energy strategies and implement these strategies. This refers to the institutional power of actors. Depending whether these actors have institutional power, industry interests and economic and financial resources, expertise or they are so-called symbolic elites (Van Dijk 1989:27-28), discourses can become influential in the decision-making processes and receive wider recognition in society. In this thesis I only consider the discourses of anti-nuclear movements and discourses of actors that stand behind policy changes because they have the institutional power to define energy strategies and policies. I refer to these kinds of discourses as the official discourses of nuclear energy.

Second, messages have to be formulated with coherence and clarity in order to be embraced by the wider audience (Koopmans et al 2005). This is an important aspect of power of discourse. Gamson argues that there are two strategies for social movements: “unloosening the hold of officially sponsored packages in mass media discourse” and “furthering the careers of the mobilizing packages” of social movements (1998:215). Gamson means that social movements have two options: either to provide a counter-message to dominate discourse, or to provide an appealing message of its own. Both these strategies require formulations which come from coherent and clear messages.

Third, power of discourse is also connected to the contexts of these discourses, their potential to be spread and become accepted in the society. Discourses become more powerful if they are embedded in broader discourses, since “mobilization potential is... affected by the presence of certain themes and counterthemes in the political culture” (Gamson 1998:214). It is crucial for the distribution of discourses whether packages of themes resonate with larger themes in society. “Resonances increase the appeal of a package; they make it appear natural and familiar” (Gamson 1998:202). Gamson argues that by resonating with broader cultural themes, then discourses, national identities or in his terminology packages of themes, acquire larger acceptance in a society. Movement identity, or the collective identity of activists in movements, also has to be juxtaposed with national identities, as there can be tensions between them. If discourses
resonate with the broader visions of society, then they have improved chances to become dominant.

This is discussed in subsequent chapters, where the power positions of actors, coherence and clarity of the ideas, and resonance within socio-political contexts are studied.

Different kinds of reasoning

This section suggests how coherence and clarity of messages in discourses could be assessed. Two historical developments are important to mention in respect to assessing coherence and clarity of messages. First, the world is presently considered to have moved to the next historical period after modernity (e.g. Beck et al 2003). Instrumental rationality predominates in modernity. But belief in science and rationality and strict separation between experts and laymen becomes less important as instrumental rationality is no longer “the motor of social history” in the historical period after modernity (Beck 1997:32). Beck wonders whether “the reflected skepticism…will overcome industrialism’s arrogant faith in technology” (1997:162). Reflected skepticism creates possibilities for multiplication of rationalities (Beck et al 2003:20) and thus opens up space for politics and negotiations of what is desired for society. This leads to how messages of different actors in society, including anti-nuclear movements, could be formulated with the use of different kinds of rationalities, not only an instrumental one.

Second, the recently noticed trend of professionalization in environmental movements concerns not only actions but also the rhetorics of movements (e.g. Mol 2000, Dalton 2015). Mol argues that environmental movements use more pragmatic rhetorics nowadays than previously (2000). On the basis of this transformation in environmental movements, it is possible to presuppose the ways in which anti-nuclear movements reason have adjusted and become more pragmatic. Pragmatic rhetorics signal different kinds of reasoning that become employed. Kinds of reasoning (or different rationalities) should be thus incorporated in the study of the order of discourse.

Conceptually, there are a number of ways to address different kinds of reasoning (for instance which might be also seen as intrinsic and instrumental values). I follow Horkheimer’s distinction between subjective, objective and instrumental reasons. These kinds of reasoning are used because

4 I use “reasoning” and “rationality” interchangeably.
this distinction enriches the discussion on pragmatic/less pragmatic rhetoric in nuclear energy discourses. Subjective reasoning presents an issue from the perspective of what can be gained from it, not discussing the issue in itself. Subjective reason “attaches little importance to the question whether the purposes as such are reasonable” (1947:3). Horkheimer introduces subjective reason in the following way:

The idea that an aim can be reasonable for its own sake – on the basis of virtues that insight reveals it to have in itself – without reference to some kind of subjective gain or advantage, is utterly alien to subjective reason, even when it rises above the consideration of immediate utilitarian values and devotes itself to reflections about the social order as a whole (1947:4).

Objective reason emanates from “the ideas of justice, equality, happiness, democracy, property” (Horkheimer 1947:20). Horkheimer implies that both subjective and objective reasons have been important for argumentation and decision-making; however “at a certain point thinking either became incapable of conceiving such objectivity at all or began to negate it as a delusion” (1947:7). When objective reasons are eliminated, subjective reason converts into instrumental reason, implying that means are not considered since they are only seen as an instrument for achieving a purpose. Horkheimer argues that the consequences of instrumentalization of reason are that “justice, equality, happiness, tolerance, all the concepts that, as mentioned, were in preceding centuries supposed to be inherent in or sanctioned by reason, have lost their intellectual roots” (1947:23). While Horkheimer used this distinction for different reasons when analyzing processes in other times and contexts than the one in this thesis, this distinction is useful for the purpose of this thesis as it seems to be connected with the process of professionalization. This distinction is treated carefully here. The distinction on objective and instrumental reasons will help to investigate the order of nuclear energy discourses and discursive opportunities of anti-nuclear movements; in particular, it will be used for studying the coherence and clarity of discourses.

2.6 Analytical framework

This thesis is based on an analytical framework that consists of several elements. It looks at action repertoires of anti-nuclear movements, and two
kinds of repertoires are distinguished: nonconfrontational and confrontational. Repertoires of social movements are shaped by sociopolitical contexts and the capacity for coalition building in movements. External sociopolitical contexts have to be studied in order to understand how nonconfrontational and confrontational repertoires are shaped.

Table 3. Analytical framework: concepts applied in this thesis

<table>
<thead>
<tr>
<th><strong>Action repertoires of anti-nuclear movements</strong> (consisting of environmental NGOs and local anti-nuclear groups) could include</th>
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<tbody>
<tr>
<td><strong>Nonconfrontational</strong> strategies (non-protest actions through institutional channels and influencing public opinion)</td>
</tr>
<tr>
<td><strong>Confrontational</strong> strategies (conventional, disruptive and violent protest actions)</td>
</tr>
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**Actions repertoires** are conditioned by

**Discursive opportunities** (based on the order of discourse):
- Power positions of the actors promoting these discourses (power over discourse)
- Coherence and clarity of the ideas advocated within discourses (power of discourse)
- Resonance of discourses within their socio-political contexts (power of discourse)

**Political opportunities** (based on perceptions of political contexts):
- Openness/closure of political opportunity structures (includes also state capacity for repression)
- Movement allies: cooperation within and beyond anti-nuclear movement (includes also public opinion and access to national and regional media)
- Stability of power balance

**Coalition building** in social movements
Sociopolitical conditions are studied through discursive and political opportunities. Analysis of discourses of anti-nuclear movements and official discourses are carried out. On the basis of the discourse analysis, it will be possible to examine the order of discourse and power relations between these discourses. Order of discourse is studied through power over discourses, coherence and clarity of the ideas advocated within discourses (power of discourse) and resonance of discourses within their sociopolitical contexts (power of discourse). The study of order of discourse provides insights into the discursive opportunities of anti-nuclear movements.

Political opportunities are studied through the analysis of sociopolitical contexts captured in the interviews conducted with environmental NGOs and local anti-nuclear groups. The aspects of political opportunities are: openness/closure of political opportunity structures, movement allies, and the stability of the power balance. It is known from previous research that political opportunities lead movements to pursue nonconfrontational or confrontational actions. In more closed contexts with limited institutional channels, movements would rather choose confrontational actions, while in an open context with institutional channels, nonconfrontational actions would occur more often.

To understand repertoires of anti-nuclear movements, actions of various actors in the movements are analyzed. The actions are categorized as nonconfrontational or confrontational. They are interpreted through the sociopolitical conditions of anti-nuclear movements and also through their capacity for coalition building in movements. As there are different actors in social movements, they probably carry out varying actions, which may also differ in terms of the level they target (local, national and global). It is to be seen how professionalization interplays between different kinds of actors involved in anti-nuclear movements and how it affects repertoires of movements as a whole. It is known that more professionalized actors prefer less confrontational actions, while grassroots groups choose rather confrontational actions. Both sociopolitical conditions and the capacity for coalition building will provide insights into the repertoires of anti-nuclear movements.
This chapter introduces the research design, presenting a selection of contexts, the research strategy, methods of data collection and data analysis.

3.1 Selecting contexts

Similar repertoires of anti-nuclear movements in the three different contexts of Russia, Poland and Sweden are explored. The study of how opposition to nuclear energy develops in the three different contexts provides deeper knowledge into the social mechanisms and conditions that evoke less protests against nuclear energy. Although investigating movements in several contexts does not provide possibilities for broader generalizations (Snow & Trom 2002:161-162), such research could provide insights into repertoires of movements in other contexts with similar developments.

Movements in the three different contexts of Russia, Poland, and Sweden were selected on the basis of fulfilling both “positive” and “possible” conditions (Blatter & Haverland 2012:15). “Positive” conditions implies that there is a similar phenomenon in focus. “Possible” conditions refer to the feasibility of carrying out a study. “Positive” contexts are countries that share such characteristics as recent changes in nuclear energy policies towards development or maintenance of nuclear energy (if not previously planned), lack of mass protests, and historical legacies of opposition to nuclear energy. Countries that could be considered “positive” contexts in this study differ significantly. Valentine and Sovacool notice that countries that have gone through changes in energy policies during the alleged “Nuclear Renaissance” are countries that use different types of energy resources, vary in terms of political regimes and have different histories of nuclear energy development (2012). As countries with various backgrounds
have considered nuclear energy for the first time or reconsidered their established nuclear energy programs, political regime type does not seem to matter for plans to construct nuclear power plants (Way 2013:165), although political motivations are one of the most important aspects for developing nuclear energy (Gourley & Stulberg 2013).

Russia, Poland, and Sweden are chosen because they represent three different national contexts. The energy policy changes and forms of anti-nuclear actions other than mass protest campaigns have occurred in Russia, Poland and Sweden from 2005 onwards. Recent energy strategies were adopted in 2006 in Russia, 2005 in Poland, and 2009 in Sweden. Historical legacies and current political systems differ among these countries. While Poland is a post-communist country and Russia is a post-soviet one, Sweden does not have a similar legacy. Poland and Sweden are members of the European Union and their energy policies are related to energy visions in the EU, which emphasizes the development of renewable energy. Sweden is an established democracy, Poland is a new democracy, and Russia’s political system has been characterized in different ways after the dissolution of the Soviet Union. The nuclear energy industries of Russia and Sweden have had a long history, while Poland is planning to build its first nuclear power plant. Furthermore, there is a gap in the research on recent anti-nuclear movements in Russia, Poland and Sweden, particularly in comparison with other countries; this calls for the analysis of these particular contexts.

Russia, Poland and Sweden are selected because it is also possible to carry out an analysis due to practical considerations. Having lived in these three countries, I am familiar with sociopolitical developments and the culture that forms the contextual knowledge of these societies. This knowledge facilitates my research. Moreover, having studied environmental movements in Russia, I also have some understanding of structures and organization of those environmental movements. Courses on social movements in Poland were also undertaken, and the completion of a master’s program in environmental communication in Sweden provided me with specific knowledge about these countries. The crucial practical aspect for choosing this particular set of contexts is language skills, which are constitutive for the designed study because discourse and content analysis are a central part of this thesis. In addition to being a native speaker of Russian, I also have an intermediate level command of Polish and Swedish, with highest proficiency in reading and satisfactory speaking ability. Familiarity with these countries and language skills provides better
opportunities to collect material, conduct interviews and analyze these contexts than if I selected other ones. All these considerations together guide the selection of Russian, Polish and Swedish anti-nuclear movements for the analysis.

3.2 Research strategy

The research strategy of this thesis is based on the triangulation of several methods of data collection (Patton 1999:1193) and analysis. Triangulation of methods of data collection has been used for gaining a more thorough understanding of contexts. Different methods of analysis required different kinds of material. Discourse analysis of texts produced by governments, energy companies and anti-nuclear movements was carried out for investigating discursive opportunities. Perceived political opportunities were studied through content analysis of semi-structured interviews. The body of collected material consists of texts produced by the studied actors and semi-structured interviews.

Triangulation of sources provided possibilities for verifying findings from one kind of source through other available sources and the reverse. This allows for observing if findings on the basis of texts produced by governments, energy companies and anti-nuclear movements and on the basis of semi-structured interviews resemble each other, even without conducting a similar deep analysis of these sources.

Triangulation of sources was also useful for tracing actions of anti-nuclear movements. Different kinds of gathered material were used for the analysis of repertoires of anti-nuclear movements. It was complemented with basic searches of online media affiliated with movements and their webpages. For instance, actions found online were verified in the interview materials since interviewees often referred to their actions. In other words, although each method asked for specific material, my knowledge of sources was used to cross-verify findings. By triangulation of sources I was able to obtain deep knowledge about the contexts and to increase the reliability of this study. As the study investigating discourses and perceptions of activists depends to some extent on a subject researcher who conducts this interpretative analysis, it is possible that certain slight differences in interpreting material may occur.

Apart from triangulation of sources, reliability is ensured through “demonstrating that the operations of a study – such as the data collection
procedures – can be repeated, with the same results” (Yin 2014:46). By transparently describing methods used for data collection and analysis, I provide a means to check the analysis. To ensure a high degree of reliability, the study protocol was used systematically, as suggested by Yin (2014:45). The study protocol is a detailed description of a research strategy, data collection and analysis, with particular attention to the analytical steps. The reader should consider this chapter on methods as the study protocol of this thesis. The data used in the analysis was carefully collected and stored, which further increased reliability (Yin 2014). As the software MaxQDA Version 11 was used for analysis, I consider the file that contains all information about the project, including data divided by country and codes as the study database. MaxQDA is a software for qualitative data analysis, allowing the coding of texts and then assembling coded pieces in various ways. It also performs other functions, but here it was only used for organizing, coding and assembling data. By assembling data, I refer to how it is possible, for instance, to choose some texts and to see to what extent some codes are present there. Close connections between empirical analysis and the analytical framework in conducting discourse analysis increased both the reliability and validity of this study. Validity is understood here as how well the study examines what it claims to be investigating.

Both discourse and content analyses required textual data for investigation. As it is social phenomena that are in focus here, the amount of textual data in respect to these processes could be immense, especially if it is not a very narrow issue. The principle of saturation was used for setting limits on collected textual materials. This principle implies that collection of material should be sufficient for interpreting social processes when possible ideas and views on these processes have been collected. The collection of material is finished when there are a few indications that new ideas (as codes) would appear in the new data (Charmaz 2006:113). In practice it meant that after I noticed that new material only repeated what was already written in the collected sources, it became predictable that the rest of the sources were likely to include similar claims, views and ideas. The amount of texts with positions, opinions and ideas on nuclear energy development is not large, as it is only one of many aspects of nuclear energy industries, and thus the collected materials are quite broad; only aspects of it related to nuclear energy development are analyzed.
3.3 Data collection

The data collection procedures applied herein follow Yin, who suggests that the process of data collection should be clearly presented (Yin 2014:84). The first part of data collection was identification of relevant policy documents, press releases and statements and other materials related to nuclear energy and mapping of involved actors. At this stage I gained basic knowledge about relevant text documents and interactions between various actors through searching relevant information at the webpages of authorities, energy companies and civil society actors. Knowledge about the environmental sector of civil society in Russia and some knowledge about the studied processes in Poland and Sweden from the university courses I was previously enrolled in helped with navigating the search for documents and actors. The webpages of the organizations I was familiar with were studied, in particular pages about their collaboration and communication with other organizations. The result of this basic network analysis was a list of state organizations, departments in energy companies, non-governmental organizations and anti-nuclear groups involved in the processes.

The second part of data collection included a thorough review of relevant texts that provided positions regarding nuclear energy development as these texts are needed for discourse analysis. The list of documents includes energy strategies and nuclear energy policies, all other related laws concerning nuclear energy development and implementation of nuclear energy programs (such as laws on the establishment of Rosatom in Russia or the nomination for the head of the nuclear energy program in Poland), transcriptions of discussions in the Parliaments, communiqués from ministries, press releases, statements, addresses, minutes, informational brochures, leaflets and other sources of official communication. Documents related to nuclear energy were searched at the webpages of ministries that were likely to have any connection to nuclear energy, mainly related to energy, the environment and natural resources. This step also included the search of documents on the webpages of energy companies (Rosatom, PGE EJ1, Fortum, E.ON and Vattenfall) and positions of these actors on nuclear energy development. Documents were also searched for at the web pages of the Russian government, the Federal Assembly of the Russian Federation (the Federation Council and the State Duma), the Polish government, the Polish Parliament, the Swedish Parliament, and the Swedish government. In the Russian context, laws and policies were also searched in the law database Consultant Plus. Policy documents and the majority of statements
and addresses that were found are available online. Those interviews found online with representatives of nuclear energy corporations and officials regarding nuclear energy development were analyzed as well. No further selection was carried out on collected texts.

Another part of the studied materials consists of statements of anti-nuclear movements, statements of environmental organizations, campaigns of anti-nuclear movements, and other possible written sources of communication regarding nuclear energy that was authorized by civil society actors. This includes statements, positions, brochures and leaflets and other types of publications written by these environmental organizations and anti-nuclear groups. They were found through: (i) google.com, google.pl, google.ru and google.se search engines through key words (anti-nuclear movements, anti-nuclear statements, anti-nuclear protests in Russian, Polish, Swedish and English); and (ii) the web pages of Bellona, an environmental organization running the environmental news portal, and Nuclear Heritage Network at nuclear-heritage.net, and (iii) the web pages of the organizations mapped during the first part of data collection. Moreover, I received a number of brochures, leaflets and even posters from anti-nuclear activists when meeting with them. As the study concerns nuclear energy development, I have analyzed only parts of the collected materials that directly relate to nuclear energy development. To minimize the possibility that some important texts could have been overlooked, I conducted searches several times with different word combinations. Sometimes I discussed with respondents the texts authored by anti-nuclear movements in order to verify my understanding of these texts. However, as I examined the period from 2005, it became clear that some texts tend to disappear from the Internet over time, making me aware of the possibility that some of these disappeared texts could not have been included in the analysis.

Although not all possible documents were collected, I found those appearing to be the ones actors most wanted to be associated with. Most probably, environmental organizations and anti-nuclear groups have written more on nuclear energy development, but those statements and positions that they continue to keep available are the most important for them. Since my goal was to analyze views on nuclear energy, this selection done by the actors themselves does not contradict my intentions.

Media texts were not collected and used in this discourse analysis, although it is common to study discursive opportunities on the basis of media sources, tracing public discourse through what is being published in
To understand how anti-nuclear movements act, I needed to investigate their own ideas and how they relate to the ideas of their counterparts, which would not be possible to do through media analysis because media provides a mediated picture, not fully reflecting the words of actors. It seems unlikely that an analysis of media sources would bring different results, as ideas and opinions do circulate in society.

While the recent energy strategies and laws have been adopted in 2006, 2005 and 2010 in Russia, Poland and Sweden respectively, anti-nuclear activists published their views on nuclear energy several years later, reacting to communication from authorities and energy companies that came some time after adopting new policies and laws. Public discussions on nuclear energy in the form of written opinions from a range of actors was condensed to a shorter period of time than 2005-2014. Public discussions in the form of documents and opinion pieces started to flourish around 2008, 2010 and 2009 in Russia, Poland and Sweden respectively.

There is a variation in types of texts produced by governments, energy companies and anti-nuclear movements in the three countries. Some types of texts appear more often in one context than in others. The analysis could be biased to some extent due to these differences; however, ways of producing texts and choosing genres for communicating positions about nuclear energy are also part of discourse analysis since this study investigates not only content but also how messages are communicated. These differences in types of texts did not influence findings in a negative way, but only provided texture to findings of discourse analysis. For instance, there are more texts stating politicians’ opinions in Russia and Poland while in Sweden it is policy documents which predominate. This difference shows the variations in the political cultures of these countries – who, in what way and under what circumstances are the positions of government and energy companies are uttered. Therefore, any specificity of the studied texts is a part of the analysis. For instance, if a text refers to some arguments about nuclear energy and not to others, this omission is a part of discourse analysis. Absence of arguments or references to counter-arguments could point towards a power play going on between texts. Absence of some arguments may or may not be intentional, but it nevertheless already demonstrates that some arguments are less important to bring up, and that suggests or creates an order among arguments. This sometimes leads to a situation when actors with different positions state their opinions without addressing the arguments of each other. This is also a part of discourse analysis. Since I look for how actors represent nuclear energy development,
their representations expressed in any possible way are important for the analysis. In this I follow Silverman, who claims that “ethnographers [discourse analysis is close to ethnography in this respect] are concerned with the social organization of documents, irrespective of whether they are accurate or inaccurate, true or biased” (1993:61).

The third part of data collection was carrying out semi-structured interviews. While texts were needed for discourse analysis, the analysis of activists’ perceptions of political contexts required sources that would provide access to their opinions and ideas. Actors’ views and ideas about nuclear energy were available online, but these materials were not complete for studying activists’ perceptions. It would not be possible to understand all aspects of the analytical framework, such as access to national media or perceptions about relations between actors within movements.

The method of semi-structured interviews was chosen as a data collection technique because this type of interview provides more flexibility during interviewing as they are based on guidelines and not strictly formulated questions (Mason 2004). This allows for an analysis of the meanings activists give to their activities (Blee & Taylor 2002:95). Mason describes semi-structured interviews in the following way:

The defining characteristic of semistructured interviews is that they have a flexible and fluid structure, unlike structured interviews, which contain a structured sequence of questions to be asked in the same way of all interviewees. The structure of a semistructured interview is usually organized around an aide memoire or interview guide. This contains topics, themes, or areas to be covered during the course of the interview, rather than a sequenced script of standardized questions. The aim is usually to ensure flexibility in how and in what sequence questions are asked, and in whether and how particular areas might be followed up and developed with different interviewees (Mason 2004).

Semi-structured interviews usually stay within thematic boundaries, but in case there are some new issues that come up unexpectedly in the interview, there is a possibility to study these issues by asking follow-up questions. Even though discourse analysis is usually based on data that is not generated by a researcher, several studies demonstrate that it is possible to use interview material for discourse analysis (see for instance Krzyżanowski & Oberhuber 2007 or Abell & Myers 2008). Interviews conducted for this thesis complemented findings from other materials in discourse analysis.
Five types of actors engaged in the processes were identified: government representatives, nuclear energy industry representatives, environmental NGOs, local activists, and researchers who focus on these issues. Government representatives were not interviewed because their statements and their views could be found in policy documents. Representatives of energy companies were interviewed in each country (Rosatom in Russia, PGE EJ1 in Poland and SKB in Sweden). SKB or the Swedish Nuclear Fuel and Waste Management Company, was chosen because it seemed that activists have more contact with this company than any other since no active nuclear energy development has been going on in Sweden. Researchers, one or two were also interviewed in Russia and Poland, while there was enough published materials to understand their points of view in Sweden.

As anti-nuclear movements consist of environmental non-governmental organizations and local anti-nuclear groups, these two kinds of actors were the main target group for the interviews. While familiarizing myself with the contexts, I created a list of actors who were found to be active in various ways and subsequently were invited to be interviewed. The list initially included all kinds of civil society actors engaged in various issues related to nuclear energy. Several of the interviewed organizations are not part of anti-nuclear movements, but were interviewed because of their relationship to discussions on nuclear energy in society; this made them actors with whose opinions and ideas that are interesting for this thesis. Among them were Green Cross Russia and the green foundation Heinrich Böll Stiftung in Poland. This list was searched for actors who deal with nuclear energy development even if they also deal with other issues related to nuclear energy. These actors were then invited to be interviewed. Further in the process I was able to confirm the list of relevant organizations/groups during the interviews when I asked questions about the composition of anti-nuclear movements. Each interviewee was asked to name active persons in the movements that they thought could be of use for my research, often referred to as a snowballing technique (Marshall 1998). Through this I also expanded the list of the groups that were active in each country and then tried to interview each respective group/organization/activist. Some of the named actors, however, did not deal with nuclear energy development and I found them less relevant for my study. The chosen quotes in the analytical chapters represent opinions and ideas of the interviewees that I found repeated in one or another way throughout several interviews. They rather present the average opinion than the odd one. I
translated quotes in the analytical chapters in order to ensure a reliable connection between an original quote and its translation into English.

The interviews were conducted during fieldtrips to Russia, March-April 2013, and to Poland, May 2013 and April 2014. The interviews in Sweden mainly took place in Stockholm, but also during short term visits to other Swedish regions from March to June 2014, with one interview via Skype in October 2014. The interviews were conducted with 17 respondents in Russia (one unrecorded interview via Skype, notes taken), 15 respondents in Poland and 13 respondents in Sweden (one via Skype, recorded). In Russia, 8 representatives of NGOs and 8 representatives of local anti-nuclear groups were interviewed. In Poland 6 representatives of NGOs and 5 representatives of local anti-nuclear groups were interviewed. In Sweden, 5 representatives of NGOs and 4 representatives of local anti-nuclear groups were interviewed; 3 interviewees were from organizations difficult to categorize as they act both as environmental NGOs and anti-nuclear groups. As they act at the national level, I considered them representatives of an environmental NGO throughout the text.

Often I interviewed the leaders of environmental NGOs. Some of the respondents from environmental NGOs have some background in natural and technical sciences while others have some background in social sciences. Although I would not be able to provide a precise description of the respondents’ background, this did come up occasionally but was not specifically discussed during the interviews. Offices that I was invited to were rather typical NGO environments. The respondents from local anti-nuclear groups are engaged in anti-nuclear movements, not due to their professional occupation, but on a voluntary basis, and they have various backgrounds. The ratio of males to females among the respondents was 13 to 4 in Russia, 11 to 4 in Poland, 8 to 5 in Sweden. Since most of the leaders of environmental NGOs and also some of the initiative groups are male, it is skewed towards more male respondents. In the selection of interview-respondents, I did not focus on gender balance as the emphasis was on interviewing the most active actors. The gender balance is important to mention because males and females tend to have different levels of concern about the environment, with females being more concerned about the environment and males tending to engage more in activism, according to research by Mohai (1991). Different levels of concerns about the environment and a focus on activism may be reflected in the collected material. However, the collected views are representative of movements and thus the potential imbalance is embedded in the actions of movements. Among
three representatives of energy companies, there were two males and one female. The gender of representatives of energy companies hardly has an impact on results, as they tend to represent the views of the companies. Sometimes civil society actors asked me during the interviews whether they should present their own or their organization’s views, and I answered that I am interested in both. There were only a couple of activists that could be characterized as young adults in each country, and the rest were middle-age and older. Age is important because some of the interviewees took part in the protests of 1980-1990s as well and could reflect upon changes in movements. More experienced actors could have chosen different actions than the younger activists due to their knowledge of previous anti-nuclear campaigns and follow similar patterns. Younger activists could use new kinds of media to a larger extent (e.g. social networks) due to a higher familiarity with them. Thus, the age groups of respondents could have influenced the results of this thesis. However, the age groups of the respondents are quite representative of movements as a whole.

With noted exceptions, all interviews were recorded and later transcribed. On average, the interviews lasted about one hour, ranging from a quarter of an hour to two hours. The interviews were conducted in the mother tongue of the respondents, Russian, Polish and Swedish in order to grasp precise meanings and expressions that interviewees used to discuss nuclear energy development and to minimize possible burdens for expression during the interviews (with two exceptions). Most of the interviews took place in the offices of the organizations whose representatives I interviewed, but also in cafes, at the homes of interviewees, in parks, and at conference facilities.

Apart from the interviews, I also collected field observations during the fieldtrips. Although it was not a large part of data collection, “viewing events, actions, norms, values, etc from the perspective of the people being studied” (Bryman 1988:61-68 quoted in Silverman 1993:31) was still important for understanding of “what is going on” (Silverman 1993:30). When I took part in Forum Dialogue organized by the Public Council of Rosatom for communication with the public in April 2013, I observed the interaction between civil society actors that engage in the discussion about nuclear energy development with representatives of energy companies. I could see how representatives of the nuclear industry reacted to questions from environmental NGOs. Forum Dialogue is a meeting place for various actors from representatives of nuclear industry, research institutes, NGOs, local anti-nuclear groups and media. Apart from that event, I was also
kindly allowed to attend the annual meeting of Swedish People’s Campaign against Nuclear Energy – Nuclear Weapons (Folkkampanjen mot Kärnkraft-Kärnvapen) in March 2013. Both of these occasions helped me to understand how communication between various actors work in practice. I also used these occasions for arranging interviews. For example, if I knew that a person I wanted to interview would be there, I would make personal contact and then ask for an interview. To sum up, three steps in data collection were carried out that all together led to a rich collection of materials for the selected research.

Co-constructing data: reflections about semi-structured interviews

In this section I describe how interviews were carried out and reflect on them. The rate of positive response for an invitation to be interviewed varied significantly between Russia, Poland and Sweden (85%, 58% and 54% respectively). In Russia, almost everyone contacted agreed to take part in the study. In Poland it was much harder to get a response: there was often no answer at all. In Sweden there was often a negative response: respondents considering themselves to be the wrong persons for the interviews. The difference among Polish and Swedish respondents relates to the fact that in Poland I received a lot of contacts from other interviewees and I knew that people I contacted are active while in Sweden it was often my own investigation which led to contacting not so relevant people (less suggestions were given during the interviews in Sweden). The other reason why I sometimes contacted less relevant people was that respondents suggested people who were active in the movements in the 1980-90s and not more recently. It is possible they did not distinguish between these two periods, probably because they see this as a continuation of anti-nuclear movements or because researchers are much more often interested in movements of the 1970-1990s. Although the lower response rate in Poland and Sweden may be considered a hindrance, it should not be seen as problematic because interviews were carried out with the key actors in the movements. The negative responses also occurred because sometimes I invited several persons from the same organizations for interviews, and seeing that I had already carried out interviews with their colleagues, these persons decided not to take part. If I had only an email address and did not receive any reply, I stopped contacting that person; otherwise I telephoned them. As with all research that relies on interviews, the results may be affected so far as they rely on only those who agreed to be interviewed. This
is partly addressed by ensuring a range of people were approached. It is difficult to predict in what way results maybe affected as views expressed during interviews were quite similar in general. The interviewees, both anti-nuclear activists and representatives of environmental organizations, seem to agree with each other on the most important aspects, particularly when discussing their political contexts.

The interviews were carried out in the native languages of the interviewees with two exceptions. One interview was conducted in English because it is the only language that both the interviewer and the respondent had in common. During the other interview the interviewee spoke a language that was not his mother tongue. This may be of importance while doing content analysis of interviews, but I believe such circumstances do not bring any difference to the study because the first interviewee has used English in his work for a long time and I assume that the second interviewee shares vocabulary with other actors in his context.

The interviewees were asked to sign a form of consent agreeing to participation in the research. In Russia, two persons declined signing anything, instead suggesting that I can use their names openly. Names of organizations and local groups without personal names are disclosed in the list in Appendix. During the interviews I learned that anti-nuclear actions may have negative consequences for activists, as some of them considered themselves being exposed to threats due to their active positions. Naming respondents could bring the focus on the identities and personal involvement in the movements, which in turn could have further consequences in interactions with other actors, and this would not be appreciated. In order to avoid interference in the field of study, I decided to keep all respondents anonymous.

The interviews varied in terms of interviewees’ willingness to speak, their knowledge and experience and also ability of the interviewer to set up an appropriate pace and tone of the conversation. It was not an easy process sometimes. There were three interviews that were not easy for me as an interviewer as it was difficult to achieve conversational flow. It did not depend only on my abilities as an interviewer with language skills, but also on the interviewees. There is little to be rectified when an interviewee is not sufficiently responsive about issues raised in the questions. Short interviews are no less interesting from an analytical point of view as a brief but eloquent answer may sometimes reveal even more than the long answer full of details. Apart from these three exceptions, there was a lively interaction during the interviews.
The interviewees sometimes drifted in their answers from the initial questions. When interviewees were not directly responding to the questions, it always brought some new dimension to the discussed themes as they raised important but unexpected related topics. The flexibility of semi-structured interviews thus provided possibilities to learn more about activists’ perceptions, revealing how “in discourse analysis, the talk itself has primacy” (Kvale & Brinkmann 2009:227).

Sometimes interaction continued after the recorder was switched off, in the form of unexpected questions such as asking for my opinion on the raised questions, asking about other respondents, requesting contacts in another country in order to establish communication. It was not always possible to avoid all questions, although most of them were not answered at all. To offer one example, in a case when I was asked about the identity of other respondents, the interviewee tried to guess and make some connections in his mind. When he produced a hypothesis about who I had interviewed, it was awkward and I did not deny his deduction. These questions were also questions of trust in me as an interviewer. I tried to be explicit as much as possible and demonstrate that there is no hidden agenda in carrying out interviews, as can be suspected with such a sensitive issue. That only concerned the circle of anti-nuclear activists. Since many of them work with each other and hold similar opinions, it is doubtful this caused any harm to the activists.

Reflecting on my position as an interviewer, this is an interactive process and my background could have affected the interviews even though it is not a matter that can be changed. Communicating with respondents in their native language, with two exceptions noted above, was an advantage and the key to arranging an interview. Having an international background was helpful in finding interviews and establishing communication during the interviews, since I was considered in some way close to the context and aware of some specifics but also a distant observer at the same time. In Russia, my affiliation with a Swedish university made me more a distant observer than if I had been working in Russia. One year of living in Poland made me slightly closer to the field of study and interviewees. A number of matters came up in interviews that could have been explained in more detail if I was not a Russian in Poland. The interviewees just referred to my Russian origin and considered that I understood what they meant, which in fact I did. In Sweden I was seen as being close to the context due to my residence there and knowing some specifics, but also distant because of coming from another country.
Though my Polish and Swedish language skills are intermediate and adequate for carrying out this study, they were not as advanced as one would wish for conducting interviews. There were a number of occasions when I was uncertain of the details of what was being said, but as interviews were recorded they could be carefully followed up afterwards. Sometimes I was not understood because of my accent, pronunciation or poor choice of wording; this usually happened in follow-up questions that were not anticipated. Eventually I made myself understood with explaining what was meant in a different way or saying a word in English. I do not consider any of this a problem since it happened rarely and communication succeeded in the end.

General knowledge about background and history of the three studied countries was necessary for the analysis of text documents and interviews. Being foreign to Polish and Swedish contexts could be a hindrance for the analysis. When faced with some statements and events which were difficult to understand, or challenged by the translation of one or two key words, I consulted with colleagues and friends native to these two cultures and languages. Although misinterpretations could still be present in the analysis, this procedure of consultation was followed in order to minimize them.

3.4 Methods of data analysis and analytical process

The methods used in this thesis are discourse analysis, content analysis of semi-structured interviews (Denscombe 2010) and content analysis inspired by Protest Event Analysis (Hutter 2014). The analysis was carried out with the aid of software for qualitative text analysis, MaxQDA Version 11.

Discourse analysis

Use of Critical Discourse Analysis as a method is grounded in the analytical framework that is partly based on CDA, so this method comes as a logical continuation of the analytical framework. That is not problematic, as CDA is both theory and method (Fairclough 2003). The method of discourse analysis was not originally developed for analyzing several contexts, but there is research applying discourse analysis for studying several contexts (see for instance Svenonius (2011)). Although other kinds of discourse analysis exist and could be considered, they do not share one important feature of CDA – the analytical separation between (a) discourse and (b) social practices and structures. The analytical separation between discourse
and social practices and structures provided a possibility to conceptualize relations between discursive and political opportunities. Discourse opportunities are located at the dimension of discourse, while political opportunities are located at the dimension of social practices and structures. This analytical separation is thus an important element in the analytical framework of this thesis.

Discourse analysis in this thesis follows the logic described in the analytical chapter. It starts with text analysis, proceeds with analysis of discourse practices and concludes with contextualizing findings in the studied social processes. Discourse analysis is a kind of text analysis. As social changes are not only described in language, but also constructed through language (Fairclough 2003), linguistic analysis is a part of text analysis in discourse analysis. The intention of this thesis is to examine discourses of nuclear energy and whether they have similar patterns and lines of argumentation in the three contexts. Therefore, attention was paid to figures of speech. A figure of speech means “a form of expression (as a simile or metaphor) used to convey meaning or heighten effect often by comparing or identifying one thing with another that has a meaning or connotation familiar to the reader or listener.” ¹ There were several notable examples of figures of speech. One example is use of the phrase “clean nuclear energy”, for formulating energy strategy with a strong reference to innovation or rationality. There was also the phrase “Rosatom, close your Fukushimas”, which referred to Russian nuclear plants. In conducting discourse analysis, the principle of abduction has been followed, with abduction understood as going back and forth between theory and empirical material in order to maintain close relations between them. Wodak and Meyer describe abduction as

Similar to the grounded theory data collection is not considered to be a specific phase that must be completed before analysis begins: after the first collection exercise, it is a matter of carrying out the first analyses, finding indicators for particular concepts, expanding concepts into categories and, on the basis of these results, collecting further data (analytical sampling). In this mode of procedure, data collection is never completely excluded, and new questions always arise which can only be dealt with if new data are collected or earlier data re-examined (2008:28).

¹ Definition from Merriam-Webster Dictionary, Available at http://www.merriam-webster.com/dictionary/figure%20of%20speech accessed 09 June 2016
Materials produced by governments, energy companies, environmental organizations and anti-nuclear groups collected for the analysis I considered generally as text (Fairclough 2003) and included them in discourse analysis. In the text analysis I followed the division between entry-level analysis and in-depth analysis, as suggested by Krzyżanowski (2007).

The entry-level analysis included the study of categories that are brought up in the text, of collocations existing in relation to nuclear energy, such as nuclear energy and modernization, nuclear energy and innovation, nuclear energy and climate change. At the entry-level of analysis I searched for kinds of categories associated with nuclear energy, and how positions regarding nuclear development are justified. When I saw some expression, word or sentence that I considered relevant, it was treated as code, typing it as a code in the MaxQDA program. Subsequently, if I identified a piece of text with a similar meaning, I assigned to it the code that I added to the system. Therefore, in the end of the analysis I had text which was marked with various codes. One list of codes is used for all three contexts (see Appendix V).

After coding was finished, how often these codes occurred and also in which texts was checked. Texts reflecting a program’s overall character (e.g. policy documents or positions of actors in anti-nuclear movement) are more representative of discourses as these are the key documents for the actors, and formulations used in these documents are potentially more carefully selected than in other documents, such as short announcement for a demonstration or an opinion expressed in the interview. For instance, formulations used in the energy policies are important even though they may not be repeated somewhere else because these are the documents that regulate the whole energy sector. Through this kind of analysis, patterns in the texts could be observed: for example, the ways in which actors justified their positions regarding nuclear energy development. This entry-level analysis has been crucial for content and context analysis (Krzyżanowski 2007:139). For instance, during this stage it became obvious that economic argumentation dominates different kinds of nuclear energy discourses.

The next step was the in-depth analysis which is linguistic analysis. Fairclough distinguishes five components for textual analysis: 1) interactional control; 2) ethos, or how identities are constructed through languages; 3) metaphors; 4) wording; and 5) grammar (1992). Although Fairclough suggests a complete linguistic analysis (1992) in order for findings to have credibility, a full analysis of grammar and sentence structure is not possible in an analysis of several genres. However, grammar
and sentence structures were reviewed if I saw something anomalous in the text. Attention was paid to modality in the text, since modality demonstrates envisioned possibilities. For example, an activist claims that nuclear energy can be developed if safety is ensured. This is a completely different message if this activist says that nuclear energy must not be built in any case. Another example is when the text says that nuclear energy is safe without providing any specific information about safety. Thus modality describes levels of certainty and contributes to presentation of opinions and views.

I looked more precisely at figures of speech and backgrounding/foregrounding. One example of figures of speech is the use of metaphors. Krzyżanowski approaches metaphors as “chiefly linguistic-rhetorical devices supporting different arguments” (2007:141). I analyzed metaphors and figures of speech “in order to discover different metaphorical expressions that were placed in the analyzed material in a content-dependent way, i.e. in a way specific to the discursive constructions approached” (Krzyżanowski 2007:141).

After the entry-level and in-depth analyses were completed, I proceeded with studying codes and memos, observing patterns in texts and identifying important metaphors. I consider to be important figures of speech those that occurred repeatedly and/or were used in principal texts, such as energy strategies and nuclear energy policies. For instance, nuclear energy is grouped under the heading of “non-fuel energy sources” with other energy sources in the Russian Energy Strategy until 2030 (2009). I did not find it in any other text, but since the text of this document is formative for energy policies, it is important not to underestimate its significance. After I obtained a clear picture of discourses, I wrote down the first draft of analysis, which basically was the description of discourses.

The next step was contextualization of findings through looking at them from the perspective of broader national developments and important events occurring in the same period of time as the texts were produced. For instance, the discourse of modernization that appears to play an important role in the Russian government discourse on nuclear energy is a broad phenomenon and its presence in the discourse of nuclear energy is not surprising as it defined Russian politics and policies at some point in time. Similar comments could be said to apply to the emphasis on environmental sustainability policies among politicians in Sweden. The findings of discourse analysis are not autonomous but co-exist within general trends of development in the countries. By contextualizing discourses I was able to
draw conclusions about the resonance of these discourses in social contexts. The three stages described above made up the analysis of discourses of nuclear energy proponents and opponents.

Content analysis of interviews

Semi-structured interviews conducted for the purpose of studying activists’ perceptions of political opportunities were analyzed through content analysis. These interviews were organized by dimensions of analysis, not a particular set of questions, following Krzyżanowski (2007). It means that the interview guide consists of themes as opposed to questions that are repeated word by word in each interview (see Appendix IV regarding suggestions for questions). As several languages were used for interviewing, it was important to not focus on particular formulations.

The introductory question in the interviews was on interviewees’ positions regarding nuclear energy development programs and extension of the life circle of already existing reactors. It was a general question that revealed the specifics of interviewees’ positions regarding nuclear energy. The themes of the interview guide came from the analytical framework of political opportunities structure: openness/closure of the political system (including state capacity for repression), presence of allies within the political system and stability of power balance (McAdam 1996:27). The role of the media, public opinion, political context, communication and channels for participation are seen as opportunities that could be a driver but also an obstacle for social movements. I asked also about respondents’ opinions about anti-nuclear movements in the past. During the interviews other themes arose that seemed to be more important for interviewees to discuss. So this range of themes is thus a starting point but not a limiting frame for the analysis.

Themes included in the interview guide

- Opinions on nuclear energy development and activities conducted in this sphere
- Anti-nuclear movements: past and present
- Political context
- Cooperation and presence of allies
- Public opinion
- Role of media
- Mobilization of citizens
- Communication with nuclear power industry and government
- Participation in decision making processes

I carried out content analysis of transcribed interviews in order to analyze perceived political opportunities, selecting texts, breaking them into smaller units, developing categories for analysis, coding units, and analyzing relations between these units (Denscombe 2010:281-282). As political opportunities, perceptions of which were studied within the interview response, are defined by the analytical framework, the content analysis that I conducted is a directed content analysis, which is more structured than conventional content analysis (Hsieh & Shannon 2005:1281). Conventional content analysis involves codes which emerge during the process of analysis while directed content analysis means that codes emerge from analytical considerations, and thus are directed by theory (Hsieh & Shannon 2005:1277).

A close connection to theory in directed content analysis is not only a strength of this approach but also a limitation at the same time (Hsieh & Shannon 2005). As theory can predetermine possible findings, a focus on theory can also narrow down the scope of possible findings. I tried to incorporate new codes when it became clear that they were not taken into account in the analytical framework, so I managed to minimize the effect of this limitation. The directed content analysis of the semi-structured interviews is deductive in its nature. Elo and Kyngäs (2007) argue that inductive content analysis (conventional content analysis in Hsieh and Shannon’s terms) is more useful when some phenomenon is studied for the first time, and the deductive approach is more suitable when there is already a bulk of previous results that the study could refer to. As stated in the introduction, considerable research on the political opportunities of anti-nuclear movements exist, making it more reasonable to construct the study in such way that allows it to relate to previous results.

After coding was completed and saved in MaxQDA project file, I analyzed the content of each code. Afterwards I could see patterns, such as Swedish activists talking about the absence of media attention in a similar way.

Content analysis of actions

After discursive and political opportunities were studied, I analyzed repertoires of anti-nuclear movements. For this purpose I extensively used the entire collection of materials at my disposal for making a list of actions. When I was analyzing texts and interviews, I used the code “action” for
marking places where anything was said about anti-nuclear actions. Since the materials coded with “action” were not enough for drawing conclusions, I made up for this gap by gathering more data about various actions and activities of anti-nuclear movements through the webpages of the anti-nuclear movements, related organizations and media. Checking the webpages of anti-nuclear movements verified the information that I already had and helped to find new events previously unrecorded in my analysis. Since the list of actions was verified through triangulation of data sources, I consider it reliable. Even if some events were not registered in the list, they were not of such great importance for movements since nothing searchable was written about them, activists did not spread information and the media did not cover these events either. The list of actions was coded with the aid of MaxQDA software. The content analysis of actions was directed by theory as the categories of nonconfrontational and confrontational actions came from the analytical framework (Kitschelt 1986, Taylor & Van Dyke 2004). The content analysis of the repertoire of actions was inspired by Protest Event Analysis by Hutter (2014). Each action of anti-nuclear movements is considered a single event. As the result of this analysis, patterns of actions in anti-nuclear movements were identified.

3.5 Summary

Russian, Polish and Swedish anti-nuclear movements were selected for studying similar repertoires of anti-nuclear movements (similar outcomes) in different contexts. These contexts are both “positive” to the studied social phenomena and “possible” due to the feasibility of analyzing them. This chapter on method is the study protocol, and the file in MaxQDA format is the study database. The data collected for the analysis consists of various kinds of texts produced by governments, energy companies and anti-nuclear movements and semi-structured interviews with activists. The methods used in this thesis are discourse analysis of the texts produced by governments, energy companies and anti-nuclear movements, and content analysis of semi-structured interviews and lists of anti-nuclear actions. The findings of discourse analysis are presented in Chapters 4 and 5 discussing discourses of governments and energy companies (Chapter 4) and environmental organizations dealing with nuclear energy and local anti-nuclear groups (Chapter 5). Chapter 6 is built on the findings from the two previous chapters on discourse analysis. The findings from the semi-structured inter-
views are applied in Chapter 7, where perceived political opportunities are scrutinized. Chapter 8, on repertoires of anti-nuclear movements, draws both on findings from previous chapters and on the analysis of collected data about anti-nuclear actions. The findings are summarized in Chapter 9 and final conclusions are reached.
This chapter introduces and discusses official discourses of nuclear energy. Official discourses of nuclear energy are discourses reproduced by ruling elites and incorporated into policy documents. *Ruling elites* are understood as governments in power and state corporations operating nuclear power plants because they produce, ratify and implement energy policies, strategies, and regulations. Knowledge about these discourses is needed for further scrutiny of the order of discourse and discursive opportunities of anti-nuclear movements. While this chapter scrutinizes official discourses of nuclear energy among governments and energy companies, the opinions of politicians in opposition are featured in the next chapter. This chapter first presents power over discourse, then contextualizes discourses of nuclear energy in relation to strategic principles of energy policies, and after that discusses power of discourse including genres and themes of discourses.

### 4.1 Power over official discourses

The concept of power over discourse refers to the power to make some actors do something they would not otherwise do (Fairclough & Fairclough 2012:113). Actors who have the power to make official statements about nuclear energy development are governments and energy companies. As authorities have the power to adopt energy strategies and policies, they also have power over official discourses on nuclear energy. Depending on the design of political systems, the key actors could be prime ministers, political parties and presidents. The key actors in the selected cases are as follows: Russia, president and State Duma (parliament); Poland, Sejm Rzeczypospolitej Polskiej (parliament) and the president; and Sweden, the Riksdag (parliament). These actors have the power to provide directions for national development and decide over nuclear energy use. In this chapter, the views
and opinions regarding nuclear energy of the political parties in Sweden and Poland, the presidents in Russia and Poland, and the prime-ministers in the three countries are analyzed in order to scrutinize official discourses of nuclear energy.

In the selected years, 2005–2014, there were no political parties in the Russian State Duma that were observed to have opposed nuclear energy development. Oppositional voices came from extra-systemic opposition – the Solidarity movement – and from some politicians who were not in parliament. Polniak’s work demonstrates that major Polish parties in Poland, namely Civic Platform as well as Law and Justice, hold pro-nuclear attitudes (2012). The Palikot’s movement (Poland) expressed anti-nuclear views, and some other political parties sent inquiries (interpellations) to the government. The Swedish Parliament was divided between the Alliance parties voting for the amendment to the law on nuclear energy about replacing nuclear reactors in 2010, and by the Social Democrats, the Green and the Left parties that voted against it. Although the four center-right political parties of the Alliance initiated the recent changes in nuclear energy law, their opinions differ to some extent. For instance, some members of parliament from the Moderate Party (Betänkande 2009/10:NU26 Address 31 Björn Hamilton M) and the Center Party (Betänkande 2009/10:NU26 Address 31 Sven Bergström C) released more reserved statements about nuclear energy, considering it to be a forced necessity. However, a member of parliament from the Liberal People’s Party (Betänkande 2009/10:NU26 Address 135 Nina Larsson Fp) and a member of parliament from the Christian Democrats expressed more interest in nuclear energy (Betänkande 2009/10:NU26 Address 57 Mikael Oscarsson Kd). As Swedish policy-making seems to be more transparent than in the other two countries, it was possible to identify different views regarding nuclear energy that underpin the recent law on lifting the ban on constructing new reactors. Little public information on the process of nuclear energy policy-making was found during the collection of material in Russia and Poland, which led to a less nuanced picture of official discourse on nuclear energy. In the Russian and Polish contexts, struggle over meanings

1 The reference list of analyzed texts including speeches, press realises, policy documents, interpellations and other materials is given in the Appendix I.

2 More detailed account of how Swedish politicians frame nuclear energy could be found in the following article (Edberg & Tarasova 2016).
in official discourses of nuclear energy are much more implicit than in Sweden. It is worth noting here that policy documents produced by governments do not specify authorship, implying that there are groups of bureaucrats and experts taking active part in shaping official discourse, but who are not identified explicitly.

After power over official discourses on nuclear energy in Russia, Poland and Sweden is presented, this chapter turns to the contents of nuclear energy discourses. Before the themes that are employed in official nuclear energy discourses are presented, this chapter discusses the strategic principles of energy policies in order to contextualize nuclear discourses in broader energy policies.

4.2 Strategic principles of energy policies

Decisions regarding nuclear energy are made according to energy strategies. Energy strategies provide principles that guide the energy sectors as a whole. These principles apply to provisions made in the energy strategies, and are not specific to nuclear energy. As energy strategies and nuclear policy documents address the challenges of the energy sectors (as perceived by the governments), energy policy documents and statements of officials demonstrate that nuclear energy is seen as one of the solutions for meeting these challenges.

Strategic principles of energy policies are strategic visions and guidelines that are formative for energy strategies and policies, and are referred to somewhat differently from country to country. In Russian Energy Policy until 2030, they are referred to as strategic guidelines; in Energy Policy of Poland until 2025, they are called long-term visions of development, and in the Swedish overall energy strategy they are referred to as pillars of the Swedish energy sector. Despite the different names, these energy policies address the same issues: the basis for forming energy strategies and policies. Since these points describe the strategic principles of their respective energy policies, I refer to them as strategic principles hereafter. These principles justify choices and suggested solutions in the energy sector, including nuclear energy development and maintenance. There are similarities between these principles in Russia, Poland, and Sweden, but some principles are unique to a country because they address challenges of the energy sector which are specific to that country.
The Russian energy strategies are portrayed as based on the following principles: energy security, energy efficiency, budget effectiveness of the energy sector, and environmental security. Energy security is understood as the stability of the power supply and as part of national security. There is a slight difference between the documents covering energy strategies until 2020 and then 2030, with the latter following the broad discourse of modernization during the Medvedev term. The energy strategy for the period until 2030 begins by pointing at internal and external challenges that the fuel and energy industries meet in Russia. The energy strategy aims to meet these challenges and to advance a balance in the energy sector by transforming the energy system into a more innovative and efficient one. This would require changing modes of energy production and consumption. This transformation of the energy sector is expected to make it able to cope with the economic, energy security and environmental challenges.

Poland’s energy policy is portrayed as based on the principles of energy security, environmental security, economic determinants of energy security, diversification of fuel and energy sources, reliability of supply, and state self-sufficiency (Energy Policy of Poland 2005:3, Polish Energy Policy until 2030, 2009). The latter two principles are particular for Poland since they address specific energy challenges. Diversification is seen as strongly needed in the Polish energy mix since more than 90% of the electricity consumed comes from coal (Energy Policy of Poland 2005:7). Apart from coal dependence, Poland has to comply with the EU regulations on climate change and to restructure its energy mix in order to include more energy sources with less environmental impact. Principles of state self-sufficiency and reliability of supply address another challenge for the Polish energy sector: the country’s dependency on the importation of energy resources, Russian gas in particular. The risk of receiving less energy than agreed to between the countries touches on the issue of national security and thus receives high priority. These are the principles presented in their energy policy written in 2005. A plan that was later adopted to develop nuclear energy is guided by these principles (Resolution of the Council of Ministers

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This resolution, adopted on 13 January 2009, mentions only two of these arguments, energy security and the need for economic development of the country, marking the particular importance of these two arguments.

The **Swedish** energy policy from 2009 is titled, “A sustainable energy and climate policy for the environment, competitiveness and long-term stability” (Regeringskansliet 2009). The title alone clearly presents the principles that this policy is guided by: environmental protection, stability, and competitiveness. Briefly put:

> Measures to promote renewable energy and more efficient energy use will strengthen Sweden’s security of supply and competitiveness and will give Swedish research and entrepreneurship a leading role in the global transition to a low carbon economy (Regeringskansliet 2009).

In other words, the three pillars of Sweden’s energy policy are ecological sustainability, competitiveness and security of supply (Regeringskansliet 2009). The strategy brings up such targets as the reduction of fossil fuel dependence and promotion of more efficient energy usage. The new nuclear energy policy adopted by the parliament in 2010 allows the replacement of old reactors with new ones. According to the Proposition 2009/10, “one more generation of nuclear power does not conflict with the goal to reduce dependence on nuclear power and hydropower” (Proposition 2009/10:172). Swedish policy on nuclear energy continues the policy of nuclear phase-out, although with changes in the law, this could be delayed for one more life-span of nuclear reactors if they are constructed. However, researchers often consider Sweden as a country that returns to nuclear energy because of this change in the law on nuclear energy (e.g. Baigorri et al 2012:459).

Russian, Polish and Swedish energy policies thus put forward several similar principles of energy strategies and nuclear energy policies (see Table 4). Energy documents in all three countries consider economic aspects of the energy sector by referring to budget effectiveness, economic determinants of energy security and competitiveness. As nuclear energy policies follow these principles, it implies that authors of the policy documents consider nuclear energy to be economically viable. Energy security is another principle that guides energy strategies in all three countries. From the first glance of the strategic principles of energy strategies and policies, it is difficult to assess what is meant by energy security. Although energy security is an often-used term, it may have different definitions (Cherp & Jewell 2014). It seems that security of supply is a subject of greatest concern
in this respect, as for instance in Swedish documents security of supply is mentioned. Less explicit in contexts of Russia and Sweden but more often mentioned in Polish policies is diversification of energy sources. This diversification refers back to energy security since a number of energy sources would allow better conditions in cases of unexpected circumstances and shortage of one of their energy sources. Ecological sustainability or environmental security is another principle that unites these strategy documents.

Table 4. Strategic principles of Energy strategies and policies in Russia, Poland and Sweden

<table>
<thead>
<tr>
<th>Types of strategic principles</th>
<th>Russia</th>
<th>Poland</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic aspects</td>
<td>Budget effectiveness of energy sector</td>
<td>Economic determinants of energy security</td>
<td>Competitiveness</td>
</tr>
<tr>
<td>Energy security</td>
<td>Energy security</td>
<td>Energy security</td>
<td>Security of supply</td>
</tr>
<tr>
<td>Environmental aspects</td>
<td>Environmental security</td>
<td>Environmental security</td>
<td>Ecological sustainability</td>
</tr>
<tr>
<td>Other principles</td>
<td>Energy efficiency</td>
<td>Diversification of fuel and energy sources</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Reliability of supply</td>
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<tr>
<td></td>
<td></td>
<td>State self-sufficiency</td>
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</table>

Other principles are country specific: energy efficiency in Russia, reliability of supply and state self-sufficiency in Poland, and stronger emphasis on ecological sustainability in Sweden than in the other two countries. Principles of energy efficiency relate to the presented need to modernize the energy sector as is proclaimed in Medvedev’s discourse on modernization in Russia. Polish dependency on coal has been noted above. Swedish policy sets a focus on reducing ecological impact, and this has been present in
Swedish policies in general in the last several decades. It is also visible in presenting the country’s policies as one of the most environmentally friendly ones.

These discussed principles guide the energy sector in general. They are the basis for justifying why nuclear reactors have to be developed and continuously maintained, together with justifying all the other solutions suggested for the energy sector in these countries. Although the three strategic principles are similar in Russia, Poland and Sweden, they are not emphasized to the same extent in each country. The strategic principles presented in this chapter provide general contexts of the energy sectors for the official discourses of nuclear energy in Russia, Poland and Sweden.

4.3 Power of discourse

Discourse analysis in this thesis has been conducted in two phases: the entry-level analysis of themes and categories associated with nuclear energy and the in-depth analysis of, for example, figures of speech and formulations of rhetorical devises such as backgrounding/foregrounding. Foregrounding/backgrounding is a mechanism for constructing relations between the aspects of the discussed object and to re-configure the presentation of the object in a different way, aligning with the established power relations (Fairclough 2003:134). The rest of this chapter is structured after the results of the analysis of themes that are associated with nuclear energy development. The results of the in-depth analysis are presented within each theme. The analysis of assumptions reveals how relations of dominance (the idea about nuclear energy as an appropriate solution in the energy sector) are reproduced in the official discourses of nuclear energy. The themes that nuclear energy are associated with that were identified in the analysis are economic development, international interdependency, safety of nuclear technologies, climate change and participatory practices. First, genres of discourses are presented in terms of how and in what forms these discourses are reproduced, and then each theme is discussed.

4.3.1 Genres of official discourses

Official nuclear energy discourses are produced in different genres or ways of producing texts (Fairclough 2003); this refers to the texts of nuclear energy policies and in different kinds of statements made by elites who have power over official discourses on nuclear energy. The three main relevant
energy strategies and nuclear energy policies in Russia comprise the following: (a) the Federal Target Program for 2007–2010 and until 2015, published in 2006: (b) an energy strategy for the period until 2020 introduced in 2003 under the presidency term of Vladimir Putin; (c) an energy strategy for the period until 2030 introduced in 2009 during Dmitry Medvedev’s presidency term.

The nuclear power program in Poland was reintroduced in the energy policy for 2005. The Ministry of Economy and Labor mentioned nuclear energy in that plan for the energy sector until 2025 (Energy Policy of Poland 2005). This energy policy focused on aligning energy sectors to the needs of the economy in transformation, and mentions gas, renewable energy, nuclear energy and energy efficiency (Energy Policy of Poland 2005:28). This strategy does not specify the plans for nuclear energy. The official return of the nuclear power program took place on 13 January 2009, when the Council of Ministers adopted a resolution on the development of nuclear power in Poland. The Polish Nuclear Power Program was published in 2010. While in the 2005 energy policy the role of nuclear energy was not specified, the document in 2010 describes their nuclear energy program in detail.

The Swedish energy strategy was revealed in “A sustainable energy and climate policy for the environment, competitiveness and long-term stability”, and was published in 2009 (Regeringskansliet 2009). The nuclear energy policy was voted for by the Parliament in 2010, with 174 votes for this policy and 172 votes against it (Betänkande 2009/10:NU26). These are the two major documents on nuclear energy in Sweden.

Genres of policy documents in these countries differ in terms of length and language. Even though these texts are produced in the same genre – policy documents – there are differences between them. Russian and Polish documents are quite lengthy, sometimes longer than one hundred pages and profuse with bureaucratic language. Swedish documents, on the contrary, are short and easy comprehensible. These differences may reflect their respective traditions of bureaucratic language and writing of official documents, and thus the contexts where these policy documents appear but they also point to the target audience of these documents. The genre of lengthy texts thick with bureaucratic language implies that they will be read by experts and relevant authorities implementing these policies (in Poland and Russia). The genre of short and easy comprehensible texts on energy

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4 On language and bureaucracy see (Sarangi & Slembrouck 1996)
policy in Sweden shows the accessibility of the texts to a broader readership, including more groups of citizens than just bureaucrats and experts. This means that Swedish texts are more inclusive than Russian or Polish texts, which also corresponds with traditions of public participation in these countries. Sweden has a tradition of referral, where authorities and interested organizations (including established civil society organizations) can be invited to comment on policy proposals before any decision is taken.

Apart from policy documents, there is another source of official public discourse: various public statements by presidents, prime ministers and political parties. In Russia, most of the statements on nuclear energy are made by the president or by the head of the nuclear energy company Rosatom, which performs similar functions as the Federal Atomic Energy Agency and the Ministry of the Russian Federation for Atomic Energy previously did. Medvedev and Putin, during their presidential terms, and Kirienko as Director General of Rosatom since 2007, made public statements on nuclear energy. In Poland, the Prime Minister and mainly the Deputy Minister of the Economy, appointed specifically to deal with the nuclear energy program, made public statements in relation to nuclear energy; there were almost no references to nuclear energy from the president. In the studied period it was mainly Donald Tusk and Hanna Trojanowska respectively who commented. In Sweden, debates that took place in the Parliament before voting for the amendment on nuclear energy, and statements of politicians from different parties in Sweden are the texts that contain positions on nuclear energy use. Positions regarding nuclear energy were stated by a broad group of politicians in Sweden. The difference in how positions on nuclear energy are expressed seems to reflect the political systems in Russia, Poland and Sweden and who has the most say on official discourse on nuclear energy. Many more statements by single politicians were found in Russia and Poland than in Sweden, which means that the collection of texts in each context varies in terms of genre and is reflected in the analysis. Genres of collected texts also reflect power over the official discourse of nuclear energy.
4.3.2 Economic development and nuclear energy

Economic development and technological modernization in Russia

Russian energy strategies until 2020 and 2030 emphasize the need for modernization of the energy industry and economic development. The energy strategy until 2030 suggests several vectors of development in this direction, including “transition to the innovative and energy efficient way of development, changes in the structures and scale of energy production, building of a competitive market environment, integration into the global energy system” (Energy Strategy until 2030, 2009:2). In order to follow these directions, one of the suggestions in the energy strategy is to develop nuclear energy; this is because nuclear energy is seen as an adequate response to fulfilling the tasks described in the energy strategy.

The document *Energy Strategy until 2030* points to the need to build more reactors because of the necessity of modernization in the energy sector in Russia. Modernization of the energy sector is part of a broader public discourse of modernization proclaimed during the Medvedev presidency (Smith 2010). Policy documents stress that the energy sector requires high-end technologies that will ensure the scientific and technological development of the country. Technological modernization, which is to be implemented in the energy sector, is a part of economic modernization that is supposed to contribute to national socioeconomic development (Smith 2010:10) and which is expected to raise living standards for Russian citizens (Energy Strategy until 2030, 2009). Innovations are seen as a crucial part of modernization (Framework of transition to innovative development of the economy 2011). This has been stated quite openly, “The introduction of innovative and effective energy sector of the country, that would be adequate to energy needs of emerging economy and export economic interests of Russia, that provides indispensable contribution to socially oriented innovative development” (Energy Strategy of Russia until 2030, 2009:2). Nuclear energy development is thus seen as contributing to modernization (Kirienko 2013, Medvedev 2010), and an economically viable technology (Medvedev 2010).

In examined texts, sometimes the expression “nuclear power plants of increased safety” is used (реакторы повышенной безопасности) (e.g. Energy Strategy until 2030, 2009:62). Although details about what is meant by increased safety were not found in the collected material, the phrase “increased safety” implies that safety standards have been or are going to be increased. The construction of nuclear power plants of increased safety is
expected to contribute to technological development, according to the energy strategies. This expression supports the association between nuclear energy development and technological modernization.

Nuclear energy has been presented as a “non-fuel” energy source in one particularly important document: “non-fuel energy (the energy of nuclear power plants, renewable energy sources)” (Energy Strategy until 2030, 2009:37). This presentation of nuclear energy associates nuclear energy development with addressing the challenge of the Russian energy sector, such as “the country’s transition from export of raw materials to the resource and the innovative development with a qualitative renewal of energy sources (both fuel and non-fuel) and related industries” (Energy Strategy until 2030, 2009:4). A strong dependence of the national economy on world market prices for oil and gas is generally considered to be one of the problems of the Russian economy and is so noted in the energy strategy. Kirienko considers nuclear energy more attractive because the price of uranium much less affects the price of kilowatt hours (kWh) than fuel prices worldwide (Kirienko 2013). Fossil fuels make up to 45% of the total Russian export (Energy Strategy until 2030, 2009:13). The presentation of nuclear energy as a “non-fuel” energy source can be related to the plan for “gradual introduction of a new nuclear power technologies of fast reactors with the closing nuclear fuel cycle with uranium-plutonium fuel that will remove restrictions on the fuel fertile material” (Energy Strategy until 2020, 2003:86). Although, technically speaking, nuclear energy is produced from fuel, uranium is required, regardless of how small the amount. Both expressions of “nuclear power plants of increased safety” and the presentation of nuclear energy as a “non-fuel” energy source reinforce the argument about the contribution of nuclear energy to technological modernization.

Technological modernization is understood as leading to economic development. Nuclear energy is presented as economically viable, according to policy documents and statements of politicians, and is seen as positively influencing an economy in a number of ways. First, the production of electricity from nuclear energy is presented as cost-efficient. Medvedev, addressing the nation on the Chernobyl disaster anniversary in 2011, underlined that “nuclear energy remains the most cost-effective way to generate electricity…also the safest way, but only if relevant rules and regulations are strictly complied with” (Medvedev 2011b). The occasion of this statement, the commemorating anniversary of the accident at the Chernobyl nuclear power plant, strengthens this position as it is proclaimed on the day when a more cautious perspective on nuclear energy would be
expected. Second, nuclear energy is expected to attract investments. These investments are to derive from “funds of enterprises obtained through the investment component in the rates, as well as from the funds of state budget and of investment and financial institutions involved through project financing under state guarantees” (Energy Strategy until 2020, 2003:98). Third, extending the share of nuclear energy is expected to diversify the energy mix by reducing the share of fossil fuels, and this is believed to ensure a stable energy supply (Energy Strategy until 2030, 2009:10, 38, 60). The emphasis on diversification and a stable energy supply relates both to technological modernization and economic development.

The last two ways relate to the international community. In the fourth way, nuclear energy development is expected to contribute to the increased integration of world energy markets through cooperation with countries interested in Russian nuclear technologies. This is to have a positive impact on the economy because Russia would be able to establish trade relations with new partners. The potential political implications of the export of Russian nuclear technologies are not mentioned in the documents, and politicization of the energy sector and international energy trade relations is considered as a challenge (Energy Strategy until 2030, 2009:35). And fifth, nuclear energy development, is expected to foster science and technological development (Putin 2012, Energy Strategy until 2030, 2009:27). In the words of Medvedev:

In the coming decades Russia should become a country, prosperity of which is ensured not so much thanks to commodities but by intellectual resources: “intelligent” economy that creates unique knowledge, export of new technologies and of innovative products. I recently identified five strategic vectors for the economic modernization of our country. First, we will become a leading country measured by the efficiency of production, transportation and use of energy. We will develop new fuels for use on domestic and international markets. Secondly, we need to maintain and raise our nuclear technology to a qualitatively new level (Medvedev 2009).

According to Kirienko, “top performance for the country is to sell the surplus product created by the most renewable resource - knowledge, human potential and intelligence” (Kirienko 2013). In this statement he refers to the advancement of science and technologies stimulated by exporting knowledge and human potential accumulated during nuclear energy development. According to Kirienko “investments in science, invest-
ments in infrastructure, investment in knowledge, which arise at the interface of nuclear technology, is, of course, investments in this future, in new opportunities and new sources of energy” (Kirienko 2013). The development of more advanced nuclear technologies is expected to stimulate science and technology in energy and to contribute to Russia’s transformation into a knowledge-based economy (Energy Strategy until 2030, 2009:62).

To sum up, nuclear energy is presented as an energy source that contributes to technological and economic developments and supports the shift from an economy based on the import of raw materials to a knowledge-based economy. Apart from that, nuclear energy is also deemed to be economically viable. The economic aspects of nuclear energy development are considered to be contributing to economic development of the country. Nuclear energy is expected to attract investments, to diversify the energy mix and to contribute to further development of science and technologies. Briefly then, according to the policy documents and actors speaking in favor of nuclear energy, nuclear energy development will not only deal with solving a number of problem areas within the Russian energy sector, but also contribute to complex development goals.

Economic competitiveness, profitability and diversification in Poland

Similar to Russia, nuclear energy is expected to contribute to the socio-economic development of Poland. Since the fall of the communist regime, the Polish economy has been transforming with the energy sector, adjusting to the new conditions of a market economy. The Polish energy sector requires profound transformation due to low energy efficiency, dependence on gas imports and coal, according to Energy Policy of Poland (2005). The Polish energy sector is expected to contribute to increasing living standards until it reaches a similar level as West European countries (Polish Nuclear Power Program 2010:4). The energy policy for the period until 2025 states three aims of energy policy: “ensure energy security of the country, increase competitiveness of the economy and its energy efficiency, protection of environment against adverse effects of energy associated with generation, transmission and distribution of electricity and fuels” (Energy Policy of Poland 2005:5). These aspects are repeatedly mentioned in speeches and in official texts.

Energy security and economic competitiveness are the leading arguments for nuclear energy in Poland (e.g. Pacholski 2012). A sufficient
energy supply (almost interchangeably used with energy security) and the competitiveness of the economy are underlined in several policy documents and statements (e.g. Kłosowski 2012). Another aspect of energy security specific to Poland is diversification of the energy mix, especially since 90% of Polish electricity comes from coal. Diversification seems to be the central argument for nuclear energy development in Poland (Energy Policy of Poland 2005, Polish Energy Policy until 2030, 2009; Polish Nuclear Power Program 2010:28). For Polish decision-makers, nuclear energy is viable because it will diversify the energy sources structure (Trojanowska 2012b). Nuclear energy is expected to foster technological development in Poland (Trojanowska 2012b). The Polish Nuclear Power Program states that “nuclear energy means a high level of technology” (Polish Nuclear Power Program 2010:7).

Apart from contributing to solving the problems of the energy sector, nuclear energy is also considered a profitable and viable measure in economic terms. Thus the development of nuclear energy is expected to lead to a “growth of innovativeness of economy” (Polish Nuclear Power Program 2010:11). Polish politicians argue that nuclear energy is profitable and has great potential for the national economy (Resolution of Council of Ministers 2009, Polish Nuclear Power Program 2010:29, Trojanowska 2008) because it is not going to be subsidized. Rather, it will increase investments (Kasprzak 2012). In the words of Hanna Trojanowska, the head of the nuclear energy program,

The atom is safe...There is more and more of the atom...The atom is simply profitable...Poland needs nuclear power. It is a rational answer to the needs of electricity consumers under the present and future conditions of the Polish economy (Trojanowska 2008).

The emphasis on the word “simply” implies that anyone can understand and be convinced by such an argument. This expression does not portray nuclear energy development as a desired energy source, but it does suggest that the “profit” argument seems to be the most important one. Such an approach to nuclear energy could provide an interpretation as to why the issue of nuclear energy profitability is not elaborated to a larger extent in the texts. Hanna Trojanowska argued that nuclear energy is needed in order to cope with the energy challenges that Poland faces, while she also acknowledged that it is not panacea for all Polish energy problems (also stated in the Energy Policy of Poland (2005)): 
Nuclear power is not a panacea for all our energy problems, but it is obviously a very important part of their solutions ... a program to build a nuclear power plant in Poland may become a flywheel for the development of the country and improve innovativeness and competitiveness of the Polish economy (Trojanowska 2012).

Rejecting the idea of a nuclear energy program as a panacea, Trojanowska assumes that economic development would be hindered without nuclear energy and that nuclear energy will play an important role in dealing with problems of the energy sector. Nuclear energy is considered to be strengthening a country’s competitiveness.

Polish official discourses of nuclear energy are characterized by the emphasis on a “rational” approach to nuclear energy. It is underlined that a decision to develop nuclear energy is a well-considered decision. Rationality is the most commonly used word when nuclear energy development in Poland is discussed. Nuclear energy is presented as an energy source with “rational costs” (Polish Nuclear Power Program 2010:7). “Rational, secure and publicly acceptable economy” as well as “rational, secure and effective waste management” are crucial for nuclear energy development and social approval (Polish nuclear power program 2010:7, Tomczykiewicz 2013). Nuclear energy could be viewed as “a rational answer to the needs of electricity consumers under the present and future conditions of the Polish economy” (Trojanowska 2008). No detailed specification was found on why it is considered to be rational; this assessment seems to be driven from the economic analysis (e.g. mentioned by Trojanowska (2012b)). Rationality presented on the basis of economic analysis suggests that the claim of rationality about nuclear energy development is considered more from an economic perspective than from any other. By applying such an approach, officials seem to intend to dissociate from any statements that could be considered emotional and irrational.

To sum up, Polish officials consider nuclear energy to be a technologically advanced energy source that is expected to contribute to addressing challenges in the energy sector by diversifying the energy mix and fostering technological modernization. The profitability of nuclear energy development is also an important argument related to economic development in Polish official discourse on nuclear energy. It is also expected that Poland’s economic competitiveness in the international markets will grow due to more stable energy circumstances.
Eco-efficient economy, jobs and no subsidies in Sweden

While Russian and Polish policy documents explicitly refer to the advantages of nuclear energy for the energy sector, discourse is different in Sweden. The energy and climate policy focuses mostly on sustainability and eco-efficiency. An eco-efficient economy is presented in the following way:

An eco-efficient economy is all about being smarter, using smarter solutions to derive more benefit with less effort from our already seriously overburdened planet. We want Sweden and Europe to take the lead in this process and promote not only the climate but also employment and industry through green development (Ministry of Environment 2009).

An eco-efficient economy “would promote greater innovation, which boosts competitiveness” (Swedish Presidency of the EU 2009). The same source further comments, “Energy efficiency is one of the cornerstones of an eco-efficient economy and contributes to all three pillars of energy policy: environmental sustainability, security of supply and competitiveness” (Swedish Presidency of the EU 2009). The position of Sweden as a pioneer of environmental solutions and leader in environmental policy is emphasized:

With our new integrated climate and energy policy, we are the first industrialised country to present a concrete strategy to break our dependency on fossil energy. International efforts and climate cooperation are part of this national policy (Ministry of the Environment 2009).

This emphasis on a leader position in environmental policies supports the general line of energy and climate policy that presents Sweden as a country striving for sustainability and an eco-efficient economy.

It is striking how limited a space nuclear energy receives in the current climate and energy policy. Most of the commentary in the policy is reserved for renewable energy development, eco-efficiency and transport, while nuclear energy is mentioned only a few times. The climate and energy policy does mention nuclear energy briefly, despite the fact that about 40%
of Swedish electricity is provided by nuclear energy. This policy document foregrounds renewable energy and measures such as energy efficiency, and backgrounds nuclear energy. Such representation of nuclear energy and other provisions in energy and climate policy from 2009 supports the emphasis on an eco-efficient economy and sustainability. The imbalance between foregrounded and backgrounded aspects of energy and climate policy provide grounds for associating nuclear energy with the rest of the policy that is focused on sustainability.

Nuclear energy is presented as only one part of the energy strategy, while political parties that voted for the amendments in nuclear law stressed how they “want to build out the renewable energy that can be generated by the wind and the sun, to provide opportunities for renewable energy and that to replace the ten nuclear power plants we have today”; aiming for several alternatives is presented as an obvious choice (Betänkande 2009/10:NU26 Address 31 Björn Hamilton M). Hamilton continues stating that “Along with nuclear power, all these sources of energy provide the basis for basic industries and energy-intensive businesses needed to safeguard our jobs and our welfare” which provide “opportunities for continued growth and sustained prosperity for our children and grandchildren” (Betänkande 2009/10:NU26 Address 31 Björn Hamilton M). Nuclear energy is associated with ensuring a sufficient supply of electricity, jobs that it provides which signal the connection to economic development and contribution to climate change mitigation. “We need nuclear power to take care of electricity, jobs and climate” (Betänkande 2009/10:NU26 Address 152 Anna Kinberg Batra M). Three main arguments in the official discourse of nuclear energy in Sweden could be summarized as

Firstly, it [nuclear energy] is good for jobs and therefore for welfare. Secondly, it creates stability in the electricity market and holds down electricity prices. Third, it opens up for the export of clean electricity to Europe and reduces carbon emissions dramatically (Betänkande 2009/10:NU26 Address 31 Björn Hamilton M).

In the 2010 parliamentary debate on nuclear energy, the argument about securing jobs and creating convenient conditions for the industry is offered

to explain why nuclear energy is considered important from an economic perspective. According to Hamilton, the abolishment of nuclear power “would jeopardize energy security and economic development” (Betänkande 2009/10:NU26 Address 31 Björn Hamilton M). Nina Larsson wonders how MPs from the Social Democratic party can vote for the dismantling and prohibition of nuclear power “when so many companies and thousands of jobs in Värmland are dependent on having a stable and reliable supply of electricity at competitive prices?” (Betänkande 2009/10: NU26 Address 135 Nina Larsson Fp). “Energy security that nuclear energy provides is needed” (Betänkande 2009/10:NU26 Address 135 Nina Larsson Fp). Nuclear energy is argued to be a cost efficient decision for the government since with nuclear energy, the energy supply will be secured.

Competitiveness that comes with nuclear energy use is also related to no state subsidies for the replacement of the old reactors. Nuclear energy will not receive any subsidies from the Swedish government. If nuclear reactors are to be built, company operators of power plants will have to find external investors. “The new legislation designed in such a manner that it does not prevent a new player who is willing to make the substantial investment required for the construction of a new reactor [from investing]” (Proposition 2009/10:172). Investments are argued to ensure competitiveness.

Although there is an assumption that there will be interest to invest from external actors in the new constructions, it is not so straightforward. It is considered that it is up to the market to regulate the nuclear industry (Betänkande 2009/10:NU26 Address 17 Carl B Hamilton Fp). As the market is considered to decide whether nuclear energy will be phased out, there is no need to interfere in it:

Why does Per Bolund think that Sweden would be a lonely island in the world where all rationality in the economic field disappears? Stephen Thomas notes that it is impossible to build without government subsidies. Citigroup notes that it is impossible to build without subsidies. It is extremely unlikely, Citigroup says. The Green Party representative noted in an article published yesterday that nuclear power is in decline. The Renaissance that was supposed to come has not come. The report commissioned by the German radiation protection authority made by a reputable analyst company Prognos concludes that the Renaissance of nuclear power that was supposed to come did not come. Instead, it states: Decommissioning of reactors will lead to a lower total number of reactors, lower installed power and less production of nuclear electricity. The report continues: Compared with the situation in March 2009, the number of reactors in the world to fall by 22 percent by 2020 and 29 percent by 2030. This is not because there is a ban on nuclear con-
struction sites around the world, on the contrary. Sweden is unique in that area. Rather it is because the market works, rationality works (Betänkande 2009/10:NU26 Address 167 Sven Bergström C).

This quote demonstrates how it seems that the share of nuclear energy is expected to decreased because of how the energy market operates, no external interference being needed and no need to impose restrictions on nuclear energy. The theme of technological development comes up in Sweden much less often than in Russia and Poland; however some politicians see “the most amazing opportunities to actually improve even nuclear power technology” (Betänkande 2009/10:NU26 Address 139 Nina Larsson Fp).

To recap, economic perspective is often used in argumentation for changing the law on nuclear energy and keeping nuclear energy in Sweden. However, Swedish politicians are much less enthusiastic about nuclear energy. The “green” visions of energy strategies seem to add a bit of such color to nuclear energy to some extent, especially since nuclear energy as such is mentioned only a few times in the policy documents.

With the above in mind, and the theme of economic development associated with nuclear energy development in the three countries, economic development associated with keeping and developing nuclear energy is portrayed as the crucial argument in favor of nuclear energy. This corresponds with economic aspects being one of the strategic principles for the energy sectors in Russia, Poland and Sweden. The official discourses of nuclear energy in Russia, Poland and Sweden share the idea that nuclear energy is an economically viable energy source and is needed for ensuring economic competitiveness in these countries. There are some specifics in terms of how these economic aspects are portrayed in Russia, Poland and Sweden. In Russia the emphasis is placed on modernization of the energy sector that nuclear energy development would contribute to, as well as the technological advancement that it would bring. In the Polish context, the diversification of energy sources and economic aspects of energy security are the most widely applied arguments for nuclear energy, which also could be called modernization. And in Sweden the connection between the economic sphere and ecological sustainability, which could be called discourse of ecological modernization, is most vivid. Therefore, the theme of modernization is inherent in Russian and Polish official discourses, while Swedish official discourses rather refer to eco-modernization.
The argument that nuclear power development will lead to technological modernization of the energy sector seems to be based on an assumption of connections between nuclear energy development and development of science and technologies. Claims about the further scientific advancement of nuclear energy have to be confirmed during the implementation of actual scientific programs. Nuclear energy is associated with technological development much less in Sweden than in Russia and Poland. Another assumption is the importance of arguing about nuclear energy in economic terms. Since economic arguments are presented to some extent differently in each context, it is possible to say that the specifics of the energy sector in each country introduced in the section on the strategic principles is visible in the economic argumentation.

4.3.3. International interdependency

International interdependency is another theme in official discourses of nuclear energy and is mentioned in reference to other countries in various contexts within Russian, Polish and Swedish texts. In Russia, other countries are viewed as business partners, while in Poland other countries are mentioned as energy suppliers in regard to changing energy suppliers. Swedish politicians make connections between Sweden and other countries with respect to climate change mitigation.

Argumentation about the export of nuclear technologies is in line with technological development and modernization in Russia. The Energy Strategy until 2020 envisions increased export of nuclear technologies as an important part of the national strategy (2003:97) that should promote Russia’s international position and foster integration in the global energy system (Energy Strategy until 2030, 2009:1-2). Kirienko claims “nuclear energy is global” (Kirienko 2013). He also claims how “Complete openness and reliance on strategic partnerships, global alliances and embeddedness in the global nuclear power market” (Kirienko 2013) fosters an interest in international cooperation. Energy strategies and policy documents explicitly aim to put aside political motives. “Politization of energy relations between Russia and foreign countries” is reviewed as one of the challenges for the successful operation of the energy sector (Energy Strategy until 2030, 2009), once again underlining the focus on international cooperation and trade relations.

Countries with nuclear energy industries are considered interdependent because no country possesses all necessary technologies and resources at the
same time (Kirienko 2013). However, it is a particular kind of interdependency that seems to be assumed here. Some aspects of interdependence are foregrounded (selling Russian nuclear technologies), while others (buying uranium abroad) are backgrounded, leading to the image of these trade relations as secure and beneficial for Russia. Interdependency is thus portrayed as selling Russian nuclear technologies rather than accepting that the Russian nuclear industry depends on other countries. This vision of interdependency contributes to promoting Russian nuclear energy. The Russian nuclear industry’s rhetoric follows a discourse of “Nuclear Renaissance” proclaimed by the International Atomic Agency. For instance, Kirienko claims that the “Nuclear Renaissance” has been successful in surviving the global financial crisis (Kirienko 2011) implying that the “Renaissance” tendency is stronger than the global financial crisis. This kind of rhetoric justifies the existence of the industry for Russian citizens and convinces other countries to develop nuclear technologies. Medvedev states that Russian “nuclear power is the most advanced in the world” and this is the reason for offering it to other countries (Medvedev 2012). The emphasis on safety could be considered as part of promoting Russian nuclear technologies to foreign partners. It can also be a consequence of the Chernobyl accident that causes politicians and officials to be more openly concerned about the safety of Russian technologies. This emphasis on safety could be the special focus area of the Russian nuclear industry.

One of the goals portrayed in the Polish energy policy is to reduce dependence on energy sources from other countries, which will be accomplished through developing nuclear energy. Importing uranium means a stable energy supply for Poland and it is even seen as a positive aspect of nuclear energy, since there is a possibility to buy it “from different world regions and politically stable countries” (Trojanowska 2012b). The same mechanism of backgrounding and foregrounding is activated as in Russia: possible negative effects of the recent nuclear energy policy – dependence on uranium supplies – are not mentioned. There seems to be no recognition of similar challenges of interdependence with countries and companies that will be contracted for building a nuclear power plant. It seems that the goal of the strategy is to reduce dependency in particular on Russian gas, although it is not explicit in the documents. Gas relations with Russia are often considered to be politicized, and nuclear energy development is expected to liberate the energy system from these political relations. However, these results of the analysis should be treated carefully as Gorska challenges “some established policy interpretation towards
Russia” such as “that Polish policy-makers pursued largely non-cooperative policy, and did so because of identity-derived negative ideas about Russia.” Importantly, she adds as “that the cooperative policy pursued by Polish policy-makers in the years 1989-2009 was a reflection of servility towards the eastern neighbor and a relic of the Cold War experience” (2010:184-185). Gorska shows that there is little evidence for both claims.

In Sweden, climate change is portrayed as a turning point for reconsidering nuclear energy (Betänkande 2009/10:NU26, Address 17 Carl B Hamilton Fp). The text of “Climate and energy policy for a sustainable future” (Näringsdepartementet, Miljödepartementet 2009) confirms the new course to “sustainable global development”. The Swedish ruling coalition planned to help Germany and Poland so that these countries could meet their climate goals, doing so by selling electricity generated from nuclear energy to them, which remains implicit in the texts:

You [political opponents] do not take up more renewable energy than the Alliance government. It is possibly the case of 3 percent, but it is not enough to replace all electrical power. You have less energy to reduce climate emissions. Then it becomes logical that you refuse to connect us to Poland and Germany, and to help them to close down coal power plants. The energy that you still passably get is supposed to be used at home in Sweden. That’s what I call climate nationalism – not to cooperate with others and do not help others, but just think of yourself and make home here and also do not take in the map image and the reality has changed. It is what it is great. Kent, you try to play in an old game that has already won. Renewable energy has already won the game (Betänkande 2009/10:NU26 address 12 Andreas Carlgren C).

This quotes demonstrates the argument that with nuclear energy, Sweden can help other countries in mitigating climate change. Some Swedish politicians see only such alternatives for Polish and Czech politicians as “to go back to being dependent on Russia, to reduce coal mining, or to work with us to get access to fossil free energy” (Betänkande 2009/10:NU26 address 152 Anna Kinberg Batra M). The rhetoric of solidarity with Poland, Germany and countries with similar problems corresponds with often mentioning responsibility, such as “industrial countries have been

6 These statements are made through examining the cases of Soviet military withdrawal, the NATO issue in Polish policy towards Russia, Poland’s energy policy towards Russia, Poland’s policy on Katyn issue (2010:21).
responsible for most of the greenhouse gases in the atmosphere as a product of their industrialization based on fossil fuels” (An Eco-efficient Future, Ministry of the Environment, Ministry of Enterprise, Energy and Communications, 2009). Helping other countries to mitigate climate change entails trade relations, which is downplayed in the discussions on nuclear energy. Responsibility seems to drive the rhetoric of solidarity with other countries.

Briefly then, official discourses of nuclear energy extend beyond domestic policies, and international relations are used for strengthening rhetoric and argumentation for nuclear energy. International interdependency has different meanings in the official discourses of the selected countries. In Russia, nuclear energy is considered to contribute to the change of export structure and establishing trade relations with other countries. However, in Poland the possibility of uranium imports from various “politically stable” countries is seen as crucial. Swedish official discourses emphasize the role of international cooperation for climate change mitigation through supporting neighboring countries by lowering their emissions into the atmosphere. Although these potential relations are conceptualized as climate change cooperation, this is international electricity trade relations. It is how international cooperation is assumed to appear in each country, although in reality it is broader than that: while assumptions about cooperation are focused on in some aspects, other aspects are downplayed. There is much more to interdependency between countries in terms of nuclear energy than presented. Nuclear waste issues, such as the storage of used fuel sent back to Russia from foreign-based reactors developed with Russian technology, as well as the import of uranium is hardly mentioned by Russian politicians. Nuclear waste management is much more actively discussed in Sweden than in Russia and Poland because public debate has been launched in order to construct the first permanent nuclear waste storage. However, nuclear waste and uranium export is not brought up when Swedish politicians discuss reasons for maintaining nuclear energy.

There could also be implicit reasons for developing nuclear energy. As Fuhrmann notes, it is quite common for the countries developing nuclear energy to consider it in relation to geopolitical conditions (2013). However, only Polish texts are explicit to some extent about the geopolitical factors of nuclear energy development while Russian and Swedish authorities dissociate from the political nature of nuclear energy use. The official discourses of nuclear energy in the three countries backgroun
political nature of nuclear energy development or assume that it does not play such a role.

4.3.4 Safety of nuclear technologies

As another theme that appeared in the entry-level discourse analysis of the texts, safety of nuclear energy became a particularly prominent question in the industry after the Fukushima accident became worldwide news. The EU countries, including Sweden, and Russia conducted stress tests. Some measures for safety improvement were made. Despite the general topicality of the safety of nuclear energy, it was discussed differently in Russia, Poland and Sweden.

In Russia the Fukushima accident is actively referred to in emphasizing the safety of Russian nuclear technologies (Kirienko 2013, Putin 2013). When the safety of nuclear energy is discussed, two expressions are used sometimes: “post-Fukushima technologies” and “post-Fukushima safety” (Kirienko 2013, Putin 2013). These two expressions appeared after the Fukushima accident, although no exact specification of “post-Fukushima technology” or “post-Fukushima safety” were found in the material. It seems that these expressions refer to preventive measures for safety improvements carried out by the nuclear industry after the Fukushima accident. These expressions seem to imply that safety standards and the technologies of Russian reactors are more advanced at the moment than the ones at the Fukushima Daiichi plant. They have a mostly rhetorical meaning of dissociating from nuclear accidents and are employed in order to create an imagined feeling of safety. These expressions illustrate how particular ways of feeling, in this case a feeling of safety, are embedded in official nuclear energy discourses. The Fukushima accident is referred to when the safety of Russian nuclear technologies is emphasized. One example of such a representation is the following:

Additional requirements should probably be introduced, as well as restrictions for the construction of nuclear power plants in high-risk seismic zones. There must clearly be common international regulations, particularly where there is a risk of a devastating earthquake followed by

7 For more information on these measures see Atominfo (2012). Rosatom to complete by July post-Fukushima works on improving safety of nuclear power plants in Russia. 21 June, Available at http://www.atominfo.ru/newsb/k0324.htm accessed 11 May 2016
a tsunami. The existing Russian rules and regulations on nuclear power prohibit the construction of nuclear power plants where there is a risk of maximum strength level earthquake, an 8.0-level earthquake. In Russia, this standard is already in place, and it should be adopted internationally because we all know what damage such a catastrophe can cause (Medvedev 2011a).

Medvedev suggests “other states should do the same to ensure that we have guaranteed protection from natural disasters and related tragedies” (2012). This statement refers to Fukushima. It demonstrates the assumption that Russian nuclear technologies could cope better with nuclear crises like the one at the Fukushima Daiichi nuclear plant, implying that they are more advanced. References to the Fukushima accidents are thus used for promoting the underlying safety of Russian nuclear technologies.

This safety of nuclear technologies is emphasized in the official documents of the nuclear energy program in Poland as well (Polish Nuclear Power Program 2010:7). Nuclear safety for planned Polish reactors is portrayed as justified though the choice of specific nuclear technologies (Trojanowska 2012a) that will be equipped with the mechanisms of a better passive safety system (containment building). However, there are few references to the Fukushima accident in the rhetoric of Polish politicians. The accident did not change the decision to construct a nuclear power plant, as Prime Minister Tusk reassured the public in February 2012 (Tusk 2012), which demonstrates a reaction to the accident with the assumption that exploitation of Polish nuclear power plant would be different.

Swedish politicians discuss the safety of Swedish nuclear energy to a much lesser extent than in Russia. Although stress tests were conducted, it is mainly politicians from the Left and the Green parties (in opposition at that time) that refer to the safety of nuclear technologies, mainly questioning the reliability of the stress tests. Statements of politicians from parties that voted for lifting the ban on constructing nuclear reactors were not found. The accident at Fukushima has not led to any significant political consequences in Sweden. Similar to my findings, Hakkarainen and Fjeastad claim in their study that the differences between Japanese and Swedish reactors are often emphasized, implying that there is no correspondence between the 3/11 accident and Swedish nuclear power technology (2012).

To review, the Russian, Polish and Swedish official discourses of nuclear energy place the emphasis on the safety of nuclear technologies. At the same time, little specification of details about the safety of nuclear technologies was found in the texts arguing for nuclear energy development and
maintenance. References to the safety of nuclear technologies would serve a particular purpose in the discourses: to overcome the rhetorical consequences of mentioning the nuclear accident in the same document as arguments for nuclear energy development. The safety of nuclear technologies is addressed in relation to the Fukushima accident. It seems that authorities in each country want to dissociate from Japanese nuclear technologies, but in the Russian texts this safety is emphasized, while in Polish and Swedish texts safety is hardly referred to. Both ways of discussing safety lead to the same effect: the safety of nuclear energy is either portrayed as sufficient or it is not discussed at all, implying there is no need to discuss it. Presenting nuclear technologies in these ways reveals an assumption that the public should not be concerned with the safety of nuclear energy because there is no need. How the safety of nuclear energy is embedded in discourses on nuclear energy thus continue the general lines of these discourses.

4.3.5 Nuclear energy and climate change

The theme of lesser environmental impact is featured in official discourses of nuclear energy. Although official discourses of the studied countries refer to environmental impact broadly, it seems that climate change together with environmental security is largely in focus when environmental impact is discussed.

According to Russia’s Energy Strategy until 2030 (2009), nuclear energy would ensure environmental security since it reduces the ecological impact from the fuel and energy industry (Energy strategy until 2030, 2009:38). Nuclear energy is seen as contributing to ensuring a stable energy supply appropriate from an environmental point of view. President Putin stresses the environmental security role of nuclear energy in the process of modernization in the following words:

Russia will continue to support fundamental studies and applied research. We see this as a key condition for global leadership in the energy sector and for developing and thoroughly modernizing Russia’s energy industry. This industry must not be just a source of resources but a source too, of modern jobs, and create strong demand for new technology, innovative solutions, and smart investment. We feel certain that the challenges of ensuring economic growth should not undermine the interests of protecting the environment, climate and biodiversity of our planet. In this regard, I would like to emphasize the importance of developing peaceful, safe nuclear energy (Putin 2012).
The underlying goal is that energy is supposed to make less of an impact on the environment, which seems to be understood as emissions causing climate change. Non-fuel energy which nuclear energy is deemed to be part of is also sometimes referred to as an “environmentally friendly energy source”. Referring to nuclear energy in this way (Putin 2012) serves the purpose of associating nuclear energy with less environmental impact.

Nuclear energy is called a “non-fuel” energy source (Energy Strategy until 2030, 2009:37). Grouping energy sources under the label of “non-fuel energy” creates an association between nuclear and renewable energy sources, equalizing the environmental impacts of these two types of energy, which seems to minimize their distinctiveness. It is claimed that nuclear energy has the ability to reproduce its own fuel base and this leads to the prioritization of nuclear energy (Energy Strategy until 2030, 2009:68). The document underlines:

Nuclear energy has the ability to reproduce its own fuel base. This basic feature forms adequate priority of nuclear energy in the future, which is characterized by stricter environmental requirements to the energy activity and stabilization of hydrocarbon opportunities of fuel and energy industry (2009:38).

The dependence of nuclear energy on uranium seems to be neglected. It creates an image of nuclear energy that lacks the most important negative feature of the current energy mix – dependence on fossil fuels. Its presentation in such a way is possible because the amount of needed fuel is indeed small. In terms of environmental impact, it means that authors of energy strategies emphasize that non-fuel energy sources will have less emissions released into the atmosphere than fossil fuels. Constructing the opposition between fuel and non-fuel energy sources make it possible to group together various kinds of energy sources achieving a positive connotation since non-fuel energy is deemed not to produce as much environmental harm as the fuel industry. The term “non-fuel” nuclear energy foregrounds one aspect of nuclear energy (little dependence on fuel) and backgrounds other aspects of nuclear energy. The effect of foregrounding and backgrounding is a more positive representation of nuclear energy in association with the positive features of renewable energy sources (no emissions to the atmosphere), and dissociation with conventional energy sources such as oil, gas and coal. Tynkkynen and Aalto, analyzing the
environmental sustainability of Russia’s energy policies, consider that the concept of non-fuel energy used in Russian energy strategy appears a fruitful conceptual basis for framing sustainable energy in Russia as it takes into account both energy efficiency and renewable energy. Yet the concept approaches sustainability only in terms of low coal intensity and CO2 emissions, thus including the highly controversial nuclear energy and large-scale hydropower...the terms “alternative energy resources” (alternativnye energoresurcy) and non-carbon energy resources (neuglevodorodnye energoresursy) refer to all alternative energy sources to fossil fuels, including nuclear power, the environmental friendliness of which is highly controversial given the possibility of leaks, other accidents, and the storage of nuclear waste, an issue which is not yet properly resolved in Russia (2012:97).

The concept of non-fuel energy appears only in the later Energy Strategy until 2030, demonstrating that environmental factors have been emphasized towards the end of the decade. The emphasis on the environmental factors in the energy strategy seem to have occurred due to the attention to the 2009 UN Climate Change Conference in Copenhagen. The growing recognition of climate change in public discourse in Russia is evident in that period. While environmental security is one of the guiding principles of Energy Strategy until 2020, its interpretation as minimizing harmful emissions is more visible in the later strategy until 2030.

Energy Strategy until 2030 puts an emphasis on two kinds of non-fuel energy sources: nuclear energy and the hydro power industry in Russia (Energy Strategy until 2030, 2009:38). The development of these two sectors is planned in different geographical regions. The construction of nuclear power plants is planned in the European part of Russia while hydro power plants will be built in eastern Siberia and the Far East due to the regional specificity of energy demands and availability of natural resources. From the perspective of the strategic principles of the energy strategy, it means that energy security and environmental security will be ensured through the development of nuclear energy in the European part of Russia.

The rhetoric connecting nuclear energy and environmental security reiterates that the Russian authorities consider nuclear energy the main, if not the only, appropriate energy source for combating climate change in Russia. Putin has stated that nuclear energy is the “only one real powerful alternative to hydrocarbons” (Putin 2010). The potential role of renewable energy sources in Russia was recognized only in 2013, when the government announced the state support of renewable energy and presented the
mechanism for stimulating the development of renewable energy. In 2014, Prime Minister Medvedev signed the decree to join the International Renewable Energy Agency. It seems that the environmental impact of fossil fuels is considered much more significant than the ecological impact and risks from nuclear energy usage. The need to cope with climate change is used for justifying a redirection towards nuclear energy development.

The perceived necessity to break from the environmental impact of fuel energy sources constitutes the meaning of environmental security in the Russian context since climate change has been caused by the environmental impact of fossil fuel. Tynkkynen and Aalto conclude that “although energy savings and energy efficiency are currently among the most important strategic initiatives of Russian energy policies, these issues are framed in terms of economic rather than environmental sustainability” (2012:113). Although considerations about climate change are used in argumentation for nuclear energy development, it is obvious that it is less important than economic and security arguments that are more explicit.

Polish policy documents and statements of authorities emphasize the crucial contribution of nuclear energy to climate change mitigation. The need for diversification in Poland, presented in the Energy Policy of Poland until 2025 (2005), does not only concern a stable energy supply, but also a task for reducing the environmental impact of the energy sector because 90% of electricity comes from coal, which is an energy source with one of the highest ecological impacts. It is known that energy produced from coal produces greenhouse gas emissions and affects climate; diversification of the energy mix with the aid of nuclear energy is considered to address this problem.

The rising cost of domestic production of coal and difficulty in acquisition of new deposits of brown coal from the perspective of progressive restrictions on the availability of fuel for the electricity sector, constitute an important factor for looking for an opportunity to diversify the fuel structure for electricity production and introducing of new energy sources, ensuring long-term and stable, also in terms of cost, supply of

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electrical energy. Nuclear power clearly meets these conditions (Polish Nuclear Power Program 2010:27).

The reduction of the greenhouse gas emissions is an important part of the Polish energy policy (Energy Policy of Poland 2005:19) since climate change is portrayed as the main environmental threat by the Polish government:

Therefore, the primary course of action aimed at reducing the impact of the energy sector on the environment will be the introduction of new technology, a change in the structure of energy, the use of more environmentally friendly fuels, the introduction of economic mechanisms to facilitate adaptation to increasingly stringent environmental requirements. The progress in the field of energy efficiency will also affect reduction of the burden on the environment (Energy Policy of Poland 2005:26).

This quote demonstrates that nuclear energy is considered to be a “more environmentally friendly fuel.” There is also the official view that “New energy policy should respond to the challenges of Poland’s modernization consistent with the constitutional principle of sustainable development and mitigation of global warming” (Polish Energy Policy until 2030, 2009:4). The role of nuclear energy for reducing CO2 emissions is emphasized (Hoc 2013, Pacholski 2012, Polish Nuclear Power Program, 2010:4,6). The issue of ecological impacts is presented together with economic efficiency in Polish nuclear energy discourse (Trojanowska 2008). Sometimes Polish documents refer to the environment’s protection (Energy Policy of Poland 2005:4,24), but a closer look reveals it seem to refer to CO2 reduction.

Climate change is thus portrayed as the main environmental threat in both Poland and Russia, and their governments consider nuclear energy to be a crucial electricity-generating technology capable of contributing to climate change mitigation.

In Sweden, climate change mitigation is the core of the contemporary political agenda. “With increasing focus on climate change nuclear power fulfills one of the key requirements of the modern sources of energy, namely, that it leads to low emissions of greenhouse gases” (Proposition 2009/10:172). The fact that the current policy is called Climate-Energy Policy shows that climate and energy matters are considered highly related by the Swedish authorities that produced this policy. The necessity to mitigate climate change is interpreted as an opportunity that will provide conditions for innovation and more efficient energy use; it is portrayed as leading to growth and strong
competitiveness (An Eco-efficient Future, Ministry of the Environment, Ministry of Enterprise, Energy and Communications, 2009). It is explained that “Fossil-based energy sources shall be phased out and the vision is for net emissions of climate gases to cease completely by the middle of this century“ (An Eco-efficient Future, Ministry of the Environment, Ministry of Enterprise, Energy and Communications, 2009). Sweden aims to increase the share of renewable energy considerably, and has a strong orientation towards sustainable development and environmental sustainability in the policy documents. It is the same policy documents that apply to nuclear energy, and the current nuclear energy policy of replacing old reactors with new ones is a part of the overall strategy.

Climate change mitigation, green economy and renewable energy are the primary focuses of Swedish energy policy, while nuclear energy is rarely mentioned in this respect, although at the same time: “Climate change is now in focus and nuclear power will thus remain an important source of Swedish electricity production for the foreseeable future” (Regeringskansliet 2009). Nuclear energy is portrayed as ensuring security of supply:

First, we are sending historically big investments to an extensive new construction and renovation of our power grid. In the next ten years, we will invest about 3.5 billion per year. Second, we are now rapidly building new renewable energy generation. And third, we have set clear requirements that nuclear power in the future must be capable of the sustained and high security, to ensure supply when demand is at its peak. All of this will reduce the risk for different prices in different parts of Sweden (Hatt 2011).

Similar to the safety of nuclear technologies, the backgrounded role of nuclear energy in mitigating climate change and achieving environmental goals lays out a disproportional emphasis on the role of renewable energy in the Swedish energy mix, while nuclear energy is constructed less significant than its actual 40% in the electricity mix.10 Through this process of backgrounding, nuclear energy seems to appear less important in the energy policy that it actually is. The official Swedish rhetoric on climate change, although completely at odds with Russian official discourses on nuclear energy, which is much more vocal about the ecological effects of nuclear

energy, creates a similar effect, and nuclear energy appears more environmentally friendly. Nuclear energy is called a carbon neutral energy source (Betänkande 2009/10:NU26 Address 125 Cecilie Tenfjord-Toftby M) and also a clean fossil free energy source (fossilfri) (Betänkande 2009/10: NU26 Address 152 and 160 Anna Kinberg Batra M). The consequences of climate change are considered much more significant than nuclear risks (Betänkande 2009/10:NU26 Address 41 Björn Hamilton M). In the words of Andreas Carlgren, the former Minister for the Environment:

To focus so strongly on which year nuclear power should be phased out indicates a risk to miss the essential point: that is, how are we to meet the dual challenge of reducing both the reliance on nuclear power and the climate emissions (from Hakkarainen and Fjeastad 2012:241).

Some Swedish politicians thus prioritize climate change mitigation and do not discuss so much nuclear energy, but emphasize intentions to develop renewable energy and undertake eco-efficient measures in the energy sector. Environment-oriented policy documents cover nuclear energy when they present the energy sector in general, implicitly establishing a link between “green” energy policies and nuclear energy. The official discourses of nuclear energy in Sweden seem to accept nuclear energy as a necessary energy source.

To sum up, climate change is portrayed as the main environmental threat in the three countries. The governments in these countries consider nuclear energy as contributing to climate change mitigation. Swedish texts are not as enthusiastic as Russian or Polish ones about the environmental contribution of nuclear energy. Despite varying rhetorical strategies and formulations used for nuclear energy, the effect is similar: nuclear energy is represented as a means for breaking from the environmental impacts of other energy sources, reducing environmental impact and thus being considered more environmentally friendly than other energy sources. According to Baigorri et al (2012), the focus on emissions and climate change has altered the perception of nuclear energy as an energy option that could contribute to mitigating climate change since the nuclear energy industry does not produce as much emissions as other conventional energy sources do. The increased role of climate change in the energy strategies refer to what Mert calls “carbonification” of environmental discourse (2013) which means that the problem of climate change becomes the most important contemporary environmental problem.
4.3.6. Participatory practices

Although the above mentioned official discourses in Russia, Poland and Sweden are quite bold and not showing much room for hesitation about nuclear energy development, authorities and nuclear energy companies also refer to openness and readiness for dialogue with citizens. Participatory practices is also a theme that was found during the entry-level analysis of themes used for constructing argumentation for nuclear energy. Nuclear energy is not only a profitable, technologically advanced, safe, environmental friendly technology, as it is presented in these discourses, but it is also presented as publicly acceptable if citizens can have a say. According to politicians and representatives of the nuclear companies, citizens can participate in decision-making processes through various mechanisms for their inclusion, such as channels and forums for communication with public.

In Russia “openness and absolute transparency” are emphasized as the essential principles of nuclear energy sector functioning (Medvedev 2011b). Energy Strategy until 2030 notes “the weak participation of the community in supporting and developing the energy business in the country” (2009:33). This energy strategy acknowledges the need for “expansion of real interaction between energy business and society in solving problems in the energy sector functioning and development” (2009:33) and “development of social partnership of the energy business and society, specifically through more active participation in the share capital of energy companies and public discussion of new energy projects in the regions” (2009:33-34). Providing information is one of the main forms of communication offered by the nuclear industry. In the words of the political elite:

Our civil society needs to play an important role in environment protection. I often hear that “green” ideas are not popular in Russia because our people are not ready for them. To some extent, this may be true. That is why, as I have mentioned, the role of environmental education is crucial. We have to take that into account in our new educational standards (Medvedev 2010).

The interviewee N (Rosatom representative, Russia) states that “the leadership of Rosatom formulates its policy in such a way, politics of openness, politics of communication with everyone who wants to know.” According to this representative, decisions should not be based on emotions (N, Rosatom representative, Russia). This could a powerful rhetoric that
excludes these dissentient “others”. Indeed the openness of the nuclear energy industry is rather presented on the basis of information availability and readiness to communicate with those who the nuclear industry finds appropriate. Medvedev comments, “As for non-governmental environmental organizations, if those people genuinely care for the environment, we need to have detailed discussions with them and find mutually acceptable solutions before we start building industrial or infrastructure facilities” (Medvedev 2010).

There is a mechanism for interaction with civil society in Rosatom, called the Public Council of the State Corporation Rosatom. Decisions of the Public Council are advisory to Rosatom. The primary task for the Public Council is to establish forums for exchange of opinions and communication between representatives of nongovernmental organizations, representatives of the nuclear energy sector and experts. The council is composed of 24 members. Ten of them are representatives of non-governmental organizations. The members of the Council are approved by the chair of the Public Council who at the same time holds the position of Director General of Rosatom. This structure poses a certain hindrance to the balance of power between these organizations and the composition of the Public Council. Rosatom and the Public Council have organized together the International Forum-dialogue and Regional Forum-dialogue since 2009. Forum-Dialogues and the Public Council of Rosatom are often mentioned as examples of openness and readiness for dialogue from the nuclear industry. But the presence of formal structures do not guarantee that true inclusive spirit is exercised. Many of the activists are critical towards the Forum-dialogues since they fail to deliver their opinions in that format.11 Mechanisms of

11 On the basis of the following materials:

b) Expert opinions at the Bellona webpage:

Bellona (2012). The hearings on Baltic NPP are carried out for "the formation of positive attitude of the population to the project”. 17. October, Available at
public participation thus have considerable limitations, and are discussed in the coming chapters.

Therefore, there is an emphasis on openness of the nuclear energy industry and the possibility to cooperate with the interested parties in the official discourse of nuclear energy in Russia, but this cooperation is rather understood as limited to what these interested parties say during the meetings. Moreover, there are no mechanisms accounting for the possibility that the ideas and opinions of these actors are even taken into consideration.

The Polish government and the nuclear energy company PGE EJ1 recognize the importance of public engagement and participation. The Polish nuclear energy program underlines the importance of civic engagement (Polish Nuclear Power Program 2010). Civic engagement in public dialogue may mean public participation in discussion and in decision-making processes. But in the Polish context, public participation acquired a different interpretation as the government decided to launch the informational and educational campaign. This is seen as a mechanism for engaging citizens in the dialogue. To address the lack of knowledge and information on nuclear energy there have been two campaigns. One was organized by the Ministry of Economy - “Get to know Atom” (“Poznaj Atom”) and the second one by the Nuclear Energy Corporation PGE EJ - “Nuclear Awareness” (“Świadomie o atomicie”). PGE EJ is obliged to provide information for the citizens of potential local sites (S, PGE representative, Poland). The Polish title of the campaign suggests that decisions should be made consciously, since the word „świadomie“ actually means to do something consciously and with awareness. The goal of these educational and informational campaigns is seen as obtaining public support for nuclear energy, since “such activities are necessary for the Company to acquire the public’s understanding and support for this investment project, especially among the residents of the regions where the power plant may be located” (PGE 2011). “The acquisition of the support of the majority of Poles for our country’s nuclear power generation programme” is also “one of the key elements guaranteeing a successful completion of the whole enterprise” (Trojanowska 2008, also in Energy policy of Poland, 2005:18).

The informational-educational campaign is thus understood as a kind of public dialogue, at least as a starting point, in the official discourse of

nuclear energy in Poland. Energy Policy for the Period until 2025 considers it necessary to immediately start the public debate on the subject of nuclear energy development (Energy Policy of Poland 2005:19). The nuclear energy program has to be publicly accepted, according to the government, and therefore public consultations should be held (Energy of Poland 2005:20). The document Polish Energy Policy until 2030 confirms the emphasis on broad public consultations and debates (2009:17). The representative of PGE EJ states in the interview the company’s interest in engaging local citizens, including various “leaders of opinion” regardless of their different positions towards nuclear energy development in the regions of potential nuclear facility construction (S, PGE representative, Poland). The interviewee points out that PGE EJ does try to talk with groups, and in the opinion of this interviewee there is a dialogue. The corporation consults with local citizens about the themes of interest to the citizens because PGE EJ does not come with “a package of informational activities” (S, PGE representative, Poland). It seems that they focus on providing information of interest to citizens. There were workshops held where PGE EJ asked local citizens about what kind of information was missing. The educational-informational campaign was launched.

Recent public opinion polls have shown that the level of knowledge about nuclear energy, ionizing radiation and nuclear physics in Poland is very low. Therefore, it is necessary to conduct a continuous educational campaign. The aim of this campaign is to raise public awareness about nuclear power which will assure that the decisions regarding nuclear energy - support or negation - will have a stronger evidence base, and will not be based on myths and false assertions, and they will resist populist actions, ideological and irrational (Polish Nuclear Power Program 2010:104).

Referring to populist, ideological and irrational actions, the Polish Nuclear Power Program implicitly constructs an image of “others” who carry out these actions. Dissenters are assumed to be ruled by emotions, to be “irrational” and to conduct “ideological and political” actions. The sequence “populist, ideological and irrational” combining these aspects together negates the difference in meanings between them. According to this quote, the uneducated are more perceptive to rely on myths and undertake ideological and irrational action. This phrase gives a strong negative image of dissenters.
We cannot deny that the plan to erect the first nuclear power plant in Poland evokes strong emotions in the public, which is uncharacteristic of other nuclear power generation, such emotions often result from the lack of basic knowledge of nuclear power generation (Trojanowska 2008).

This representation of nuclear energy demonstrates how the official discourses of nuclear energy in Poland portray “the others”, ascribing identities to other groups in society. It could be partly stated the other way around, that those who undertake ideological and irrational actions are uneducated and their numbers will shrink if only they start becoming more educated. The agency of citizens with other views seem to be denied along with their rationality because they are not considered to be educated enough. Such a situation limits possibilities to establish a constructive dialogue. It is assumed that to be ideological implies to be irrational. It seems that the current energy policies are assumed to be non-ideological and therefore non-political.

This program continues that Poles are aware that they know little about nuclear energy, which is a good sign because “it means openness of the society for information, education and dialogue” (Polish Nuclear Power Program 2010:101). These constellations of words are interesting because they equal information, education and thus dialogue. There seems to be no doubt in the texts that information and education will lead to the public acceptance of nuclear energy. So even though the official discourse of nuclear energy in Poland portrays public participation as a key aspect for developing nuclear energy, it is rather understood as information and the education of citizens.

Although openness and dialogue are strongly emphasized in the official discourses of nuclear energy in Poland, there is strong evidence that in practice it differs from the potential expectations of citizens. Despite the bright picture drawn in the policy documents, Stankiewicz argues that technology governance of the Polish Nuclear Power Program does not provide possibilities for broad public participation and non-experts do not have access to the discussions. Public communication strategies rest on understandings of protests as irrational, and risks related to nuclear energy development are marginalized in public communication (2014:102).

The official discourses of nuclear energy in Sweden portray public participation in a different way than in Russia and Poland. In particular, dialogue with the public is presented differently, since it is stated that new
policy on nuclear energy is “co-decided by the government, business and society.” The public is presented more as a partner to authorities than masses needing education. “Dialogue with environmental movements, the business sector, authorities and research communities form the basis of the policy’s goals and focus” (An Eco-efficient Future, Ministry of the Environment, Ministry of Enterprise, Energy and Communications, 2009). Moreover, even if this decision has not gained widespread public support, the Climate and Energy Policy for a Sustainable Future states “that this agreement will be able to win broad support in the society, in business community and among labor market partners” (Näringsdepartementet, Miljödepartementet 2009).

The broad claim about coordinated decisions between the government, business and society in relation to the nuclear energy policy decision implies consensus, which in turn negates the political character of nuclear energy development. There is certainly an intention to break from the politicization of this decision. At the same time, politicians in opposition say that this decision over nuclear energy is both of political and moral nature (Betänkande 2009/10:NU26 address 1 Tomas Eneroth S). Political parties in opposition want to have a political say for the future energy mix, and do not want to leave all the decisions to market forces (Betänkande 2009/10:NU26 address 28 Maria Wetterstrand Mp).

It is evident that Russian, Polish and Swedish official discourses of nuclear energy construct recipients of nuclear energy policies differently. This is in line with Kress and van Leeuwen (1996) who considers that role allocation is a part of representing identities of actors in the discourses. Although readiness to include society in the decisions is portrayed as somehow similar, it is possible to see that public participation is understood differently in the three studied contexts. While in Russia and Poland the necessity to inform and educate is emphasized in the discourses as well as discussions with some actors but not with others, Swedish society is portrayed as a partner for government and business. It is also portrayed as having a more active role, while in Russia and Poland society is given a more passive role in communication with the nuclear industry.

In short, the participatory practices as well as the readiness for dialogue with the public is another aspect in the official discourses of nuclear energy in Russia, Poland and Sweden. This aspect is to be studied further through the eyes of anti-nuclear movements, since there is evidence showing that participation, in particular in the contexts of Russia and Poland, tends to be understood as information, education and “dialogue with the ones who
want to communicate and cooperate.” Both in Russia and in Poland, citizens are considered to have access to public discussions and consultations (which adds to the legitimacy of nuclear energy), while in Sweden public participation is not discussed to a similar extent, probably because there are stronger mechanisms for public engagement in transparent governing structures. Emphasis on participatory practices in general could be an effect of “participatory turn” that has been developing in the interaction between state, industries and society worldwide (see Jasanoff 2003).

4.4 Concluding remarks

The official discourses of nuclear energy in Russia, Poland and Sweden present nuclear energy as a viable energy source in the energy mix of these countries. From the perspective of the strategic principles of energy sector development that were discussed in the beginning of this chapter (economic, energy security and environmental aspects of strategic development of the energy sector), it is possible to see that despite similarities among these principles among Russian, Polish and Swedish documents, the official discourses of nuclear energy in these countries emphasize different principles. In Russia, nuclear energy is expected to contribute to economic and technological modernization of the country and to shift from fossil fuels. Poland’s nuclear energy is expected to diversify its energy mix and by this construct a more stable energy supply. In Sweden, nuclear energy is a part of the national agenda of sustainability and an eco-efficient economy, while nuclear energy itself does not receive much space in policy documents. Swedish official nuclear energy discourses are less enthusiastic and more explicitly focused on climate change than Poland and Russia; the leading voice suggests that nuclear energy is a forced necessity. Official discourses of nuclear energy in these countries, particularly in their parts on the contribution of nuclear energy to socio-economic development, absorb the main challenges of these countries and present nuclear energy as part of the complex measures to meet these challenges. Despite differences, the aspects of official discourses in all three countries boil down to four key words: competitiveness (economic development), advanced technologies (also meaning safe), diversification and climate change mitigation.

Official discourses of nuclear energy share an emphasis on profitability and the role of nuclear energy in the countries’ economic development. It goes hand in hand with denoting the role of external investments because state subsidies to nuclear energy are going to be limited (Russia and Poland)
or no subsidies will be given at all (Sweden). External investments seem to be important for nuclear energy to be considered profitable and viable. Arguments about the profitability of nuclear energy do not contain references to nuclear waste management and rarely to decommissioning of nuclear reactors. These aspects are discussed somewhere else, but a connection with nuclear energy development is not established.

Official discourses of nuclear energy could be summarized as discourses of “progress”, which is how actors that put forward these discourses would like to present them, although with different accents in Russia, Poland and Sweden, similar to the Gamson and Modigliani study (1989). In Swedish discourses, nuclear energy is rather at the background of the “progress” discourse of sustainability and eco-efficiency (nuclear energy is not considered “progressive”). According to Gamson and Modigliani, discourses of progress may be more appealing than an anti-nuclear agenda, since they refer to the larger cultural theme of technological progress (1989:15). The technocratic vision and technological progress are related to the national identities. Bouzarovski and Bassin connect the outlook of the Russian energy system to the national identity of “energy superpower” matters for the Russia energy system (2011). Similar interpretations can be provided for the contexts of Poland and Sweden in terms of technological orientations of identities. Polish engineers share technocratic visions that were reproduced in that educational and research system close to the one in the Soviet Union. As Sweden went through the phase of rapid modernization in the twentieth century, the technologies and engineering capabilities played a similar role in the national Swedish identity. The role of national identities should not be underestimated, as Hecht points out:

locating the construction and the performance of cultural forms such as national identity in the practices of technological change shows how these forms are grounded in the material worlds. This, in turn, demonstrates not just the political power of cultural forms, but also their material power. Ultimately, the practices of technopolitics reveal that the political power of culture cannot be separated from its material power (Hecht 2001:287).

In light of Hecht’s claim that the relations between cultural and material power are of a political nature, and the representation of nuclear energy in the official discourses in Russia, Poland and Sweden as apolitical, “the necessary decision”, seems to be paradoxical, if not confusing. The effect of such representation is backgrounding the political nature of the nuclear
energy projects. Decisions about nuclear energy are presented as an apolitical “necessity”. The one exclusion from this is the remarks made by the Swedish political parties in opposition during the research phase that wanted the ruling coalition to admit that the decision on the new nuclear energy law in 2010 was political. Marcuse argues that technologies should not be seen as neutral and apolitical because technologies organize social relationships and act as an “instrument for control and domination” (1982). The collected materials present a world, where economic considerations seem to prevail in domestic policy-making and international relations instead of politics. However, representation of nuclear energy in such a manner is political. If the decision is apolitical, then there is no space for political struggle over it, and such discourses of nuclear energy construct a “there-is-no-alternative” vision of nuclear energy. This vision of nuclear energy is discussed in greater detail in Chapter 6, where official discourses and discourses of anti-nuclear movements are examined together. But before that, anti-nuclear discourses are scrutinized in the next chapter.
5

Expert voice, unprofitability and public participation in anti-nuclear discourses

The previous chapter highlighted that official discourses of nuclear energy in Russia, Poland and Sweden represent nuclear energy development and maintenance as an apolitical issue that leads to progress through the themes of economic development, technologies, international interdependence, nuclear safety, climate change and participatory practices. This chapter explores discourses of nuclear energy of local anti-nuclear groups and environmental NGOs in these contexts. It follows a similar structure as the previous chapter, and begins with the presentation of actors that put forward anti-nuclear discourses (power over discourse). The chapter then proceeds with the power of discourse, and presents the main pattern and genre of these discourses. After that a discussion follows on each theme that anti-nuclear movements associate nuclear energy development with, and which were found during the entry-level part of discourse analysis. The findings from the in-depth part of discourse analysis are presented in the section on the main pattern of the anti-nuclear discourses and in connection with a relevant theme.

The chapter on official discourses of nuclear energy presented only the discourses of the governments in power, while statements of political actors with anti-nuclear views are quoted to some extent. Following Tarrow, who argues that it is possible to consider political parties temporarily as parts of social movements (1989), I consider that it is possible to say that anti-nuclear discourses are not only reproduced by anti-nuclear movements but also by politicians that oppose nuclear energy programs, despite politicians not being part of the movements. This chapter presents the pattern of anti-nuclear discourses that comprises discourses of anti-nuclear movements but also to some extent of other political actors with anti-nuclear views.
5.1 Power over discourse: emerging challenge in relations between environmental and anti-nuclear identities

The definition of social movements as “not so much a concrete group as a continuing, confrontational interaction between challengers and authorities” (Tilly (1984), quoted in Tarrow (1989:37)) suggests that identity (as a confronter of authorities) is important for defining actors in social movements. As movements consist of different organizations and groups, different actors in movements may have specific identities. Differences in identities come from differences in how exactly actors in the movement perceive they need to respond to state policies and what actions should be carried out. Despite specific identities, cooperation of actors in movements is possible because, as interviewee T (environmental NGO, Russia) indicates, there is a possibility to cooperate within a movement even if there is no full agreement.

There is a potential problem for present-day anti-nuclear movements: the unity of the core movement identity consisting of environmental and anti-nuclear identities is challenged since there are environmental organizations that are not anti-nuclear. Presently, an environmental organization could present itself as environmental and support nuclear energy at the same time as, for instance, the name of the international group Environmentalists for Nuclear and the book Environmentalists for Nuclear Energy by Bruno Combi suggest. These kinds of environmental organizations are very marginal in Russia and Poland but they nevertheless exist and sometimes speak on the environmental agenda and nuclear energy development. Their voice could be heard in the public discussions regardless of how small they and their real intentions had been. For instance, respondents O (environmental NGO, Russia) and R (environmental NGO, Russia) mention environmental organizations with pro-nuclear views in the interviews. In Sweden such organizations are not mentioned. This shift could be a strategic move or unintentional outcome of the shifting identities related to the agenda of climate change mitigation, as Baigorri et al note the important of the climate change agenda (Baigorri et al 2012). A distinction between anti-nuclear and environmental identities paves the way for questioning present-day environmental identity. A seemingly challenged identity among environmental activists creates a mixed message that may lead to confusion among their audience regarding what environmentalists think about nuclear energy; this in turn affects the clarity of the message which is important to be understood, according to Koopmans et al (2005).
5.2 Genres of anti-nuclear discourses

Here, genres of texts illustrating anti-nuclear discourses in Russia, Poland and Sweden are introduced. Recalling that anti-nuclear movements consist of environmental NGOs and local anti-nuclear groups, according to Fairclough, power relations are reflected in genres of text production (2003). Genres reflect how texts are produced, and activists, for example, may choose a genre of report or a genre of sensational article to present their ideas.

Environmental NGOs and local anti-nuclear groups differ in terms of actions and resources that they have at their disposal, which consequently leads to using different genres to express their ideas, opinions and views on nuclear energy. The main difference between them is tied to how environmental NGOs are active at the national or regional levels and not linked to a particular nuclear power plant, while local groups are concerned with nuclear power plants that are being built, considered or discussed in their local area. Environmental NGOs tend to be placed in capitals or big cities in the regions, while local anti-nuclear groups often appear near present and planned nuclear power plants.

Expert identity is communicated in texts produced by environmental NGOs. They emphasize their expertise and relevant university education, but also cooperation with nuclear physicists, engineers and other experts, including research institutions such as scientific academies (on the basis of interviews). Expert identity expressed by one respondent is described:

I am able to read official documents, in particular, Environmental Impact Assessment documents, and that is from 200 to 3000 pages. This is fairly heavy documents that not everyone can explore and evaluate. I can give expert advice. I can show them where it is not correct... give some criticism of the official justification for the construction of nuclear power plants .... (F, environmental NGO, Russia).

This identity is manifested through genres of texts that environmental NGOs produce. They publish reports, lengthy brochures and books that provide broad overviews of the nuclear energy industries and actors deliver their ideas, opinions and statements on nuclear energy development. To offer some examples of reports and brochures produced from 2005-2014, there are Ecologist story about the nuclear industry by Alexey Yablokov; Environmentalists against nuclear power edited by Aleksandr Nikitin and Alexey Yablokov; Why development of nuclear energy is harmful for Russia
by Solidarity Movement, a Russian liberal democratic political movement; On the economy of Russian nuclear power industry by Bellona; and Extending the life cycle of nuclear power plants by Andreev (Bellona) in Russia. In Poland, similar materials are produced by Jan Haverkamp from Greenpeace Poland, for instance Energy of the Future? Nuclear energy in Central and Eastern Europe edited by Karel Polanecky and Jan Haverkamp. Shorter materials were produced by WWF: Nuclear power is the wrong answer, and by Radosław Gawlik; and Nuclear energy in Poland: pro-nuclear propaganda with no counterargument. In Sweden, a few examples are: Why not nuclear energy - a small handbook on the nuclear energy issue by MILKAS, Report; Find five faults on nuclear power by Naturskyddsförningen; An extremely expensive and dangerous way to heat water by Åsa Moberg; and It is you who chooses- an argument against nuclear energy by FmKK (Folkkampanjen mot Kärnkraft-Kärnvapen) and MILKAS.

The above is not a full list of produced materials, but a selection of a few examples. The expert voice of these materials is already visible in the titles. Environmental organizations and activists unite their efforts in publishing brochures and reports. For instance, the preface of the brochure Environmentalists against nuclear energy says that it was written by 11 organizations and many others read the text before publishing. Polish organizations produce much shorter brochures than Russian and Swedish do, and more concise leaflets identifying core problems of nuclear energy, although Russian and Swedish environmental NGOs also publish shorter statements and leaflets sometimes. That could be related to less numbers of engaged environmental NGOs than in the other two contexts, which in turn may relate to a more recent nuclear energy program in Poland. The presentation of arguments in the form of reports and brochures suggests that these arguments are a result of thorough investigation. When experts talk, they provide evidence for their arguments and so do environmental NGOs. These NGOs often choose such genres that strengthen the expert voice.

Local anti-nuclear groups are groups of local citizens. While some of them may have specific knowledge, most of them have not studied ecology, nuclear physics or other relevant disciplines. Local anti-nuclear groups mainly use short forms as the main genre, such as letters and leaflets of various sorts. Asking others to take action, join a demonstration or things of this kind, they are less explicit in communicating expert identity and focus more on unjust decision-making. Although genres of texts authored by environmental NGOs and local groups differ, concise statements or
The expression of position in one or two page-leaflets emphasizing a number of arguments against nuclear energy is common for both kinds of actors. These two kinds of actors exchange knowledge as local activists often are in contact with representatives of environmental NGOs and/or read materials published by these NGOs. Representatives of local anti-nuclear groups have stated and confirmed in the interviews that they obtain information about nuclear energy from brochures and leaflets produced by their colleagues in environmental NGOs. They find these materials on the internet, but also through personal contacts with authors. Sometimes representatives from NGOs visit local sites of anti-nuclear movements. The texts produced by environmental NGOs are thus not only consumed by an external audience but also internally within the movement.

The internal reproduction of anti-nuclear discourses within the movements leads to similar arguments being voiced by activists both from environmental NGOs and local anti-nuclear groups, despite the fact that lengthy materials are published by small groups of people who have skills for writing these kinds of texts. The rhetoric of talking about nuclear energy is similar between various groups and organizations and across countries. Reproducing the expert voice by local anti-nuclear groups is, on the one hand, expected as they consume the anti-nuclear discourses of environmental NGOs. On the other hand, it may be challenging for the movement.

Some materials are even translated and ideas about nuclear energy become shared between several countries. An example of this could be the brochure *Why not nuclear energy - a small handbook on nuclear energy issue* by MILKAS, which includes reprocessed parts of *Nuclear Power – Only problems No solutions* produced by the European Petition Campaign against Nuclear Power. Some of the positions are signed by organizations and groups from different countries, and a possible exchange of opinions occurs at this stage (Open letter 2013\(^1\)). A united group of activists wrote and signed the *Open Letter in connection with the developed project on underwater cable at the bottom of the Gulf of Finland*, including activists from Russia, Sweden, UK, the USA, Serbia, Norway, and Poland.

The main result of in-depth analysis is that the expert voice reproduces a language close to a scientific one, with a few figures of speech or metaphors, in particular the usage of metaphors as how Krzyżanowski understands

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\(^1\) The reference list of analyzed texts including speeches, press releases, statements and other materials is given in the Appendix II.
them to be supporting the main lines of argumentation (2007:141). Texts are often presented as analytical, and expressive rhetoric is avoided. This could be interpreted as the intention to employ a neutral style in order to demonstrate expert knowledge and a professional attitude and to represent authors of these texts as potential partners in communication with the nuclear industry and as experts. Metaphors are applied much more in relation to the safety of nuclear energy than any other nuclear theme.

The choice of expert voice among environmental NGOs partly relates to the culture of environmental and anti-nuclear movements, and partly to adapting to sociopolitical contexts. For instance, environmental movements in Soviet Russia first formed at the departments of biology and geography at the universities, such as Moscow State University, where natural science students were involved (Haliy 2008). It is not surprising that discourses of nature protection (where discussions of nuclear energy are included) have evolved in this particular way. Some organizations like the People’s Campaign Against Nuclear Energy – Nuclear Weapons (Sweden) have originally been more of an umbrella organization for anti-nuclear groups, but more recently this organization, together with other environmental NGOs, produce anti-nuclear arguments in the same genre as other environmental organizations, mainly brochures and leaflets. Clearly, environmental NGOs differ in terms of expertise; some organizations have internal experts, while others have to cooperate more with external experts. The result is similar: expert brochures and leaflets, with or without cooperation from other actors.

5.3 Power of discourse

This section introduces the main pattern of anti-nuclear discourses in Russia, Poland and Sweden. This pattern is found in the entry-level discourse analysis of themes that anti-nuclear movements associate nuclear energy development with. The main pattern in anti-nuclear discourses embraces a wide range of different arguments against nuclear power. Through presenting a wide range of arguments, the anti-nuclear discourses communicate that nuclear energy is thoroughly assessed. Anti-nuclear discourses associate nuclear energy with economic, technological or climate change aspects, but also with political, social and broader environmental aspects of nuclear energy in the three countries. These themes appear in various combinations, and although not necessarily all of them are mentioned, usually at least three are.
Russian interviewee H claims that nuclear power plants “do not need to be built because they are economically, environmentally, politically unacceptable” (H, environmental NGO, Russia). The main strategy is to demonstrate that nuclear energy is not a good choice from all possible perspectives. The following quote is exemplary:

Construction of nuclear power plants entails not only the security risks and risks related to the environment, but also the serious economic difficulties, high costs, high tariffs on electricity and a host of other negative consequences. We would like to say that the project of nuclear energy development is unprofitable for Russia in all respects, not only in terms of our security or the environment. We want to show that nuclear power - it’s expensive, that the development of nuclear power plants in Russia puts dependence on imports of uranium from other countries. We want to show that nuclear power plants – are the threat of the rising cost of electricity for the Russians, that the NPP worsen structure of the production balance and consumption in our country. Thus, whatever perspective you look at - nuclear power associates with some solid problems (Solidarity Movement 2009:2).

Realization of the program will lead “not only to serious environmental consequences, threat to life and health, but also contribute to the economic devastation of the region and the country” (WWF statement 2008). The themes of anti-nuclear discourses appearing in various combinations are unprofitability, inefficiency, dependence on uranium, environmental threats of nuclear energy, technical risks, and the illegality of new constructions (Nikitin & Yablokov 2010, WWF statement 2008, Solidarity Movement 2009, Kola NPP Online petition 2012, Statement 2010, Yablokov 2009). The joint position on the usage of nuclear energy produced by actors in Russian anti-nuclear movements during the roundtable in 2013 covers several aspects simultaneously. Russian anti-nuclear activists “strongly opposed: technologies producing plutonium, military nuclear programs, energy technologies with uranium-plutonium fuel, prolongation of life cycles of nuclear and radiological, dangerous objects, as well as the operation of nuclear power plants on the excess design, construction of new nuclear power plants, including abroad” (Roundtable position 2013). The multifaceted negative aspects related to nuclear energy suggest that “development of nuclear energy in Russia does not happen in the interests of the country and its people” (Yablokov 2009:117).

Activists in Poland argue against nuclear energy by addressing a range of issues concerning nuclear energy development as well (Lubiatowo webpage...
The most common themes are the economic ineffectiveness of the nuclear energy industry, lack of mechanisms for public participation and nuclear waste (Lubiatowo webpage 2013, Leaflet 2012b). Local anti-nuclear groups emphasize potential consequences for tourism in the areas considered for nuclear power plant construction. The impact on tourism is crucial for Polish local anti-nuclear groups since the population of the regions where a nuclear power plant may be built is engaged in the tourist industry, and in the case of any accident or danger for tourists, they would experience negative economic effects.

Anti-nuclear activists in Sweden follow a similar approach. Nuclear energy is considered unacceptable because of its impact on the environment, health and economic and social factors. Nuclear energy is presented as lethal, hazardous, destructive to the environment, subsidized, wasteful, unnecessary, and a safety risk (FmKK & Milkas 2014). Swedish activists consider nuclear energy to be neither environmentally, nor socially or economically sustainable (Network Nuclear Free Gulf of Bothnia 2014). The emphasis on sustainability marks the connection between anti-nuclear discourses and official discourses of nuclear energy in Sweden: sustainability is a common theme in different kinds of nuclear energy discourses.

The anti-nuclear discourses bring together economic, social, political, environmental and other aspects related to nuclear energy. On the basis of this range of arguments, anti-nuclear activists claim that nuclear energy is not acceptable. In activists’ opinions, the issue of nuclear energy has to be addressed in accordance with its complexity without simplification of the matter. What follows is a detailed discussion on each theme in anti-nuclear discourses: profitability, public participation, safety of nuclear energy, nuclear technologies and other aspects.

5.3.1 Calculating profitability

Unprofitability of nuclear energy is the most common argument against nuclear energy and the theme most often mentioned in the texts. Unprofitability of nuclear energy means that nuclear energy is too expensive for investment. This argument is presented together with other arguments, but also sometimes alone. Presenting nuclear energy in economic terms, anti-nuclear discourses respond to the widespread claim about cheap or economically viable nuclear energy among supporters of nuclear energy. The emphasis on unprofitability is an unexpected development in anti-nuclear
discourses, since it is produced by local anti-nuclear groups and environmental NGOs, meaning that environmentalists discuss economic aspects of the nuclear energy industry. That could be understood as an intention to oppose one of the main arguments for nuclear energy and also as a manifestation of the expertise of environmental NGOs. The argument about the unprofitability of nuclear energy is based on several grounds.

Nuclear energy in Russia is considered to be unprofitable due to several considerations. According to the sources employed here (Bellona Position 2006, Solidarity Movement 2009), the state’s and the nuclear energy industry’s lack of financial resources for building new reactors and the unattractiveness of the nuclear energy industry for investors will bring negative economic effects (Bellona Position 2006). Activists expect that financial obligations will shift from the nuclear industry to citizens in the forms of hidden taxes for risks and higher tariffs for electricity following nuclear energy development (Solidarity Movement 2009, WWF statement 2008). While it is possible to obtain some information within the nuclear industry’s sphere of security, environmental and technological aspects of Rosatom, economic issues are hardly disclosed (Andreev 2011:7). This leads to the question of openness and transparency of the nuclear industry (Andreev 2011:7), since “facts of state subsidization of the nuclear industry are silenced” (Nikitin & Yablokov 2010:31). For instance, “taking into account the value of the property of all existing storage “Rosenergoatom” gets hidden subsidizing in the form of tax exemption until 2 billion rubles annually” (Nikitin & Yablokov 2010:39).

Bellona published a report On the economy of Russian nuclear power industry that is devoted to economic aspects of the nuclear energy industry in Russia, highlighting negative effects and the inefficiency of nuclear energy because it attracts implicit state subsidies (Andreev 2011:39). One of such implicit subsidies is the risk insurance in case of any major accident. The situation with hidden subsidies is similar to any other countries as there is no full liability for nuclear companies in case of a major accident (Yablokov 2009:48).

Development of nuclear power causes economic damage to the state. Nuclear energy today - the most expensive, despite actively circulated thesis about the cheapness of nuclear energy. In 2009, the average tariff of nuclear generation of electricity on the wholesale market in Russia exceeded the average rate of thermal power plants (95.7 kopecks / kW / h against 89-91.5 kopecks / kW / hour (“Expert», № 12 (651) 30 March 2009)... Facts of government subsidies the nuclear industry silenced –
“atomic” lobby is afraid of open discussion on this issue. (Nikitin & Yablokov 2010:31)

Usage of numbers in the report Environmentalists against nuclear energy (Nikitin & Yablokov 2010) is an example of an “analytical” genre serving to demonstrate the expertise of environmental NGOs and activists, and therefore the expert identity of environmental NGOs and anti-nuclear activists.

Funding of research and development within the nuclear industry, and design engineering from the state budget are also considered to have a negative economic impact (Nikitin & Yablokov 2010:41). “The lack of inverse relation between technological progress and costs distinguishes nuclear energy from other kinds of energy” (Andreev 2011:17). According to that brochure and also the interviewee R (environmental NGO, Russia) the cost of nuclear energy is growing constantly, and more development does not mean less costs. Instead, according to the forecast, costs of nuclear energy are considered to grow significantly in the future as old reactors would have to be decommissioned in due time (Andreev 2011:29, Nikitin & Yablokov 2010:41). This is presented as an additional economic burden. According to the report Environmentalists against nuclear energy:

Rosatom’s declared “economic benefit” of nuclear energy is based on:

a) hiding the true cost of nuclear fuel producing, reprocessing, waste recycling, reclamation of contaminated areas, decommissioning of nuclear reactors, elimination of the consequences of the multiple emergencies;

b) obtaining of various direct and indirect subsidies from the state;

c) shifting continuously growing waste disposal problems on the shoulders of future generations (Nikitin & Yablokov 2010:41)

Apart from the above-stated economic aspects, the economic side of the unresolved issue of permanent nuclear waste storage is mentioned (Bellona Position 2006, Solidarity Movement 2009, Andreev 2011, Nikitin & Yablokov 2010). Nuclear waste issues are not only seen as a safety question, but as economic as well, since someone will have to pay for the expenses related to research, construction of facilities and storage of nuclear waste (Andreev 2011:7). Nuclear energy is also deemed not to be fitting into economic systems due to low flexibility in electricity production (Solidarity
Movement 2009). A number of negative aspects of nuclear energy exploitation are thus denoted.

Nuclear energy development is not only portrayed as inadequate because of its unprofitability, but also because there are other energy sources that are considered more appropriate. Natural gas is seen as a more appropriate energy resource instead of nuclear energy, according to Solidarity Movement’s report (2009). According to the activists, alternative energy sources are less expensive and hazardous (Leaflet 2012d, Yablokov 2009). To sum up, the unprofitability of nuclear energy is an important theme in anti-nuclear discourses in Russia.

In Poland emphasis is often put on the costs of nuclear energy, which is considered to be an “expensive and inefficient investment” (Leaflet 2012b). These costs are assessed on various grounds. The core emphasis is laid out as “nuclear energy is not profitable and inhibits the fight against unemployment” (WWF leaflet 2009, Press Release Lubiatowo 2012). The matter of unemployment is brought up in Poland because the construction of a nuclear power plant will take place in tourist regions and may thus hinder tourism and those employed in it (Distributed letter 2011, Leaflet 2012a, Leaflet 2012c).

The arguments of anti-nuclear activists relate to the official discourses of nuclear energy in Poland. References to the unprofitability of nuclear energy read as a response to the name of the educational-informational campaign called “Security that pays off” (Bezpieczeństwo, które sie opłaca). The verb opłaca (pay off) is a cognate word with nieopłacalna (unprofitable). Anti-nuclear activists are skeptical towards the profitability of nuclear energy and question state subsidies for its development because the educational-informational campaign organized by the Ministry of Economy was paid from the state budget (IAN 2011, Press Release Lubiatowo 2012). Moreover, the Greenpeace assessment of the Strategic Environmental Assessment (SEA) report about Polish Nuclear Energy Programme resumes that

From the list of responsibilities on page 20 and further, it becomes clear that this is a state-driven project, not at all a market driven project. This goes against the liberalisation of the electricity market and gives nuclear power a non-market-conform advantageous position – especially in comparison with potentially competing generation forms like cogeneration and renewable energy sources as well as energy efficiency measures. This is counter to EU policy concerning the liberalisation of the electricity market (Haverkamp 2011:7).
According to anti-nuclear discourses, nuclear energy becomes unprofitable if costs of potential nuclear accidents are included in calculating profitability. Leaflet 2012b claims that liquidation of the consequences would “take several decades and cost about the annual budget of Poland”. Liability of the nuclear companies is a major concern and reason to consider nuclear energy unprofitable since liability remains limited, meaning that overhead will be paid by the government and taxpayers (Letter 2009, IAN 2011).

Nuclear energy is also portrayed as unprofitable because it is inefficient since, according to activists’ estimations between various sources, it will cover approximately 2 to 10% of the energy mix while other energy sources together with the new technologies of energy efficiency would create better conditions for reducing dependency on fossil fuels. This refers back to the specific condition of the Polish energy mix: a strong dependency on coal.

Presentation of all given anti-nuclear arguments from an economic perspective is a distinctive aspect of Polish anti-nuclear discourses. The bottom line of Polish anti-nuclear discourses is that the Ministry of Economy and PGE are considered to miscalculate the costs of the nuclear energy program, omitting a number of costs that in the end will be paid by current and future taxpayers. Catastrophes are discussed in terms of companies’ liabilities, nuclear waste is addressed from the point of the necessity to invest in nuclear waste storage in the future (Gawlik 2010; H, environmental NGO, Poland), and the deconstruction of nuclear power plants after their intended life span would be costly (Leaflet 2011b). Local businesses would be harmed because a nuclear plant would lead to a change of landscape and to decreasing amounts of tourists in these areas (Lubiatowo webpage 2013). In short, some themes that are usually discussed from the environmental point of view are instead approached from the economic perspective in Poland.

**Swedish** anti-nuclear discourses follow similar patterns. The liability of energy companies in case of accident and nesessary state subsidies are emphasized, similar to Russian and Polish discourses. According to the anti-nuclear movement in the Gulf of Bothnia, nuclear energy is not profitable (Open letter 2014). The text produced by FmKK and Milkas presents a similar viewpoint:

> It is an outrageous cost for building new nuclear plants. Because nuclear power is difficult to regulate, it is also hard to connect in a grid with many small producers. The nuclear fuel chain are major emitters of greenhouse gases, nuclear power plants do not produce the residual heat, which further contributes to warming. Despite being subsidized
increasingly nuclear power has hard times to compete with renewables. Nuclear power has played out its role for the future and it is unnecessary as an energy source in Sweden (FmKK & Milkas 2014).

Even though liability of the Swedish energy companies seems to be by law broader than in Poland or Russia, anti-nuclear activists question the real meaning of the full liability of a reactor’s owner. FmKK (2009) emphasizes that unlimited liability in practice does mean something else, since liability is conditioned by the size of the company, and a company cannot pay more than it costs. FmKK argues that in the case of a company being faced with a larger fee than the cost of the whole company, then the parent company should be liable as well. This proposition describes a common situation in the energy sector, where energy companies create smaller companies responsible for a specific energy source or region. In the words of FmKK,

The unlimited liability for nuclear accidents should naturally be unlimited in the sense that ordinary people understand the term, i.e. the parent company to the nuclear divisions of the respective parent company has full cost recovery liability for accidents until the entire parent company total economic value. Such rule applies to Vattenfall in Germany. We are strongly in favor of the same liability rule for Vattenfall in Germany to apply in Sweden (FmKK 2009).

Anti-nuclear movements in Sweden mostly focus on the two aspects of liability of nuclear energy companies and state subsidies to the nuclear energy industry. It is expected that since both liability of energy companies and state subsidies are not defined properly, it will be the state who pays the bills in the end. This is considered to be inappropriate and unacceptable by Swedish activists.

Apart from subsidies and liabilities, activists bring up the cost of research for nuclear energy together with other costs that “are already now higher than those several renewable energy sources” (Leaflet 2012e):

There are ideas for future reactors to be safer and produce less and not as long-lasting nuclear waste. But they can come at the earliest in 20 years. And electricity from them will become so expensive that it is not going to be competitive (Leaflet 2012e).

Anti-nuclear activists also make a claim that there are cheaper ways of producing electricity, such as co-generation plants that “produce both
electricity and district heating” (Milkas 2010). The same text also argues that it is hard to find private investors for building a nuclear reactor.

Although following similar patterns of how nuclear energy unprofitability is presented, Swedish anti-nuclear activists focus on economic aspects a little bit less than movements in Russia and Poland. There could be several explanations for this, with less state involvement in the energy sector as a crucial explanation, since electricity market liberalization, which is still the target of Russian and Polish policy-makers, has already taken place in Sweden. As there are less possibilities for the government to interfere in the electricity markets, the claims of interference addressed by the public to the government could be seen as less useful by the activists.

To sum up, the greatest emphasis in anti-nuclear discourses is put on the unprofitability and economic unviability of nuclear energy usage in the three studied contexts. The extent to which this argument takes place demonstrates it is assumed that the economic aspects of nuclear energy is one of the most important arguments against it.

5.3.2 In need of better channels for public participation

Apart from the unprofitability of nuclear energy, another common theme relates to limited possibilities for public participation in nuclear energy governance. As anti-nuclear activists consider nuclear energy to be an inadequate energy source for solving countries’ energy challenges, they seem to be interested in taking part in discussions over the energy future of their countries. However, to various extents their frustration about lacking opportunities for doing so is reflected in anti-nuclear discourses.

Arguments about more quality possibilities for public participation relates to requests for more openness within the nuclear energy industry. Since nuclear energy industries are quite closed sectors, there are limited possibilities for public participation. Anti-nuclear activists claim that standard procedures of public participation regarding constructing new nuclear power plants are not always implemented appropriately. Sometimes this argument is combined with other arguments against nuclear energy development, and sometimes it stands on its own.

Environmental NGOs and anti-nuclear groups argue that practices of public participation are not fully democratic in Russia (Open letter 2013, Yablokov 2009). WWF notices that the “practice of ignoring of interests and opinions of citizens in decision-making over building dangerous objects, like nuclear power plants” is unacceptable (WWF statement 2008).
Environmental organizations and anti-nuclear groups declare that the involvement of citizens in the process of decision-making over nuclear issues is one of their goals (EcoDefense 2011, Green World webpage 2013). At the same time, observers such as Bellona note that discussions about extension of the life cycles of nuclear reactors is “quite closed for the public” (Bellona Position 2006) and Rosatom is claimed to not disclose “its financial information in public reports, as well as during public meetings, for example during the Forum-Dialogues with the public” (Andreev 2011:7). There are problems with the existing mechanisms of public participation:

There are also no idiots, they [decision makers for nuclear energy] are also able to do something, even more, they have learned to hold public hearings, as they should, they convene the people whom they need. And if you just did not know about the public hearing, did not organize the right people, did not come yourself, did not prepare, they will hold a public hearing without you and they will be all right (V, researcher, Russia).

People who would say positive things about future nuclear power plants are more common at the public hearings than anti-nuclear activists:

The paradox is that, not a paradox, a problem, we know that in fact the decision is made just there [at the level of the Parliament and the Government] and not at the public hearings that are usually predetermined and made according to Rosatom scenarios. That is, in the worst sense of this word, budget organizations are rounded in, there are people who receive a salary from the state who fill seating places in the room. Everyone has a certain defined role. That is, people read poetry, they say how they will live well with the new nuclear power plant. Many of them have some kind of, any item of clothing for not missing a stranger. You see, that is all planned to accuracy, and it is Rosatom department engaged in this. So all the public hearings are fake that, say, does not allow even to say that this is where the decisions are made (G, environmental NGO, Russia).

Despite identified challenges in nuclear energy decision-making, sometimes anti-nuclear movements express “hope that such discussion [honest and open] will happen and each side will be able to check and prove the rightness of their positions during the honest dialogue” (Nikitin & Yablokov 2010:4). Some activists have already noticed positive changes such as more participatory channels and some changes in the trends (T, environmental NGO, Russia) while other activists do not see any change.
Russian anti-nuclear activists emphasize that the construction of nuclear reactors is a political matter and part of the political process in general. One of the brochures states that since the economy of nuclear energy is inefficient, only the political will make it work. They acknowledge the existence of a nuclear lobby that treats nuclear energy as business as usual while still being a political matter (Nikitin & Yablokov 2010, WWF statement 2008, Solidarity Movement 2009).

The **Polish** Energy Policy from 2005 states that the nuclear energy project needs public acceptance and, hence, it is necessary to start public debates on this issue. Nuclear energy was not extensively discussed until the resolution from 2009 stated that Poland would construct at least one nuclear power plant. As a part of this process, the state launched a media campaign. The December 2009 program document for that educational-informational campaign was called “Security that pays off”, and states that public acceptance of nuclear energy development is one of its main goals, that public acceptance of nuclear waste storage is a minor goal, and the building of public support for nuclear energy is a general goal. On the one hand, the government claims to engage the public in discussions about nuclear energy, an image reproduced through the media, but on the other hand, this media campaign aims to influence public opinion. This ambiguous process has not gone unnoticed by anti-nuclear activists. State strategies to launch public consultations in this manner are criticized by the groups opposing the construction of nuclear power plants in Poland.

Polish anti-nuclear movements are interested in open public debates about nuclear energy development in Poland as there have not been broad public consultations (Gawlik 2010:7). “The lack of broad debates makes a right decision impossible” (Gawlik 2010:7). Nuclear energy programs should be compared with “realistic alternatives” (Haverkamp 2011) through “democratic procedures” (Gawlik 2010:8). For instance, the Strategic Environment Assessment (SEA) report to the Polish Nuclear Energy Programme was criticism since it “only describes one possible energy mix, based on a non-comparative analysis of the development of different electricity generation sources and energy efficiency” (Haverkamp 2011:8). According to Polish anti-nuclear activists, alternatives to nuclear energy ought to be discussed in society. They comment:

The government is anticipating that its promotional campaign will succeed in bringing a majority of the Polish public around to its position, but nuclear energy is not a path that would allow for the selection of the most effective and optimal method for modernising the
Polish energy system and developing an active policy of climate protection (Polanecky & Haverkamp 2009:23).

The Greenpeace assessment of the SEA report to the Polish Nuclear Energy Programme maintains that the inevitability of nuclear energy which is inherent in the report is “highly speculative because no comparable data are made available for other possible energy mixes” (Haverkamp 2011:8). Anti-nuclear activists in Poland respond to what they interpret as the Polish government’s idea about its citizens. “Polish government is acting contrary; treating its citizens as undereducated ‘simpletons’” (prostaczki) trying to convince them that in Poland any accident or any disaster cannot happen, and the entry into the nuclear program is the Polish raison d’etat for energy!” (Leaflet 2012b). Local citizens also ask themselves why they are treated this way (Distributed letter 2011), which sounds like a call for mobilization. Anti-nuclear activists even attempt to re-evaluate power positions, not considering politicians as experts and calling citizens to take more responsibility in the democratic process:

The main responsibility for making the right decision rests ultimately on policy-makers, that is, the ruling politicians. But remember that they are not experts neither from the fields of energy nor ecology. Their decisions are affected not by those who have more sense, but by those who are more persuasive. We can require a different procedure for making decisions from politicians in a democratic country than in an authoritarian state. Therefore, all citizens have responsibility for using available democratic procedures (Gawlik 2010:8).

Another aspect of problematic public participation in nuclear energy decision-making procedures is that “the Polish Nuclear Energy Programme and its SEA report do not give all information necessary to enable the justification of the potential environmental impacts of the development of nuclear power in Poland” (Haverkamp 2011:3). Therefore, the necessary conditions for public participation “prescribed under the Aarhus Convention, the EU Directive on SEA and the SEA Protocol of the Espoo Convention” do not seem to have been fulfilled. The SEA report report is criticized on the basis of “the pro-nuclear bias of choice of materials…and lack of inclusion of more critical material as well as lack of coverage of certain important critical areas.” (Haverkamp 2011:4).

Polish anti-nuclear movements point to the political aspect of developing nuclear energy, similar to Russian anti-nuclear movements.
The most mentioned examples are state expenditure on educational-informational campaigns, or in the words of activists – propaganda and inappropriate practice. The specification of this campaign “points to an open debate as a threat to the success of the Polish nuclear program (!)” (IAN 2011). According to the activists “in a democratic country such practices should not take place, especially when it comes to the investments that have essential significance for many successive generations” (IAN 2011). The media is criticized for supporting the government’s arguments (Gawlik 2010:1,3). Sometimes nuclear energy development is even seen as the result of a secret agreement between Poland and France that was put forward by the nuclear energy lobby (Polanecky & Haverkamp 2011:23, Interviews). Polish anti-nuclear activists are quite explicit about public discussion on nuclear energy as a struggle for their rights to decide:

For our summer guests from Warsaw and Czarna Dąbrówka, Małopolska and Wielkopolska, for our children, grandchildren and for ourselves, residents of Gąski arrived here from different places, we will fight for the right to decide about our land with determination that has not been seen for a long time in Poland (Leaflet 2011b).

Polish anti-nuclear movements use several metaphors that demonstrate the attitude of the movements towards the state actors that support the nuclear energy program. The seriousness of the official discourses on nuclear energy is undermined by references to the Polish nuclear energy program with such words as medicine (lekarstwo) (Press Release Lubiatowo 2012) and toys (zabawki):

Government’s plans of Polish Nuclear Power Programme were established due to the expansion and pressure from energy companies, which “necessarily” must try their latest toys from the series “Atomic lego”: Reactors ABWR, EPR, PWR and what else is there (Leaflet 2011b).

Besides anti-nuclear activists opposing the appropriateness of the Polish Nuclear Power Program, they also emphasize how the development of nuclear energy in Poland is not based on serious considerations of the alternatives, but that reactors are toys for the government. A similar message is inherent in the use of lekarstwo (medicine). It is applied here as the solution for fixing problems by developing nuclear energy. Synonyms for the word lekarstwo in Polish are medykament (medicine) or panaceum (panacea). So according to the movement, nuclear energy is not a panacea
for solving Polish energy problems, and it is not a universal solution for all energy-related problems. The proponents of nuclear energy are considered dangerous to society and future generations:

As IAN [Anti-nuclear Initiative] we believe that no solidarity towards society, however, is expressed by the Polish government in the daily practice of governance. Idea of building nuclear power plants in Poland is irresponsible tossing ‘cuckoo’s egg’ for society and future generations (IAN 2011).

More strongly put, the activists reject the “toxic ideas of nuclear lobby” (Leaflet 2012b). All of these metaphors point at the two features of nuclear energy proponents: they are not considered to have a serious approach to developing energy policies and their actions and ideas are dangerous for society.

Polish activists sometimes have called for an “energy democracy”, which means a system with “a network of autonomous producers - energy consumers (prosumers), producing it on a small scale, in within households and local communities, and jointly deciding about management of surplus” instead of “monopolized energy market belonging to the large energy producers and distributors operating outside the control of its customers” (Press Release Lubiatowo 2012). Similar rhetoric about building on a small scale appears in the analysis of Swedish material. Democratic procedures and public participation in nuclear energy development in Poland raise serious criticisms of anti-nuclear movements that seem to consider themselves as denied a role in the decision-making process and aiming to regain their role back by making the process of discussion about nuclear energy more open and inclusive.

Swedish anti-nuclear activists put the emphasis on public participation in the nuclear energy industry and on the transparency of decision-making. They do not mention specific instances of inappropriate practices, but rather see some problematic features of nuclear energy governance, or even broader contemporary politics. Recent Swedish nuclear energy policy from 2010 is a revision of the previous decision made after the referendum about nuclear energy in 1980. Anti-nuclear activists do not accept that the previous decision based on a public vote was ruled out without public involvement, although the outcome of the referendum was not binding and the decision was made by the government. The argument is as follows:
Should the outcome of the referendum be declared invalid, such a measure out of democratic reasons first should be preceded by a new referendum on the issue that legitimizes such invalidation. If the government does not have the opportunity to close the nuclear reactors out of democratic and/or energy for political reasons, it becomes a serious drawback for the introduction of sustainable energy (FmKK 2009).

Another aspect of public participation relates to participation in nuclear waste management and permanent storage. Nuclear waste storage has been an issue of long discussion in Sweden, and according to Darst and Dawson it is sometimes presented as a solved issue (2010). However, even though environmental NGOs have been involved in the participatory process regarding a nuclear waste repository, they do not agree with such wording. They are also critical regarding lack of industry transparency in general. They express their position as follows:

We demand transparency and research independent from the industry!

The nuclear industry has a vested interest in presenting the nuclear waste issue as solved since they want to continue to operate nuclear power plants. It is unreasonable for the nuclear industry’s own company, SKB - a private company with the right to keep information confidential as trade secrets - to have responsibility for most of the research on the waste issue. We believe that the money to finance research on the repository has been used irresponsibly. To a large extent, it has gone to support one-sided advocacy of the method SKB now proposes at Forsmark. We demand full democratic accountability of SKB’s work and a change in the law so that responsibility for research on development of alternative methods is given to actors independent from industry. We also call for protection of the legal right of all staff of companies involved to publish dissenting views. It is disastrous if those who discover errors or questionable data cannot publish their views without losing their jobs for being disloyal towards their company (FoE & FmKK Position 2010).

Activists consider that nuclear waste management is more democratic in Sweden than in other countries in general, and it is more possible to influence the process in Sweden than in neighbouring countries, such as Finland. At least the involvement of civic organizations is deemed positive:

Sweden has much more democratic treatment of the disposal method (KBS 3) that is yet unfinished. The process involves not only many different public authorities, but also civic organizations. The method has
during treatment suffered much from both Swedish and international criticism of the copper corrosion risk, bentonite clay sustainability and so on. A responsible decision-making requires that the Finnish decision-makers await the conclusion of the thorough process in Sweden before taking any decisions on waste storage in Olkiluoto (Open letter 2014).

Apart from that, Swedish anti-nuclear movements also see threats in the burden resting on people local to nuclear industry activities, since they are expected to suffer most (FmKK 2009), and perhaps have less resources for expressing their position. Activists particularly talk about the impact of uranium mining on local populations within and beyond Sweden (Milkas 2010).

There are differences in terms of how anti-nuclear movements in Russia, Poland and Sweden address the issue of public participation. In Russia and Poland, anti-nuclear activists are concerned with establishing themselves as a legitimate actor in the discussions on nuclear energy, while Swedish activists, who have already been included on numerous occasions, are more concerned about transparency of the industry.

5.3.3. “Nuclear energy is not safe”

Nuclear safety is also a theme found in the entry-level of discourse or thematic analysis. While the analysis of official discourses of nuclear energy in the previous chapter demonstrated that governments and nuclear energy companies consider nuclear energy safe enough to be developed, anti-nuclear activists from the three countries do not agree with this. They suggest viewing nuclear safety from a different perspective, including other risks that the nuclear industries do not discuss in Russia, Poland and Sweden to the extent anti-nuclear movements would like them to be discussed. According to them, not all aspects are taken into account when governments make statements about nuclear safety; not all risks are included in assessment. Anti-nuclear movements making claims about unsafe nuclear energy draw conclusions on the basis of assessing a full nuclear energy cycle. This matter is brought up in Russia in the following way:

For 60 years, the global nuclear industry cannot solve three fundamental problems of global security: the safe disposal of radioactive waste, creating a safe nuclear reactor and connection between nuclear energy and nuclear weapons. While these problems are not solved, nuclear energy development carries unacceptable risks to humans and wildlife (Yablokov 2009:117).
Such stages of a full nuclear energy cycle as uranium mining, nuclear waste storage, and decommissioning of old reactors are considered. According to Nikitin and Yablokov (2010), Solidarity Movement (2009) and WWF statement (2008), uranium mining is exhaustive for nature and negatively affects nature conservation. There is a request for ensuring nuclear safety, for instance in such wording:

“There is a need for truthful and convincing evidences, that nuclear technologies in use today have absolute guarantees of safety that they do not have adverse impact on human health of present and future generations, that they are securely and safely solve the problem of radioactive waste, that they do not contribute to the spread of nuclear arms materials and technology development, the use of which threatens the entire Earth’s civilization (Nikitin & Yablokov 2010:8).

The Polish anti-nuclear movement is concerned about risks that a nuclear power plant may bring. They do not consider nuclear technology safe because of risks and also health effects (Haverkamp 2011). Nuclear waste is often mentioned in relation to nuclear safety due to its threat to public health (WWF leaflet 2009). Similar to Russian anti-nuclear movements, the activists do not accept the argument that no catastrophe is possible in Poland (Press Release Lubiatowo 2012).

In Poland, the nuclear energy production cycle is seen as one inseparable process where a matter of nuclear waste is directly related to nuclear energy generation (WWF leaflet 2009). “If there is no solution for the waste and there are feasible alternatives for the programme, there should be no new production of nuclear waste (precautionary principle)” (Haverkamp 2011:18). In a similar way, if it is argued that if nuclear energy is being developed, then it is likely that renewable energy will receive less funding. And regarding uranium mining, with the possibility to build a nuclear weapons program from a civilian nuclear program, and other social factors of the “nuclear” cities, would all be part of the same picture and should be addressed all together. Maciejewska and Marszałek point out that official Polish state discourses highlight certain phases of nuclear energy production but not others (such as waste storage and uranium mining) (2011), thus disconnecting the phases of nuclear energy production.

In Sweden, the issue of nuclear safety is presented mainly in relation to the Fukushima accident. The accident taking place at the Fukushima plant is often brought up to demonstrate that the catastrophe can happen even at the “safest” power plant as the “Japanese nuclear power plant was the
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worlds safest” (FmKK & Milkas 2014). To facilitate the understanding of what Fukushima means in terms of safety for local people, activists from Värmland suggested to imagine what it would look like if a similar catastrophe happened in Sweden (Leaflet 2012f). Their leaflet shows how much territory would be contaminated after the catastrophe, how many people would have to move from their houses. The aim of this leaflet is to present a nuclear accident as something that can happen anywhere, including Sweden, and to demonstrate through the reference to the accidents in Harrisburg, Chernobyl and Fukushima that there is no absolute safety with nuclear energy. Stating that a safety culture is an international problem, the Värmland anti-nuclear group provides a list of incidents at Swedish nuclear power plants in the 2000s portraying how the Fukushima catastrophe is not exclusively a Japanese matter (Leaflet 2012f). Activists in their statements claim nuclear safety is a more complex process than just providing citizens with energy resources, and they point to the limitations of this understanding of nuclear safety.

Swedish activists bring attention to the production of uranium in other countries and its import to Sweden (Open Letter 2014). For them, nuclear energy is not a “home-made” energy source but is dependent on trade with other countries. For instance, activists in the Gulf of Bothnia are concerned about a new Finnish reactor built with Russian technologies and trade relations with Rosatom. They have the following concerns:

Russian state company Rosatom is the largest shareholder in the company Fennovoima. Rosatom will build the reactor that requires Russian special fuel. Fennovoima states that “secondary sources” to reprocessed uranium will be used. Where and how this will be reprocessed and what fuel contains is unclear. How to guarantee that the waste is not reprocessed into nuclear weapons in Russia? How to ensure transparency of the Russian state as the largest shareholder and also a supplier of reactor and nuclear fuel? What we know about the political developments in the future Russia? (Nuclear Free Gulf of Bothnia 2014).

However the concern about this international dimension is less visible on the picture produced by the activists in the Gulf of Bothnia where the radiation only goes in the direction of Sweden (Leaflet 2014).

Activists are concerned about the extension of consequences beyond the borders of one country in case of an accident. This concern is voiced by German activists protesting against the Polish Nuclear Power Plant (NPP) – “radiation will not stop on the countries’ borders” (Leaflet 2011a) and also
by the network Nuclear Free Gulf of Bothnia that campaigns against a nuclear power plant in Finland.

In order to support their arguments about risks related to nuclear safety, anti-nuclear movements use metaphors and figures of speech. One of the most common figures of speech is the interchangeable use of names of nuclear sites and places where nuclear accidents took place. In Russia, for example, activists call Russian nuclear power plants “Fukushimas”. A WWF statement expresses “Rosatom, close your Fukushimas!” Leaflet states “Japanese tragedy may occur on each of 32 reactors in Russia” (2012d). That implies that there is not much difference between Russian and Japanese reactors. Such rhetoric implies that the accident taking place at the Fukushima Daiichi plant could happen in a Russian context as well.

Activists use national cultural symbols (in Russia) or images of a terrified human face (in Poland) in order to demonstrate that nuclear accidents could happen nearby. The anti-nuclear group in Murmansk region drew the image of a Russian matryoshka doll together with the common symbol of a radioactive hazard. Swedish activists turn to impressive numbers of the half decay period of nuclear waste, “100,000 years”, instead of images. “Nuclear power leaves behind a waste that is hazardous for more than 100 000 years” (Nuclear Free Gulf of Bothnia 2014). It is unthinkable to consider something so long in comparison with the duration of human life. Nuclear safety is the only theme that anti-nuclear movements in the three countries approach in an expressive manner (with pictures and figures of speech) and not in an expert voice and neutral style, as with all other arguments.

Summing up, anti-nuclear movements discuss nuclear safety in broader terms, including risks from the full cycle of nuclear energy production, and not only the phase of actual electricity production. Arguments about nuclear safety from anti-nuclear activists are somewhat paradoxical. Activists demand nuclear facilities to be safe but they also state that “throughout the world there is no safe place to store highly radioactive waste from nuclear power plants” (WWF leaflet 2009), that full damage in case of nuclear accidents is hardly calculable (IAN 2011) and “nuclear energy will never be safe” (H, environmental NGO, Poland). It seems to be a rhetorical play going on since activists demand something that they do not think is possible to achieve. It is a two-layered argument since, in demanding nuclear safety, activists already have a second argument for the

2 This number refers to the half-life period of uranium.
nuclear industry if it is to claim that new safety standards are adopted: nuclear energy will never be safe enough. It may also be interpreted as the intention to fit the expert discussion with the nuclear industry and to be invited to various events and in the end be able to communicate at least some issues related to nuclear energy.

5.3.4 Something old or something new?

Questioning nuclear technologies

Another theme associated with nuclear energy concerns the relations between technological development and nuclear power development. Anti-nuclear activists question the argument that nuclear energy brings technological development. Anti-nuclear activists argue that a technological perspective on nuclear energy dominates in Russia. The social dimension of nuclear energy exploitation, such as exposing the population to nuclear risks, should be considered more carefully. According to interviewees, how nuclear energy affects life in society should be taken into account while making a decision about building new nuclear reactors:

Here there is such a feeling that someone who is not a specialist, has no right to talk about it. At the same time, in this context, most people believe that expert is only a nuclear physicist. And this is one of these very serious problems that matters for our work, because it is actually the opposite. Because when we begin to discuss the issues of nuclear energy - it is almost never questions that are relevant to nuclear physics. Never. We do not discuss nuclear physics. We discuss social, economic and environmental consequences of nuclear energy usage. That is, if to be picky, the experts here will be economists, environmentalists and those handling social issues. That’s who the real experts are here. But there is a stereotype (R, environmental NGO, Russia).

This quote demonstrates the similar processes that have been presented above: anti-nuclear movements attempt to maintain the status of expert in the public discussion about nuclear energy. Activists question arguments about the advanced character of nuclear energy in the following way:

The strategy of the development of nuclear energy in Russia in the first half of the XXI century in its optimistic scenario envisages a growth rate based on that the nuclear industry is more technically advanced. This is a rather controversial argument, since atomic lobby in its strategies recognizes that nuclear energy of the current generation has exhausted its possibilities. And the next generation, which is spoken of mostly by nuclear physicists, not practitioners, is in the phase of scientific
developments. Construction of five units abroad indicates that Russia intends to continue in the near future to remain at the current generation of nuclear energy (Bellona Position 2006).

And also in the following way:

Russian nuclear experts talk about the fast breeder reactor - breeders - as the new ideal solution all the problems and shortcomings of nuclear power. In fact, this “new” idea to transfer nuclear energy to fast neutron was proposed over 40 years ago by A. Alexandrov, N. Dolezhal et al. at the UN conference. But nobody in the world has been rushing for building a fast breeder reactor in mass scale due to the fact that they leave unresolved too many questions. In the first place - the problem of using plutonium. At each breeder must exist radiochemical production for the isolation of produced plutonium. In such production per each million kilowatt of electrical power there will circulate more than twenty tons of plutonium (Nikitin & Yablokov 2010:13).

The activists and environmental NGOs often refer to nuclear energy technologies as inappropriate and without prospects. Calling to assess nuclear energy from a wide range of perspectives, the activists point out the complexity of nuclear energy technologies. As the interviewee R (environmental NGO, Russia) points out, there is a dominant stereotype about who is considered to be an expert. The well-thought argumentation is not expected to come from anti-nuclear activists, who are seen as biased actors despite their actual knowledge and expertise.

Nuclear energy is considered unnecessary in Poland (zbędne) (WWF leaflet 2009, Press Release Lubiatowo 2012), especially because it will not solve existing problems (Polanecky & Haverkamp 2011). However, to argue that nuclear energy is not needed, even with a number of arguments, one needs to have sufficient knowledge and expert identity. Some Polish activists claim that politicians are not experts but are informed and persuaded by others.

Technologies occupy an important place in Swedish anti-nuclear discourses. The new law on nuclear energy from 2010 proclaims that built nuclear reactors will be based on the “most modern” technology. Swedish anti-nuclear activists contest that the development of nuclear energy will lead to the general development of science and technologies. According to the activists “the fourth generation of nuclear energy will reduce nuclear waste storage time to 300–500 years through ‘transmutation’…but who can guarantee the safety of the storage for “just” 300–500 years?” (Leaflet
Moreover, the text states that these technologies have not been developed yet.

Anti-nuclear movements in Russia, Poland and Sweden critically assess technological advances associated with nuclear energy development promised in the official discourses of nuclear energy. This aspect also demonstrates that anti-nuclear movements consider themselves experts and aim to gain the status of experts.

5.3.5 Other arguments

Apart from the discussed themes, the entry-level analysis also revealed a variety of other themes that are mentioned less often but are persistently present in the discussion of nuclear energy. They are introduced in this section in order to illustrate that anti-nuclear discourses are based on a wide range of themes. These arguments mostly refer to ecological consequences, the impossibility of mitigating climate change with nuclear energy, public health issues and nuclear weapons. Risks of catastrophes and terrorist attacks on nuclear power plants (Haverkamp 2011:11), emissions of various kinds in local air and water, inequality between the development of nuclear energy and renewable energy are also mentioned. This section is not separated by country but organized by each theme. There is not sufficient material to investigate variations between the three countries but it is possible to see that all of these themes are common to anti-nuclear discourses in Russia, Poland and Sweden.

Nuclear energy is not acceptable because of ecological consequences, according to Solidarity Movement (2009), and it is dangerous for the environment (Leaflet 2012g, Nuclear Free Gulf of Bothnia 2014, Nuclear Free Gulf of Bothnia & FmKK 2014). The ecological consequences of the nuclear industry are “forever contaminated with radiation lands, uranium ‘tails’, abandoned RTGs [Radioisotope Thermoelectric Generator], nuclear materials in the open air, and destroyed health of the millions and mutations transmitted to new generations” (Yablokov 2009:117). According to Nikitin and Yablokov (2010:45), “huge amounts of money are allocated to support the nuclear industry, that does not allow alternative environmentally clean energy sources to obtain sufficient resources for its rapid development”.

Anti-nuclear movements concerned with and discussing relations between nuclear energy and climate change are a clear example of social movements reacting to official discourses of nuclear energy (for instance, see
Press Release Lubiatowo (2012)). Anti-nuclear activists attempt to disrupt the association between nuclear energy and climate change, claiming that other energy sources are more appropriate for climate change mitigation. Polish activists consider that nuclear energy is not a solution to climate change because it will “replace only 10% of energy from fossil fuels” (WWF leaflet 2009). Russian environmentalists also expect that significant reduction of CO2 will not happen (Yablokov 2009) since CO2 is emitted during the process of reactor construction: “Although a nuclear reactor does not emit CO2, this gas is emitted in large quantities in the construction of nuclear power plants, uranium mining and preparation of nuclear fuel, during handling radioactive waste encountered in the course of NPP work, at dismantling and disposal of nuclear power plants” (Nikitin & Yablokov 2010:29). These sorts of related processes are externalities of nuclear power production that are often not included in the calculation of CO2 emissions by the nuclear industry, according to Yablokov (2009:114). Moreover,

It is important to bear in mind that the growth of carbon dioxide emissions is not the only cause of climate change. All nuclear power plants emit a huge amount of krypton-85, which has already noticeably increased electrical conductivity of the earth’s atmosphere. It is possible that the observed increase in the number and intensity of thunderstorms, windstorms, storms and hurricanes is “on the conscience” of NPP (Legasov et al., 1984). Release of water vapor (a greenhouse gas) during cooling of condensers at a nuclear power plant is comparable with the release of CO2 gas power. Finally, the construction of nuclear power diverts funds from the development of less environmentally hazardous energy source (Nikitin & Yablokov 2010:30).

Haverkamp gives a number of reasons why climate change will not be mitigated by nuclear energy development:

The construction of nuclear power stations in Poland would push Poland out of line with the European climate targets for 2020. For the construction of nuclear blocks, Poland will need to use an enormous amount of fossil fuels that will increase its CO2 emissions before the operation date. It has to be pointed out here, that according to the International Panel on Climate Change, greenhouse gas emissions would need to peak around 2015 if we want to have a reasonable chance to maintain temperature rise this century under 2° C (Haverkamp 2011:10).
Polanecky and Haverkamp suggest that “if Poland wants to meet its requirements under the climate and energy package, it must increase energy efficiency by at least 20% and heavily support the development of renewable energy sources in order to achieve their 15% share of final energy consumption” (2011:19). “Energy efficiency, changing CHP to gas fuel, tidying up our oil and especially gas pipelines, termination of combustion of billions cubic meters of associated gas in the oil fields” are named as much more efficient mechanisms for climate change mitigation (Yablokov 2009:115). Swedish anti-nuclear activists emphasize that alternative energy sources and energy efficiency should be considered much more (Open letter 2014, Leaflet 2012f). They make clear that nuclear energy is not a solution to climate change, but renewable energy is (Nuclear Free Gulf of Bothnia 2014).

Nuclear waste and associated risks with nuclear waste storage are also often mentioned, not only as a part of the safety theme that was discussed above. Nuclear waste issue “is escalating each year” (Bellona Position 2006). The problem of nuclear energy waste is often presented from an economic perspective, that it is expensive to organize nuclear waste storage (Solidarity Movement 2009). These expenses will be postponed for future generations (Andreev 2011:39) and “it seems these places (geologically stable for waste storage) do not exist” (Nikitin & Yablokov 2010:16). “Tens of thousands of tons of already accumulated radioactive waste will remain dangerous for thousands of years so that the Russian nuclear industry will not lose work” (Leaflet 2012d). Responsibilities regarding nuclear waste storage is a frequently raised question among Swedish anti-nuclear activists.

The Swedish government and nuclear industry have taken the position that the current generation should “solve” the nuclear waste problem. The reasoning is that it is this generation that has benefited from the nuclear technology that generated the waste and that the problem should not be passed on to future generations. The aspect of whose responsibility it is for producing the waste in the first place is rarely brought up. Stress is put on the fact that no matter what one thinks about nuclear power, there is waste that has to be dealt with. The issue of more and more waste being produced daily is avoided. The greatest responsibility of this generation regarding nuclear waste is to stop making it! (Goldstick 2012).

The brochure of FoE and FmKK addresses responsibility in relation to nuclear waste in the following manner:

Take the nuclear waste issue seriously! Stop producing waste!
It is unreasonable to assert that there is a safe storage method that can operate for 100,000 years, for waste that is so hazardous. It is not possible to guarantee safety over such long time periods. This is true regardless of the choice of method! We simply cannot foresee geological and social development so far into the future. We therefore believe that the first priority must be to stop producing nuclear waste. Stop nuclear power and replace it with energy efficiency, energy conservation and renewable energy! The quantity of waste that has to be dealt with should be minimized. The costs of nuclear power are currently grossly underestimated considering that the waste issue will require huge resources in both the foreseeable and unforeseeable future. Forsmark – no safe solution to the issue of waste! (FoE & FmKK Position 2010).

**Public health issues** are often mentioned as the exploitation of a nuclear reactor leads to production and emission of “radiotoxic ‘eternal’ radionuclides (plutonium, iodine-129, Neptunium-237, technetium-99)” (Nikitin & Yablokov 2010:22). Often this is also the issue that is constructed through references to people who suffered from a range of health issues (O, environmental NGO, Russia; K, local anti-nuclear group, Poland). Nikitin and Yablokov emphasize there are studies demonstrating that closeness to a nuclear reactor may result in a high correlation between emissions from NPP and public health records (2010:23). Polish activists mention public health a bit less often, but, nonetheless, it is quite important for these movements (Leaflet 2012b, Leaflet 2009). Moreover, health issues seem to be brought up more often by activists who have been in movements since the 1980s and by people from national environmental organizations. Local anti-nuclear groups mention it as well, but in comparison with economic arguments, this topic receives less attention.

The possible connection between nuclear reactors and **nuclear weapons** is recognized in Poland (WWF leaflet 2009), in Russia (Andreev 2011, Nikitin & Yablokov 2010, Roundtable position 2013, Yablokov 2009) and in Sweden. Regarding the latter, it is mentioned in the title of the umbrella anti-nuclear movement organization: People’s Movement against Nuclear energy – Nuclear Weapons (FmKK). The link between nuclear power and nuclear weapons is often raised, and even Nobel laureate Hannes Alfvén’s well known quote “Nuclear power and nuclear weapons are Siamese twins” has been referred to (FmKK & Milkas 2014).

Anti-nuclear movements are known for campaigning against nuclear energy in the past with an agenda about public health risks and the connection between nuclear energy and nuclear weapons. These arguments are part of the studied discourses in Russia, Poland and Sweden, although they
are visibly less often mentioned than other presented reasons against nuclear energy development. They seem to recede into the background, while arguments about unprofitability of nuclear energy and climate change alongside with continuous arguments about limited public engagement and nuclear waste prevail.

5.4 Concluding remarks

Anti-nuclear discourses are similar in Russia, Poland and Sweden. References to a wide range of arguments against nuclear energy are almost always presented together; in each statement of opposition to nuclear energy, at least three arguments are stated, and often there are more. This is the main pattern of anti-nuclear discourses. Discourses of anti-nuclear movements include references to an all-encompassing set of issues. From uranium mining to nuclear waste, from health issues to unprofitability of nuclear energy, from safety concerns to public exclusion from decision-making process, this is a yet unfinished list of all issues that are referred to in the discourses of anti-nuclear movements. Activists particularly emphasize the unprofitability of nuclear energy and participatory decision-making. Security issues, technological aspects as well as nuclear risks and associated health problems are less often mentioned in the collected texts, but still all together are a significant part of the discourse. A combination of a wide range of arguments against nuclear energy strengthens the expert voice in anti-nuclear movements because it represents anti-nuclear arguments as the result of profound considerations of various aspects of nuclear energy development.

The reference to the unprofitability of nuclear energy and associated economic costs of nuclear energy demonstrates that anti-nuclear movements consider nuclear energy in economic terms. As themes, unprofitability and unviability are referred to much more often than other themes. Nuclear energy’s unprofitability is often presented as associated with state subsidies of energy companies, costs of building and exploiting nuclear power plants, and liability of energy companies in case of accidents. The matter of unprofitability is portrayed as relating to who will pay for nuclear energy in the end. According to activists, the answer is taxpayers. The image of taxpayers as the subjects who states are responsible to is present in the texts explicitly. Focusing on unprofitability is surprising, taking into account that the expertise in the movement comes from nuclear
physics, engineering, environmental sciences and other related disciplines. This reference to the economical aspect is an unexpected turn for activists and nongovernmental organizations because such framing would be rather natural coming from a business sphere, but not civil society organizations. I interpret this as a response to the nuclear industry’s presentation of nuclear energy as an economically viable energy source. It seems to signal the desire of civil society actors to adopt the language of the government and the nuclear energy industry in order to set a common ground for discussion and to be heard.

The expert identity of anti-nuclear movements is reproduced both through the themes that movements cover (the entry-level discourse analysis) and how they approach these themes, as in genres and in-depth discourse analysis. Environmental organizations dealing with nuclear energy strive to be treated as experts. That could be the strategic move of environmental NGOs, in line with Bernstein’s finding that movements may use their identity strategically (1997) but it is not necessarily so. Local anti-nuclear groups, obtaining information from the materials produced by environmental NGOs, also adopt the expert voice to some extent. While arguments are mostly written in the genre of analytics being presented in a pragmatic way, nuclear safety is the only area where metaphors and expressive forms are used. However, even parts of the argument about nuclear safety is written in an analytical genre: nuclear energy is perceived that it should not be developed because it is an unsafe technology and that is why activists demand safety from nuclear energy. At the same time, they consider that this is not possible, which leads to a confusing message that may be interpreted as an attempt to accentuate the “analytical” approach to nuclear energy. This “analytical” or “pragmatic” approach raises an important question: what has happened with appealing to the emotional aspects of nuclear energy development that could be formulated as “I do not want to live close to a nuclear reactor, and that is all”? Campaigning against nuclear energy is, after all, a political process and not a meeting of experts, at least not all the time. The fact that these discourses and the expert voices within them are reproduced by local anti-nuclear groups complicates the circulation of this discourse. This aspect will be discussed in detail in the next chapter. The bottom line of anti-nuclear discourses is that nuclear energy is a complex issue with multiple dimensions which may be part of an attempt to disrupt official discourse of nuclear energy.
Discursive opportunities: discussing (un)profitability of nuclear energy between experts

This chapter discusses power relations between discourses studied in the two previous chapters, and how these discourses are ordered. The concept of order of discourse addresses how power relations between discourses are established, rather than just stating which discourses dominate the public sphere. The order of discourse is crucial for social movements as it enables some discursive opportunities, while making others unavailable. It is assessed on the basis of the following aspects: power positions of actors promoting these discourses (power over discourse); coherence and clarity of the ideas advocated within discourses (power of discourse); and resonance of discourses within their sociopolitical contexts (power of discourse). Discursive opportunities are studied here in order to understand the repertoires of anti-nuclear movements.

6.1 Power over discourses: dispositions of actors

The power of actors putting forward discourses is important in regard to the dissemination of the discourses (Van Dijk 1989, Fairclough & Fairclough 2012). In this thesis, power over discourses is understood as the institutional power to change energy policies, including the control of decision-making processes. Institutional power implies possibilities to speak up for or against nuclear energy, and thus influence the public discourse on nuclear energy. The turn to more nuclear energy oriented policies signals that those in power support keeping or developing nuclear energy at least for one more generation of nuclear energy. The political regimes of Russia, Poland and Sweden are reflected by the power relations between authorities and their challengers, as well as chances to change the public
discourse of nuclear energy opponents. There is a difference between old and new democratic systems, as the former provide more stable rules of the game, while the latter one can be more turbulent due to recent transition processes. According to various indices of democracies and freedom,¹ Sweden is one of the most democratic countries in the world, Poland has recently gone through democratic transition, and Russia is considered to have a hybrid political regime, meaning that it has both features of democratic and authoritarian rule. Political regimes matter for access to institutional politics and opportunities to oppose energy strategies and nuclear energy policies.

Access to institutionalized politics provides more opportunities to influence discourses. In the studied period, there have been limited opportunities to advance anti-nuclear discourses. Political parties with anti-nuclear views in the period 2005–2014 had limited power over official discourse, although to a different extent in each country. There were nuclear energy opponents in the parliaments of Sweden and Poland in the studied period. In Sweden, the three parties in opposition, the Social Democratic party, the Green and the Left Parties, voted against the changes to law on nuclear energy in 2010. In Poland, anti-nuclear views were expressed by parties in opposition in the Parliament. The Palikot Movement is the third largest party in the Parliament after Civic Platform and Law and Justice, entered Sejm in 2011 and opposed nuclear energy plans in Poland. Several politicians from other parties in opposition in

¹ Different kinds of indexes of democracy and freedom are available with varying classifications of political regimes. Although there is no agreement about the precise classification, it is possible to note differences in political regimes of the three studied countries. The indices were the following:


Parliament filled in written questions. There has been no party that opposed nuclear energy in Russia’s Parliament in the 2005–2014 period, although several politicians who were not voted into Parliament expressed anti-nuclear views. This excluded them from the possibility to initiate official discussions on nuclear energy. Having political power and thus opportunity to express anti-nuclear opinions does not mean that political parties used this opportunity. For instance, according to the interviewee B (environmental NGO, Sweden), the Swedish Green Party has expressed their anti-nuclear position during the debates on new nuclear power policy, but they have not come back to the issue of nuclear energy very often apart from that in their public speeches.

Power relations between actors involved in discussing nuclear energy demonstrates actors putting forward anti-nuclear discourses have less power over official discourses on nuclear energy than actors supporting changes in nuclear energy policies. Apart from power over discourse, content of discourses also matters for chances of these discourses to be disseminated.

6.2 Power of discourse: coherence and clarity of nuclear energy discourses

Coherence and clarity of the themes put forward by social movements are crucial for movements gaining more public support (Koopmans & Duyvendak 1995, Koopmans et al. 2005). Since social movements are generally interested in making themselves heard, how they formulate their claims is important in this respect (Gamson 1998). The core ideas within the official discourses of nuclear energy are economic and technological modernization (Russia), economic competitiveness and energy diversification (Poland), and climate change mitigation (Sweden). The core idea of these discourses seems to be the “progress” that I identify following Gamson and Modigliani (1989). This idea reveals through emphasis on technological modernization and/or eco-efficiency, the issues of economic development and competitiveness, diversification of energy sources and energy security, reduced emissions offering a promise of securing and, perhaps, even expanding the present standards of living while mitigating climate change and other challenges in society. While the discourses of nuclear proponents are those of “progress”, the discourses of nuclear energy opponents forward a range of arguments against nuclear energy by
referring to the unprofitability of nuclear energy and need for better organized channels for public participation together with nuclear safety, health issues, nuclear waste, nuclear uranium mining, nuclear technologies, alternative solutions, and energy efficiency. Some aspects are specific to different kinds of nuclear energy discourses such as energy efficiency and energy security in official nuclear energy discourses, safety of nuclear technologies, health issues and the full cycle of nuclear energy in anti-nuclear discourses. The fact that actors do not refer to these aspects implies that they do not consider these aspects important, do not have particular opinions about them or want to avoid them. Economization and instrumentalization of nuclear energy discourses are two crucial developments that order discourses of nuclear energy.

Economization of nuclear energy discourse

The previous chapters revealed that (un)profitability and (un)viability of nuclear energy are the most referred themes in discourses of both nuclear energy proponents and opponents in Russia, Sweden and Poland. While according to official nuclear energy discourses it is claimed that nuclear energy is cheap and profitable, anti-nuclear actors stress that it is expensive and unprofitable. Profitability and viability are assessed on the basis of whether benefits from nuclear energy are deemed higher than its costs, and this is in terms of cost-benefit analysis. Profitability and viability do not only mean the commercial value of nuclear energy but also the relevance, practicability and cost-effectiveness of nuclear energy development and maintenance. Cost-benefit analysis here is understood in its original form, from economic analysis, investment analysis and regulatory processes, where the core question is whether public investments would be profitable.

As different kinds of nuclear energy discourses contain different sets of ideas of what is crucial for society, different factors are used in their calculations of profitability. Official nuclear energy discourses mainly include competitiveness, economic and technological modernization and transformation, diversification and stability of energy supply. Economic development and competitiveness are the crucial concerns in official

nuclear energy discourses. Proposals to attract external investments and the matter of subsidies support this line of argumentation for nuclear energy. The politicians in Sweden emphasize that the changed law does not allow subsidies for nuclear energy. Investors themselves will have to pay for building new reactors in Sweden. The discussion on subsidies are not that evident in Russia and Poland, but owners of power plants also aim to attract external investments as in Sweden. Participation of external investors in the construction of reactors implies that budget and environmental goals such as climate change mitigation might be met with less state expenses.

At the same time, critics of nuclear energy emphasize the costs of construction of nuclear reactors, decommissioning of nuclear reactors, costs associated with health issues, uranium mining, environmental deterioration and expenses for designing and construction of nuclear waste storage. Anti-nuclear discourses contain references to social aspects of nuclear energy usage and nature protection, and even economic aspects are considered from the perspective of ecology.

Therefore, economic development and competitiveness are prioritized in official nuclear energy discourses, while in anti-nuclear discourses priority is given to ecological aspects. These varying starting points result in varying ideas about the usefulness of nuclear energy development and maintenance. This difference in priorities seems to come from fundamentally different worldviews on nuclear energy, particularly regarding what is most important for societies. The difference in calculating profitability within different kinds of nuclear energy discourses is not so surprising if one takes into account Jessop’s argument about the impossibility to construct economic models that would include all important factors for calculations. Jessop argues that economic models are always socially constructed in a sense that some aspects become emphasized and others are downplayed because “the totality of economic activities is so unstructured and complex that it cannot be an object of calculation, management, governance, or guidance” (2006:162). The problems in conducting cost-benefit analysis that includes some factors and exclude other economic factors are that “such exclusions limit in turn the efficacy of economic forecasting, management, planning, guidance, governance, and so on, because such practices do not (indeed, cannot) take account of excluded elements and their impact” (2006:162).

Views of actors may contradict views of other actors in terms of formulating what aspects are important. These aspects are constructed on the basis of values and norms inherent to worldviews of involved actors and
biased towards actors’ normative stances. For instance, anti-nuclear activists talk about the health risks of nuclear energy development, including both nature contamination related to the exploitation of a nuclear reactor, and in case of an accident. However it seems difficult to confirm the amount of people directly affected by a nearby reactor or an accident, while it appears more possible to trace trends in local population health. In other words, there is quite a high level of uncertainty that accompanies the exploitation of such complex technologies as nuclear energy reactors, and risks related to uncertainty are estimated differently within different kinds of nuclear energy discourses. Views on uncertainty may be guided by deeply rooted priorities or normative positions.

While discourses contain direct opposite views on these features, the presence of these ideas in both discourses contributes to establishing an order of discourse. It is striking that discourses share the argumentative structure based on profitability, although these discourses are in opposition to each other. This shared argument about the (un)profitability of nuclear energy establishes a homogeneous basis for discussing nuclear energy. As different kinds of actors find it important to talk about the profitability or unprofitability of nuclear energy, the potential to challenge this way of discussing nuclear energy is minimized. Order of discourse becomes locked in these kinds of discussions, meaning that discursive opportunities are closed on this matter, and there is no possibility to not refer to the economic aspects of nuclear energy. The uniformity of argumentation in terms of cost-benefit analysis and profitability is crucial for order of discourse. Profitability, viability and cost-benefit considerations thus occupy one of the dominant views on how nuclear energy could and should be discussed.

Instrumentalization of nuclear energy discourse

The reliance on cost-benefit analysis in arguments concerning the profitability or unprofitability of nuclear energy is instrumental because nuclear energy is presented as an instrument for achieving something else, predominantly economic development, market competitiveness, modernization and climate change mitigation. In anti-nuclear discourses, nuclear energy is also sometimes presented as instrumental because nuclear energy development cannot fulfill economic and climate promises emphasized in official nuclear energy discourses and because it is unprofitable if interests and gains of the population are taken into account, according to the move-
ments. For instance, gains for the nuclear energy industry could be less important for local citizens who want to continue earning their living from tourism, to use an example from the Polish context. Anti-nuclear discourses adapt a similar focus on the utility of nuclear energy for society as in official nuclear energy discourses. In principal, nuclear energy can be assessed differently, including discussing the ultimate acceptance of nuclear energy at all. That is what is done in anti-nuclear discourses to some extent. The instrumental view on nuclear energy in anti-nuclear discourses creates an ambiguous message. Do anti-nuclear movements protest because nuclear energy is unprofitable, or because it should be generally avoided in society? If both, which is more important? These are questions that citizens might ask. The emphasis on general non-acceptance of nuclear energy in contemporary societies is not made to the same extent as the emphasis on unprofitability in anti-nuclear discourses.

The focus on viability and profitability of nuclear energy recalls Horkheimer’s distinction on subjective and objective kinds of reasoning. Subjective reasoning presents an issue from the perspective of what can be gained from it, not discussing the issue in itself. Viewing nuclear energy as a means to achieve economic development, competitiveness, modernization and climate change mitigation is based on subjective reasoning. While each of these purposes and desired end-results may be based on objective reasoning (e.g. climate change mitigation is wanted for the sake of climate change mitigation, not for any further outcome), nuclear energy is presented as a means to achieve these purposes. Subjective reason “attaches little importance to the question whether the purposes as such are reasonable” (Horkheimer 1947:3), so the purpose of nuclear energy in itself is not part of official nuclear energy discourses. There is no argument visible in official nuclear energy discourses whether economic development, market competitiveness, modernization, and climate change mitigation are more reasonable purposes than, hypothetically, the purpose of leaving no nuclear waste for future generations.

Anti-nuclear discourses are also partly based on subjective reasoning. In calculating the profitability of nuclear energy, anti-nuclear movements focus on how much nuclear energy development would cost if the risks of accident, health issues and environment contamination are included in the calculation. Anti-nuclear movements claim that nuclear energy will not contribute to climate change mitigation, that it would not boost technological modernization because the technological advancement of the nuclear technologies is yet to be discussed, and that other sources of energy
or reliance on increased share of these sources could be used for economic
development. These reasons against nuclear energy development are sub-
jective because they consider nuclear energy as a means for achieving or not
achieving something.

While policy documents hardly consider objective reasons for nuclear
energy development, the materials produced by anti-nuclear movements
are based on both subjective and objective reasoning. Objective reason
emanates from “the ideas of justice, equality, happiness, democracy, pro-
perty” (Horkheimer 1947:20). There are some ideas about justice, equality
and democracy, and general non-acceptance of nuclear technologies as such
included in anti-nuclear discourses. According to anti-nuclear discourses,
local populations residing near uranium mining sites face severe health
problems, and could suffer because they will not be able to keep their
businesses; in general, local populations could be affected in many ways.
These and many other formulations of injustice and inequality are part of
anti-nuclear argumentation. According to the activists, it is immoral to
campaign against nuclear energy in one region and to accept it in another
one (R, environmental NGO, Russia; H, environmental NGO, Russia), so
according to them, no sacrifices in terms of regions chosen for nuclear
energy development should be made.

Relations between different kinds of reasoning in anti-nuclear discourses
matter for the clarity of the message of these discourses. These kinds of
reasoning may provide a complex picture which is not easy to spread
(mentioned in the interviews by T (local anti-nuclear group, Sweden) and G
(environmental NGO, Russia)). The interviewee T claimed that it is not easy
to explain the unprofitability of nuclear energy because it requires
references to numbers which may not be easy to explain and comprehend
during actions on the streets. The interviewee G (environmental NGO, Russia)
acknowledges a similar problem by saying that sometimes a
message needs to be re-formulated in such ways that it is easier to
comprehend. Anti-nuclear discourses in Russia, Poland and Sweden may be
perceived as complex because of combining subjective and objective
reasoning, and this in turn influences the coherence and clarity of the
messages within these discourses.

It is unknown why and how anti-nuclear movements in the first place
started to discuss the unprofitability of nuclear energy because discourses
are both shaping and being shaped by social practices and specific histories
of environmental movements. It is not possible to examine to what extent
subjective reasoning is used strategically in order to be able to interact with
governments and energy companies. What is important is whether the combination of a wide range of arguments against nuclear energy, in discussing the unprofitability of nuclear energy together with ideas of inequality, injustice and the systematic impact of nuclear energy on humans and nature, works, after all, for the purposes of anti-nuclear movements. Potentially perceived as too complex, such anti-nuclear discourses could be hindered from spreading. At the same time, it could also establish a common language with other actors in society, which is important for at least partially delivering ideas of movements to decision-makers.

To sum up, discursive opportunities inherent in the order of discourse enable arguments about nuclear energy development only in economic and cost-benefit terms. Order of discourse locked in instrumental reasoning provides anti-nuclear movements with a discursive opportunity to use this kind of reasoning, even while discursive opportunities to appeal to feelings is inhibited. While it may be a favorable situation for discourses reproduced by ruling elites that are responsible for the public administration of the national budget, the economic aspects in anti-nuclear discourses may communicate rather a complex picture.

6.3 Power of discourse: resonating within broader public discourses

Apart from internal clarity and coherence of discourses, the resonance of discourses within their sociopolitical contexts is important for the power of discourse and therefore the order of discourse (Gamson 1998:202). The resonance of discourses refers to how much themes inherent to these discourses resonate within the broader public and become more accepted in society. Economic and technological modernization, market competitiveness and energy diversification are the core arguments for nuclear energy in Russia and Poland. Climate change mitigation is an overarching policy goal in Sweden, and it is inherent to state planning and policy decisions. The necessity of nuclear energy development or maintenance resonates with the core focuses of official discourses of nuclear energy: technological modernization and economic development in Russia, diversification and competitiveness in Poland and sustainability and eco-efficient economy in Sweden. Moreover, the aspect of resonance that characterizes the ordering of discourses also touches the issue of national identity. “Technological” mentalities are part of national identities in Russia (Bouzarovski & Bassin 2007),
but also in Poland and Sweden as countries with strong engineering schools. Images of national mentalities resonate with official nuclear energy discourses.

The resonance of official nuclear energy discourses is strengthened through the spread of the “there-is-no-alternative” vision of nuclear energy. The formulations of this “there-is-no-alternative” vision of nuclear energy range from nuclear energy as “forced necessity” (usually presented as a need to wait until at some point in future there will be alternatives) to “enthusiastic” view on nuclear energy (nuclear energy as the most advanced and appropriate technology, there is no alternative to this technology). Despite different emphases specific to each country, the “there-is-no-alternative” vision is crucial for official discourses in all three countries.

This vision leads in one direction: if there is no alternative to nuclear energy then it is a necessary decision. It is not presented as a political decision because no competition between several options is deemed possible. Basically, official nuclear energy discourses do not leave any space for discussion of arguments and competition between different energy strategies. It becomes instrumental to carry out what is necessary to be done. The withdrawal of nuclear energy from politics by presenting nuclear energy development and maintenance as a necessary and apolitical decision, as business as usual, shuts the doors for a full-scale discussion of nuclear energy programs. The “there-is-no-alternative” vision of nuclear energy inherent in official nuclear energy discourses in the three studied countries influences possibilities to disrupt the resonance of official nuclear energy discourses with broader socioeconomic discourses. For anti-nuclear movements, the choice of nuclear energy development and maintenance is political because other energy sources could be prioritized instead of nuclear energy or developed even further. Emphasizing the political nature of nuclear energy development and maintenance, they aim to disrupt the non-political vision of nuclear energy. Nuclear energy, being fixed as an energy source without alternatives, limits the discursive opportunities of anti-nuclear movements significantly.

The rest of this chapter discusses four aspects on the basis of which the “there-is-no-alternative” vision of nuclear energy resonates with broader public discourses: economic development, energy security, climate change and availability of communicative channels with nuclear energy industry (increased amount of participatory practices).
Economic development and energy security

As mentioned earlier when clarity and coherence of messages in discourses was discussed, extensive focus on economic development closes possibilities to discuss other possibilities as the core argument for nuclear energy. The necessity to ensure energy security is a crucial consideration because it connects to economic development. Apart from economic considerations, dependency on oil and gas is widely considered unsustainable because of resource shortages and the ecological consequences of these resources. Formulations of energy security in the energy strategies and policies contributes to the “there-is-no-alternative” vision of nuclear energy. Energy security is one of the core reference points that is used as an argument for nuclear energy development in Russian, Polish and Swedish energy policies. It is also one of the most significant current global concerns as energy fuels economic development (Yergin 2011). The significance of ensuring energy security, and in particular energy supply security, became vivid during the energy crises, such as the oil crisis in the 1970s and the Russia–Ukraine gas conflict in 2006 and 2009, and also due to climate change. In times of crisis, resources need to be secured. The concept of energy security entered energy policies after energy crises were recognized. A lack of the broad public discussions on what energy security means or may mean for society contributes to the vision of nuclear energy as a “there-is-no-alternative” energy source.

It seems that Russian, Polish and Swedish energy policies share aspects with which energy security is defined, mostly referring to stability of supply and economic viability of nuclear energy. However, other definitions of energy security are hypothetically possible. Anti-nuclear discourses implicitly reproduce an alternative vision of energy security. These discourses include an emphasis on the full nuclear energy cycle, including uranium mining and nuclear waste storage, and health aspects and risks which yields a different understanding of energy security. Although it is the same word for safety and security in Russian (безопасность) and Polish (bezpieczeństwo), it is possible to see that activists refer to the safety of nuclear technologies and not energy security. Since anti-nuclear movements do not question dominant understandings of energy security, there is no disruption of the connection between energy security and nuclear energy developments and maintenance. Challenging this aspect of official nuclear energy discourses could be one of the strategies to advance their influence and disrupt the “there-is-no-alternative” vision on nuclear energy, but it is
probably beyond the scope of their activities. This is likely due to the fact that it is broader than just the issue of nuclear energy and usually refers to the functioning of the whole energy sector.

Climate change: exceptional times require exceptional measures

The “there-is-no-alternative” vision of nuclear energy is strengthened by the argument about nuclear energy’s contribution to climate change mitigation. Official nuclear energy discourses envision climate change as an acute problem that has to be prioritized among other environmental problems. Official nuclear energy discourses imply that nuclear energy will produce much less emissions than the traditional energy sources of oil, gas and coal. In all three countries climate change is explicitly or implicitly presented in nuclear energy policies. Swedish energy policy is even titled A sustainable energy and climate policy for the environment, competitiveness and long-term stability. An apocalyptic vision of climate change is more visible in Sweden (see Anshelm & Hultman 2015), while climate change is generally less referred to in Poland and Russia. Official nuclear energy discourses reflect the broad public discourses in climate change.

Holmberg and Hedberg demonstrate that the majority of Swedish citizens accept nuclear energy reluctantly (2010). It seems that Sweden, and partly Poland, are not exceptions to the reluctant acceptance of nuclear energy when it is framed as contributing to climate change mitigation. Similar conclusions have been drawn in other countries, such as the UK (see Bickerstaff et al 2008, Corner et al 2011). This could be connected to an apocalyptic vision on climate change, which suggests it might recruit nuclear energy sceptics to reluctantly accept nuclear energy.

The importance of climate change mitigation in official nuclear energy discourses in Sweden and Poland could be partially interpreted in relation to their membership in the European Union, which put climate change mitigation on the agenda. Russian policies use reduced emissions as one of the arguments for nuclear energy, while the notion of climate change is used less often than in Poland and Sweden.

While climate change mitigation is one of the core arguments in official nuclear energy discourses, anti-nuclear discourses contain more emphasis on environmental problems and environmental risks associated with nuclear energy, such as deterioration of natural resources, nuclear waste problems, and water and soil contamination. Anti-nuclear movements suggest prioritizing renewable energy sources, and eco-efficiency contri-
tributes to climate change mitigation. However, while politicians in Russia and Poland critically refer to the capacity of renewable energy to fulfill countries’ energy needs, Swedish politicians argue that they have already given as much priority as possible to renewable energy sources.

A broader discourse of climate change does not offer much opportunity to challenge the connection between climate change mitigation and nuclear energy development. Alternative views on the climate change phenomenon are rarely discussed in public discussions (Hulme 2009), leaving little space for changing dominant discourses of climate change. However, climate change could be interpreted and presented differently. Changes in dominant discourses of climate change could provide openings for shifting connections between climate change mitigation and nuclear energy development in nuclear energy discourses. However, at the present moment it seems that official nuclear energy discourses resonate with broader discourses of climate change mitigation. Although anti-nuclear movements could try to shift the fixed understanding of relations between nuclear energy development and climate change mitigation, it does not seem to be within the scope of activities of anti-nuclear movements, as this issue is not only about nuclear energy but about the functioning of the whole energy sector. They have few opportunities to change the dominant discourse on climate change because it is not their primary topic of concern.

Participatory practices are already part of the decision-making processes on nuclear energy. Arguments about public participation in the nuclear energy programs contribute to the “there-is-no-alternative” vision of nuclear energy. Politicians and energy companies in Russia, Poland and Sweden emphasize the necessity of public engagement in reviewing the projects and existence of communicative channels for these purposes. More communicative channels arranged by the nuclear industries are a part of the “participatory turn” that has been developing in the interaction between state, industries and society worldwide (Jasanoff 2003). Public involvement in the environmental assessment of energy projects is enforced by law in the three countries. In Poland and Sweden, public participation channels as well as access to the relevant information is provided by the Aarhus Convention, Russia did not ratify it. And although both kinds of discourses refer to public participation, the meanings and interpretations of public participation in these discourses differ.
In Russia, Rosatom provides channels for interaction with the nuclear industry, such as Forum Dialogue and also the Public Council of Rosatom. Several Russian activists remark in the interviews that there has been more openness in communication with them, but there are a number of particular instances showing that activists have not considered these interactions as dialogue. In Poland, dialogue on the issues of nuclear energy is mentioned in law and in several policy documents. However, numerous reports from activists suggest that the space for dialogue indeed is very limited. For instance, there has been much more emphasis on educational-informational campaign and information meetings in Poland. In Sweden, the new energy policy states that it has been co-decided by state, business and society, although local anti-nuclear groups and representatives of environmental NGOs dealing with nuclear energy seem to wish more transparency.

The mismatch between the emphasis on a functioning public participatory mechanism in the official nuclear energy discourses and the call for proper public participation and dialogue in the anti-nuclear discourses creates tensions between them. According to van Dijk, the political elite, speakers with institutional powers, have better resources to promote their discourses (1989:27). In the studied contexts, the actors with institutional power have increased chances for influencing the understanding of what actually happens and thus their views on how public participation takes place are spreading. Increased interaction with the public provides the grounds for authorities to claim increased public participation. This means that inclusion of participation as one of the themes in the official discourses of nuclear energy resonates with the broader discourse of necessity of public participation in decision-making.

To sum up, economic development, energy security, climate change mitigation and participatory channels contribute to the resonance of official nuclear energy discourses and spread of the “there-is-no-alternative” vision of nuclear energy, while anti-nuclear discourses do not disrupt this vision. Due to an imbalance in terms of power positions, anti-nuclear actors have limited means for challenging such orders of discourse and the grounds on which this vision is based.
6.4 Concluding remarks: from order of discourse to discursive opportunities

Discursive opportunities are established through an order of discourse. Official discourses of “progress” promoted by governments and energy companies are the dominant discourses, while the discourses of anti-nuclear movements are more marginal. This order of discourse relates to power over discourse, actors opting for keeping and extending nuclear energy programs have more power, and power of discourse, coherence and clarity of messages and resonance with broader discourses of socioeconomic development and challenges of the energy sector.

Anti-nuclear discourses contain rather complex messages. According to these discourses, nuclear energy would not live up to the promises of nuclear energy proponents because it is considered unprofitable and unviable. At the same time, anti-nuclear discourses do not only discuss nuclear energy as an instrument for achieving or not achieving other goals, but discuss the value of nuclear energy as such. It means that anti-nuclear discourses are based on objective as well as instrumental kinds of reasoning. Nuclear energy development should be considered from the perspective of justice, equality and democracy, according to this kind of discourse. Objective reasoning is observable when a number of problems and issues, such as health risks, contamination of soil and water, uranium mining conditions, nuclear waste storage problems and several others are brought up. Both kinds of reasoning construct anti-nuclear arguments in such a way that it has less of a chance to resonate in society because of its complexity.

Official nuclear energy discourses resonate more with broader discourses of socioeconomic development since they connect to the major problems and issues of the present, such as economic competitiveness, energy security and climate change. Such resonance provides rhetorical grounds for the “there-is-no-alternative” vision of nuclear energy. Needless to say, ruling elites contribute to broaden public discourses, providing ideas on how society should develop. The resonance of official nuclear energy discourses with broader public discourses is part of the same process of elites defining what is important for society. Anti-nuclear movements, however, have limited access to influencing broader public discourses, including being able to disrupt the grounds on which official nuclear energy discourses are based. It is not only the power positions of actors putting forward some nuclear energy discourses that is crucial for public discourse on nuclear energy, but also the coherence and clarity of messages and the resonance of
official nuclear energy discourses within the broader discourses of development of societies that contribute to the established order of discourse. Broader discourses of development of societies are also constructed, but they are less accessible for critique from anti-nuclear movements, because movements do not specialize in these topics.

Power relations between discourses establish conditions for movements to act in one way or another, or in other words provide them with discursive opportunities. Following Bröer and Duyvendak, who see discursive opportunities as the maps of legitimate actions (2009), I argue that order of discourse shapes several actions and argumentation as legitimate. The first discursive opportunity, which is actively used, is to discuss nuclear energy from the perspective of (un)profitability. The profitability or unprofitability of nuclear energy is a widely used argument by both nuclear energy proponents and opponents. Second, a discursive opportunity derived from the first one is the usage of expert voice. It is connected to the tendency to employ more instrumental reasoning such as (un)profitability or (un)viability. Anti-nuclear discourses adjust to instrumental discussions of nuclear energy, using that expert voice. By expert voice I mean the particular genre of reproduction of anti-nuclear arguments, such as publishing lengthy brochures or short leaflets that include references to a number of arguments against nuclear energy which are expressed in a scientific manner. The instrumental reasoning of nuclear energy proponents thus influences the public discourse, such as seeing nuclear energy as an instrument for achieving something else, like energy security and economic development. Instrumental reasoning about nuclear energy shared by nuclear energy proponents and opponents thus shapes anti-nuclear movements in such way that the expert voice becomes dominant.

Now that discursive opportunities of anti-nuclear movements have been discussed, this thesis turns to scrutinizing political opportunities of anti-nuclear movements. As it is a question of how movements see their opportunities, the focus is put on how actors in movements perceive their political opportunities.
7

Anti-nuclear movements’
perceived political opportunities

Repertoires of anti-nuclear movements are conditioned by discursive opportunities (Koopmans & Duyvendak 1995, McCammon 2012) and by political opportunities (Kitschelt 1986, Meyer & Minkoff 2004). Where the previous chapter scrutinized discursive opportunities for anti-nuclear movements, this chapter examines the political opportunities for anti-nuclear movements. The focus is on activists’ perceptions of their political contexts and opportunities since perceptions of activists may differ from the impartial analysis of political opportunities (Kurzman 1996). It is important to know how activists perceive their contexts in order to understand their actions and strategies. According to Kitschelt, more open political contexts present more opportunities for nonconfrontational actions (Kitschelt 1986). In the political contexts with restricted opportunities, social movements, deprived from any other opportunities, are likely to carry out confrontational actions. Three aspects of political opportunities are considered in this chapter: openness of the political system; presence of allies within the political system; and stability of the power balance (McAdam 1996:27). State capacity for repression is included in the aspect of openness of political system.

7.1 Openness of political system

Openness of political system may include a number of different aspects. However, in this study it is limited to issues that activists brought up during the interviews. They mainly focused on areas that they have direct experience with. These areas include political regimes to the extent activists
experience them, functioning of mechanisms for public participation, and interaction with energy companies and other environmental organizations.

**Political regimes as a context for anti-nuclear actions**

Political regimes are formative for social movements as they determine to what extent non-state actors, meaning not only civil society but also business and the media, are included in the political systems and the ways in which they are included. More open political contexts, with mechanisms to deliver ideas and opinions for various groups in society, including social movements, would provide more openness for movements and will lead to nonconfrontational actions (Kitschelt 1986). The political regimes of Russia, Poland and Sweden were mentioned in the previous chapter when power over discourse was discussed. The difference in the political regimes of Russia, Poland and Sweden is reflected in the perceptions of anti-nuclear movements. While Polish and Swedish respondents portray their countries as democratic with functioning procedures, the situation is different in **Russia**:

> The overall political situation in the country [Russia] deteriorated sharply, became twisted. We are moving in the direction of authoritarianism, and such kind of authoritarianism, where the government is blended with corporate interests (H, environmental NGO, Russia).

In countries where democratic mechanisms do not function, political will and the strong position of elites is considered necessary for projects to be implemented. Russian activists acknowledge that the plans for nuclear energy development are developed and approved at a high political level, while civil society organizations have little access to the process of decision-making (G, environmental NGO, Russia). This is further reflected in the observation “nuclear energy is supported by the political leadership of the country” (F, environmental NGO, Russia). In Russia “opportunities are severely limited due to the sharp limitation of work of independent civil society organizations in general” (R, environmental NGO, Russia). The interviews with Russian respondents were conducted in March and April 2013 when the Public Prosecution Office and various public agencies conducted inspections of a number of civil society organizations. These inspections relate to 2012 amendments to the law on non-governmental organizations. The amendments introduced the status of a foreign agent for the organizations that are considered to conduct political activities and
receive financial support from abroad for these activities, and on these
grounds are considered as acting in the interests of foreign countries.\(^1\) “And
the last thing that begins – a total inspection of all public organizations and
many of my colleagues’ organizations were visited regarding extremism and
political influence for the benefit of other countries” (F, environmental
NGO, Russia). Organizations were checked for whether they belonged to
the category of foreign agents. Political activities were interpreted quite
broadly. For instance, the status of foreign agent was imposed on the
environmental organization Eco-Defense that, for instance, actively
protested against the Baltic nuclear power plant in Kaliningrad and did not
agree to take on this status. The amendments on foreign agents were
introduced after the mass demonstrations For Fair Elections taking place
during 2011–2012 elections to Parliament and for the post of the president.

Polish and Swedish civil societies are not exposed to similar pressures,
according to the interviewees. Polish activists acknowledge that the political
system is democratic. Polish activists consider the Polish political regime,
despite its weaknesses, offers some possibilities to influence the develop-
ment of the nuclear energy program in Poland. The interviewee B
(environmental NGO, Poland) compares communist times with the new
political regime in the following words:

> The difference is essential, because then we had the so-called communism
> – imaginary – real socialism. And then we were being closed in jail for
> such protests. Now we are not closed, at most we are wiretapped. Then we
> were wiretapped as well. But there is a fundamental difference. It is,
> however, a democratic system. You can have different considerations
> (uwagi) on it and so. Democracy is sometimes doing better sometimes it is
> weaker, but it is a democratic system with kind of independent media – as
> freedom of expression, freedom of demonstration.

Swedish activists consider that Sweden is “one of the most democratic
countries in the world” (X, environmental NGO, Sweden). Some activists
did not like how the outcome of the 1980s national referendum was dealt
with. The referendum was not binding but Parliament decided to follow the
results, suggesting to phase out nuclear energy by 2010. The recent policy

\(^1\) The Economist (2013). Will Russia play tough with its “foreign agent” law? 20
November, Available at http://www.economist.com/blogs/easternapproaches/2013/03/
November 2013
on nuclear energy is considered to be at odds with the decision to phase out nuclear energy by 2010. The activists argue that it is problematic that there are no mechanisms to guarantee that the decision from the 1980s would be implemented (X, environmental NGO, Sweden). Anti-nuclear movements consider that this policy change goes against the public opinion expressed in the referendum, and there is no means to keep the government accountable for the decision made in the 1980s. Formally not following the results of the referendum is not a problem (because the referendum was not binding), but it is perceived as such by activists. They seem to have different expectations regarding how the referendum should have been treated. Swedish activists also claim that Environmental Impact Assessment procedures contain a structural problem related to a limited time period when non-state actors are invited to participate, including the financial support they are to receive for it:

The prerequisite for obtaining financial support has been linked to participation in the Environmental Impact Assessment process of consultation. The money has been intended to that. But the consultation is finished. …We wanted to continue to get money to continue working on the issue until it gets to court. But the industry does not want it. For us to be in court and to be working against them. So somewhere there will be a limit but we are in and pushing. But now there is no consultation process where everyone can meet and discuss. There is no natural arena anymore (Q, local anti-nuclear group, Sweden).

Swedish activists emphasize that civil society actors are only involved at some stages, whereas they would like to have more access to the process of decision-making. That is a perceived limitation of a well-functioning democratic system.

Several Russian and Polish anti-nuclear activists point out that they have experienced some actions by anonymous actors that I classify as repressive kinds of actions. There are no details about actors behind these actions, but interviewees associate these events in connection with their active position against nuclear energy. Activists’ perceptions that these events could be related to their anti-nuclear activity are important for their further actions as well as understanding their situation and expectations from other actors.

To sum up, the ways anti-nuclear movements refer to political regimes of Russia, Poland and Sweden reflect the state of political regimes in these countries. As democratic regimes have better functioning procedures for involving the public, and also trust in these procedures, there are much
more open structures for anti-nuclear movements to deliver their opinions and ideas. More democratic contexts invite more nonconfrontational actions of social movements, as there are institutional channels for them.

Procedures for public participation in governing nuclear energy

Discussing openness of the political contexts, the interviewees referred to procedures for public participation frequently, as they often take part in these procedures. Citizens of Russia, Poland and Sweden have the right to participate in public reviews of energy projects. In Poland and Sweden this right is provided by the Aarhus Convention. Although Russia has not ratified this convention, the right for public reviews during the preparation phase of energy projects is stipulated in policy documents. Public reviews can be conducted as public hearings in the course of Environmental Impact Assessment procedures or written reviews of the energy projects being planned. The rights for public reviews establish formal channels for communication between authorities, nuclear industries, civil society and the general public. As is shown in Chapter 4, actors promoting nuclear energy development and maintenance emphasize that everyone has a possibility to be engaged in dialogue with nuclear industries. The emphasis on the possibility of communication is particularly visible in Russia and Poland. Such channels for communication as Forum-Dialogues with Rosatom and Public Council of Rosatom are emphasized in Russia. In Poland the emphasis is on a dialogue with society about nuclear energy development, with the energy company PGE EJ1 answering the questions of local citizens.

However, institutional channels for public participation vary in terms of how they are practiced and perceived. Formalization of these channels does not guarantee that they are comprehensive or legitimate, according to the respondents. Russian activists acknowledge that they have an opportunity to participate in the EIA procedures in two ways: to take part in public hearings during the EIA procedures and, alone or together with someone else, initiate a public environmental review of a project (G, environmental NGO, Russia). However, “all other forms of public participation at the level of parliament, or governmental level – there we are denied access” (G, environmental NGO, Russia). In general, Russian activists argue that there are sometimes limitations to realizing these opportunities. Public environmental reviews are not always carried out as the activists think they should be. One of the organizations faced the problem with authorities’ interpretation of the law. Up to two public examinations for one project was
interpreted by authorities as *no more than two* (B, environmental NGO, Russia). Opportunities to take active part during public hearings could be limited by amount of citizens who want to have the floor. As the interviewee G explains:

The paradox is that, not a paradox, a problem, we know that in fact the decision is made just there [at the level of the Parliament and the Government] and not at the public hearings that are usually predetermined and made according to Rosatom scenarios. That is, in the worst sense of this word, budget organizations are rounded in, there are people who receive a salary from the state who fill seating places in the room. Everyone has a certain defined role. That is, people read poetry, they say how they will live well with the new nuclear power plant. Many of them have some kind of, any item of clothing for not missing a stranger. You see, that is all planned to accuracy, and it is Rosatom department engaged in this. So all the public hearings are fake that, say, does not allow even to say that this is where the decisions are made (G, environmental NGO, Russia).

Not all respondents expressed such a radical view on the limited usefulness of public hearings; the majority of them mentioned constraints to influence the nuclear energy projects through this channel in Russia. Russian activists claim that public hearings are used mainly for information but not for communication, and there is little space for expressing critical views on the projects, even though these views may be constructive. Activists thus question the functions and purposes of public hearings. They claim that the nuclear industry does not interpret EIA procedures as they are intended in the documents that establish these procedures. Although public hearings establish a forum for citizens to bring their opinions and evaluations of a discussed energy project, they are not considered a place of actual decision-making because “there is no voting on these public hearings” (O, environmental NGO, Russia). “No one is responsible, there is no such mechanism, so in general it is not such a mechanism” (O, environmental NGO, Russia). Interviewee B (environmental NGO, Russia) considers “the absence of the willingness to see partners in the non-state actors but not the objects for educating and informing” as one of the current problems. Another interviewee continues:

It turns out that that’s the current practice of public hearings - a kind of therapy. Activists can come there, criticism is voiced, moreover they are given the word, but it is confined to that room where it all goes. Yes, it
then enters protocols and nothing else. That is, there is no mechanism for advancing this further (F, environmental NGO, Russia).

There are also organizational limitations for participation in public hearings, such as procedures often being held during working hours when people are unable to attend (E, local anti-nuclear group, Russia).

**Polish** activists acknowledge that there are channels for interacting with the energy company and authorities, but they are critical towards the quality of these channels. They argue that these channels are used to inform citizens rather than to establish two-way communication. They disagree with labeling this process as dialogue. For instance, in the words of one of the interviewees:

I mean, they said that this is a dialogue. They believe that they carry out a dialogue with the public, but it seems that simply understand the word dialogue in a different way. Because sort of the only one thing that is done rather through PGE than Ministry are briefings in the local areas-information points in the areas. But it is difficult to talk about the fact that they have a dialogic character. These are regular information meetings where experts present their presentations, and tell how the functioning of a nuclear power plant goes, and why it is a good solution. So there is no room for two-way communication (I, researcher, Poland).

Polish activists point at the limitations of public hearings, similar to those expressed by Russian activists. “When the official public consultation was held, of course, we took part in them, but our notices (uwagi) were not taken into account” (M, local anti-nuclear group, Poland). In Poland local authorities are seen as more open for interaction with the anti-nuclear groups than energy companies (E, environmental NGO, Poland), and there are possibilities to organize events with them that could, perhaps, lead to changes of opinions. Local authorities organize various meetings in the regions. However, there are obstacles for interacting with local authorities as well, such as a perceived opportunism of local governments: “they listen, nod, pseudo discussion takes place and that is how consultation is conducted” (B, environmental NGO, Poland).

Activists consider that problems with public hearings are perhaps of more universal character as there is limited accountability of this kind of meetings. There are also organizational challenges related to different public meetings, such as problems accessing these meetings similar to the situation in Russia. The interviewee N (environmental NGO, Poland)
acknowledged that there was debate in Gdańsk, also at the national level, but he mentions that there were problems with access to these debates. Since the nuclear program is a new phenomenon in Poland, there have not been EIA public meetings conducted, although there have been several panel discussions with a range of actors. Polish activists underline that the general public, including local anti-nuclear groups and environmental organizations, is not considered to be a partner by the energy sector.

The quality and access to public participation mechanisms is on a positive level in **Sweden**, according to the interviewees. Following the procedures of policy ratification, which includes the possibility to be invited to write a referral before a policy is adopted, Swedish environmental NGOs took this opportunity and sent referrals to the recent nuclear energy policy before the decision was taken in Parliament. Views of environmental organizations objecting to the propositions of new nuclear policy are documented together with referrals from other actors in the appendix to the policy. No public reviews have been conducted in Sweden in relation to nuclear energy development or maintenance of the existing reactors because no proposal for a new nuclear construction has been made, even though the new policy allows replacement of old reactors with new ones.

Due to the fact that anti-nuclear groups are not only concerned about new nuclear energy policy but also about nuclear waste storage, they describe their interaction with energy companies through their communication with them. In the Swedish context, the interviewees have more opportunities for interaction with public authorities:

> In Sweden, the sectors of society, or stakeholders that work on the nuclear waste issue have a lot of personal contact, which is unusual internationally. Our organization has a lot of personal contact with other organizations as we take part in many meetings and seminars arranged by industry and government. We meet often and are have the opportunity to talk during coffee breaks and lunches (U, environmental NGO, Sweden).

In general, the interviewees marked a high degree of openness and possibilities of interaction with authorities and energy companies, including both formal and informal communication. There is also an annual forum where all actors concerned about Swedish politics meet, called Almedalen.
One anti-nuclear group in Sweden, active in the northern part of the country, campaigns against a Finnish nuclear power plant. The transnational character of this case limits possibilities for anti-nuclear groups there to engage in formal structures in order to voice their opinions. The transnational character of this case is very different from all other localities of anti-nuclear opposition discussed in this thesis.

To sum up, in the three contexts, activists expressed concerns about accountability of public hearings and sometimes lack of transparency in the process. The formal presence of public hearings in Environmental Impact Assessment procedures and written public reviews characterizes the political contexts as open or open to some extent. But social movements do not always perceive these mechanisms as opportunities as they take into account quality of communication during these procedures; this can range from being regarded as passive actors to receiving information to be included to a limited extent as partners in dialogue. According to interviewees in the three countries, it is not only important to have channels for interaction with energy companies and authorities, but also to be heard. According to the perceptions of activists from all three contexts, they do not believe there are any guarantees they will be heard, even in the Swedish context where the communication between authorities, energy companies and anti-nuclear movements is of much better quality than in Russia and Poland. Activists articulate different reasons for seeing these interactions as not without problems, such as lack of knowledge about how procedures should be held or intentional moves from energy companies and authorities in Russia and Poland or lack of transparency in Sweden. Activists are skeptical towards being able to influence projects through these interactions, particularly because there are no measures to make companies consider voiced opinions during these meetings and hold companies account-

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2 Almedalen week is the annual forum for Swedish politics where various actors have an opportunity to meet. The program is formed of seminars and speeches. More can be read at the official webpage, Available at http://www.almedalsveckan.info/ accessed 29 January 2017
able for their words afterwards. However, it is the formal presence of these mechanisms which structures political contexts for social movements: having a formal opportunity to take part in the procedures seems to subvert an opportunity to claim the lack of any participatory channels and to carry out confrontational actions, thus leading to more nonconfrontational actions.

Large-scale energy companies as a part of context for anti-nuclear actions

Public hearings and public reviews of energy projects are initiated by local authorities, and where nuclear energy companies take an active role. Their perceptions of opportunities are based on these interactions of activists with these actors. While authorities follow the laws in EIA and public participation, energy companies have more flexibility in their interaction with civil society, with possibilities to just follow the laws or to add extra mechanisms for engaging the public, or in general to show a more or less “friendly” face. At the same time these companies are used to dealing with clients and not citizens, and think in terms of gaining profit rather than addressing social inequalities.

Some activists in Russia argue that the nuclear energy industry became more open in recent years. Rosatom introduced several channels for interaction between the company and civil society organizations such as Forum Dialogues, the conference-type meeting organized regularly, and the Public Council. These councils are enforced by law in recent times (L, environmental NGO, Russia). Kirienko, the Director General of Rosatom, “created some structures, especially for interaction with civil society organizations, but of course, these structures are mainly aimed at persuading that they are all so nice and fluffy…but these structures began to specifically create some activities, organize, talk, interact, and so on and so forth” (T, environmental NGO, Russia). Despite the creation of forums for interaction, some argue that

Rosatom prefers not to hold dialogue with the opponents. They have a tough stand. They do not want that. But they must show to maybe someone in the government or to public opinion, that they are not the main villains, so they for instance held, and now it will be held again, this purely a public relations event called “Forum Dialogue” (G, environmental NGO, Russia). Rosatom launched a new communicative strategy several years ago, that purports “everyone who wants can come to the public hearings” (O, environmental NGO, Russia). But “environmentalists would anyway be
there a minority because the employees of the … power plant will be participating who will get a day off for that, they will be sent there” (O, environmental NGO, Russia). In fact the roots of the problem with public participation is deeper than it may be thought:

It [Rosatom] cannot criticize itself. It is a closed system, it is a whole, and there is no system of checks. It develops as it wants to develop, so it is all right there. Therefore, all social activity outside of it, so to speak, is allowed, but until some point, not to look really like a rabid hawk, to show that the civil society “yes, here you are, it is there.” (G, environmental NGO, Russia).

The activists occasionally describe the communicative efforts of Rosatom as propaganda. There is a mention of propaganda when public reactions to Fukushima are discussed: “why there has been a turn back, such a fast one, faster than in Chernobyl, is also because there powerful propaganda machine was turned on after it [Fukushima]” (G, environmental NGO, Russia). Another interviewee comments:

The discussion is not possible, because it is not profitable to Rosatom, so it does not go for discussion. Rosatom is not capable of debate, only propaganda. As soon as they tell some lies, they immediately can easily be caught, and they did not know what to say (C, local anti-nuclear group, Russia).

Some activists in Russia do not feel that someone creates barriers for them but “the fact itself that Rosatom is our opponent, it is a rich corporation, and we are somehow the poor public already imposes challenges” (C, local anti-nuclear group, Russia). They have the capacity to build an “atomic center in each region and to print a huge amount of propaganda literature, we can afford much less” (C, local anti-nuclear group, Russia).

Polish anti-nuclear groups consider the influence of the nuclear lobby to be strong (M, local anti-nuclear group, Poland; K, local anti-nuclear group, Poland). According to N (environmental NGO, Poland), the nuclear lobby consists of three groups of people, including the convinced group, the group of those who can benefit from the project and the politicians who agreed to support this project on the basis of incomplete information. The role of the nuclear lobby in Poland observed by activists is striking, because the nuclear program is new there. Some of the activists explain this with pointing at the role of other countries, such as Russia, deemed to be an
unreliable partner for the natural gas supply, and the French government and companies that Poland made an agreement with for building its first nuclear power plant.

Communication organized by the PGE is considered to be “propaganda” “because it does not present alternatives but rather nuclear energy without alternatives” (F (local anti-nuclear group, Poland), also mentioned by Y (local anti-nuclear group, Poland), N (environmental NGO, Poland)). Polish activists point out that the enormous “propaganda” budget for convincing the public in favor of nuclear energy was already used, but in their opinion they also claim there are not enough resources for actually constructing a nuclear power plant (N, environmental NGO, Poland; O, researcher, Poland). In the words of the interviewee Y,

We do not have any money and are trying to oppose them [PGE] with our activities only. It is a lack of balance in all of this. They can inform, may communicate the information widely, have a lot of money of the government on these things, and we can just talk to ourselves (Y, local anti-nuclear group, Poland).

The unbalanced power relations are expressed in the inequality between the PGE and anti-nuclear movements in terms of financial resources which provide different opportunities to present different perspectives on nuclear energy in society (M, local anti-nuclear group, Poland; K, local anti-nuclear group, Poland).

Swedish interviewees believe that the nuclear power lobby has been successful in Sweden (T, local anti-nuclear group, Sweden). Swedish activist G (environmental NGO, Sweden) considers that it is problematic that SKB, which deals with nuclear waste disposal, is not a state agency, but a company. Activist G acknowledges the willingness of the nuclear industry to communicate with society, but at the same time, in his opinion, SKB “protects things that could simply show weaknesses in their method for storing nuclear fuel”, claiming to protect business interests. Swedish activists consider the closeness of business interests and politics to be one of the problems of the political system: “they should be separated” (T, local anti-nuclear group, Sweden). The personal relations between business and local and national politicians influence the situation even more (Q, local anti-nuclear group, Sweden).

Anti-nuclear movements acknowledge the imbalance in terms of resources for making an impact on public opinion that activists have in
relation to the nuclear industry: “the nuclear lobby has money to publish glance brochures, give materials to schools” (M, local anti-nuclear group, Sweden). It is challenging to influence opinions without the financial resources that the nuclear industry has. However, according to the activists, this difference in financial resources does not predetermine the result. “But at the same time I do not think it needs so much economic resources all the time if one is smart and efficient and so, so you can keep the debate about nuclear issues alive in Sweden and get the necessary changeover that is needed” (Z, environmental NGO, Sweden).

Anti-nuclear activists in all three countries acknowledge the strength of nuclear industries in their respective countries, despite differences in duration of nuclear energy programs. Apart from the power of interpreting mechanisms for public participation and significant differences in resources between energy companies and anti-nuclear movements, activists argue that energy companies have the power of shaping and adjusting language for discussing nuclear energy. In Russia interviewee S (environmental NGO, Russia) states that the nuclear industry created its own “bird” language (рус. Птичий язык). For instance, the term accident seems to be used only in case of a very dangerous accident, where a nuclear reactor is already about to explode. For other situations the operators of nuclear power plant use extraordinary stop (рус. Внештатная остановка). Swedish activist U (environmental NGO, Sweden) notes a similar problem in relation to how the nuclear industry discusses nuclear energy:

Industry government use language that takes advantage of colloquial usages, for example the word “disposal” which we have tried to avoid using since we do not want to give the impression that nuclear waste storage will ever be over and done with. Actually, it is a perpetual problem. Even if nuclear waste can be temporarily dealt with, people will always need information about where it is and what it is about so people do not try to get into contact with it. There are many examples, including words used to describe radiation that give the impression that it is not dangerous. The term “spent fuel” is used instead of “highly radioactive fuel”. Language is used that does not express how dangerous the nuclear waste is.

According to activists, this creates a situation when some terms are replaced by others, making it harder for citizens to distinguish what is meant and for anti-nuclear groups and organizations to address these issues. This is an example of power over discourse, of how energy companies are able to control how nuclear energy is discussed. In other words, energy companies
have more access to adjust the language that is used in discussing nuclear energy than anti-nuclear movements do; they also have more resources to control how nuclear energy is discussed in society, both through financial resources and using specific language.

In short, the actions of energy companies are able to structure the opportunities of anti-nuclear movements. Energy companies seem to make an effort to become more open with varying degree of success in the studied countries. Activists considered that companies hold too much power in their hands. Creating and administering some spaces for interaction, such as various meetings and forums, energy companies are considered to be the ones that define and structure communication in these spaces. Formal mechanisms for public participation are provided, so anti-nuclear movements cannot claim that they are excluded. It looks like there are some channels for nonconfrontational actions and there are not many reasons to legitimize more confrontational strategies. At the same time, energy companies are more flexible in their actions, for anti-nuclear movements are not the same to deal with as the authorities. Anti-nuclear movements consider that energy companies can significantly disrupt their actions by just changing the rules of the game, for instance, using a different word for an accident or by spending much more financial resources to promote their views on nuclear energy.

Environmental organizations with close ties to nuclear industry as counter-agents to anti-nuclear movements

Apart from political regimes and mechanisms for public participation and energy companies, the role of some environmental NGOs that are perceived to be connected to the nuclear industries were brought up in the interviews. Anti-nuclear movements emphasize that the industry has close relations with some environmental NGOs that voice opinions similar to nuclear companies. These kinds of environmental NGOs are only mentioned in Russia and Poland (O, environmental NGO, Russia; B, environmental NGO, Russia; K, local anti-nuclear group, Russia; M, local anti-nuclear group, Poland). The actions of these organizations are counter-productive for the movement as anti-nuclear activists perceive them. Independent nongovernmental organizations and local anti-nuclear groups have to deal with impressions that these organizations leave on the actions of environmental NGOs and environmentalists’ positions about nuclear energy development. As noted in the chapter on anti-nuclear discourses, these environmental organizations contribute to establishing environmental
discourses that contrast with the discourses of anti-nuclear movements: nuclear energy is considered acceptable. These kinds of environmental organizations thus limit the argumentative power of the anti-nuclear movements. Such perceptions of activists lead to a lower level of trust in the political system.

To conclude the part on the openness of the political systems, more democratic contexts are perceived as providing not only more reliable communicative channels with authorities and the energy sector, but also more legitimacy to the public meetings between these actors and activists. Formally there are open structures for civil society actors to engage in, although these mechanisms, such as the Environmental Impact Assessment procedures, are not always perceived to be working as they should be, according to the activists. Activists in the three contexts see general problems with EIA procedures. Companies have the power to control language and agendas. The Swedish political context is certainly much more open than the other two, but Swedish activists seem to have higher expectations in terms of transparency of the process.

Although political regimes in Poland and Sweden are perceived as more open, there are other kinds of opportunities for civil society actors incorporated in governing nuclear energy in Russia. In Poland, activists believe that a free press and right to assembly is the democratic condition that they can actually use for delivering their opinions; some Russian activists find it possible to use the channels for interaction provided by Rosatom, such as Forum-Dialogues and the Public Council of Rosatom. This shows that opportunities for nonconfrontational actions can be part of a movement’s contexts regardless of political regimes, but, for instance, they could be provided by the energy companies. Institutional channels for public participation and sometimes even additional mechanisms for public participation are a crucial opportunity for anti-nuclear movements. Institutional channels for public participation do not live up to the expectations of the movements, and they are often questioned as an actual opportunity to deliver opinions and ideas and to be heard. This situation complicates the choice of a particular strategy (nonconfrontational or confrontational), as the presence of the structures for participation suggests using these structures (leading to a more nonconfrontational strategy) while there is also an absence of the grounds for a more confrontational strategy (as there are some mechanisms for public participation).
7.2 Presence of allies

Opportunities for social movements do not come only from perceptions about openness of the political contexts, but also from perceptions about the presence of allies. If movements cooperate with other actors they have more opportunities to promote their agenda. The presence of allies thus structures the choice of actions of anti-nuclear movements. This section investigates these allies and arising opportunities related to their presence. The structure of movement allies is considered through movements’ relations to political parties, experts, other movements, cooperation with international actors, public opinion and the media as respondents often named them as their allies in the interviews.

Cooperation with political parties, experts, other movements and international cooperation

Political parties are important allies of social movements since they can deliver movements’ positions to the political arenas (Kitschelt 1986, Zdravomyslova 1993). Some of the Russian anti-nuclear movement activists are members of political parties with environmental agendas that are currently in opposition to Parliament (H, environmental NGO, Russia).3 At the same time, some interviewees stated that they do not interact with political parties:

for example, there is a green party in Russia, because they do not interact with us, they do not help us in any way, do not participate, they bypass this topic (E, local anti-nuclear group, Russia).

Movements in Russia seem to have limited interaction with political parties. *Palikot’s Movement* (Ruch Palikota), a party that was in the Polish Parliament from 2011 and later transformed into *Your Movement* (Twój Ruch), have supported the anti-nuclear agenda (F, local anti-nuclear group, Poland). It has also been supported by the green party Zieloni 2004 (D, environmental NGO, Poland). Swedish activists claim that it has been relatively easy to communicate with politicians, although this seems dependent on which party (K, environmental NGO, Sweden). Political

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3 These parties should rather be considered movements as they are not formally registered as parties.
parties that anti-nuclear movements have contact with are usually parties with a strong environmental focus. However these parties have not had much influence in the politics of the discussed period of time. In Sweden during demonstrations, anti-nuclear movements sometimes cooperate with the Green Party, the Left Party and their youth organizations (T, local anti-nuclear group, Sweden). However, perceived as an ally of the movement, the Green Party does not raise the topic of nuclear energy, according to the interviewee X (environmental NGO, Sweden). “They reason that they do not need to push as much nuclear question since everyone knows that the Green Party is against nuclear power, so they want to broaden the agenda” (X, environmental NGO, Sweden). Some of the activists are both active in anti-nuclear movements and environmental parties and political movements as rank-and-file members.

Experts could be another kind of ally for movements. In Russia, Poland and Sweden experts are often part of the movements as anti-nuclear movements have members with background in nuclear physics, ecology and related areas. Movements also find other sorts of expertise externally when it is needed (e.g. K, local anti-nuclear group, Russia) as anti-nuclear movements actively communicate with scholars in the three countries. An example from an interview in Sweden with G (environmental NGO, Sweden):

Interviewer: Do I understand correctly that your organization have different competences? What kind of?

Respondent G (environmental NGO, Sweden): We have energy experts, for example.

Interviewer: Researchers?

Respondent G: Many of them, of our experts ... there are different. Partly, we have employees in our office. For example, we have lawyers employed. We have energy experts employed, for that matter even biologists and agronomists and many more. Some of them have scientific background but not all of them. Since usually we also engage, when we write a report, we can turn to the external ones that have some relevant background.

Anti-nuclear movements claim that there is strong expertise in the movements, either through internal or external experts. The difference of opinions between experts related to anti-nuclear movements and
professionals from the nuclear industries does not, however, feature as a conflict in the public sphere. Experts affiliated with anti-nuclear movements are presented as losing a certain degree of independence in their opinions. In a similar manner, interviewees point out that the nuclear industry involves only scholars who are employees of the nuclear institutions, which are seen as biased in favor of nuclear energy (M, local anti-nuclear group, Poland).

Although expert dissent can theoretically be helpful for anti-nuclear movements (Rüdig 1990), analysis of the anti-nuclear movements in Russia, Poland and Sweden demonstrates that experts need to be considered and treated as experts for this dissent to gain credibility. Nuclear industries exercise a certain power in this respect by not treating some members of movements as experts. The analysis in this thesis demonstrates that Kolb’s and Rüdig’s arguments about expert dissent do not really provide the full interpretation of the case at hand because to have expert dissent means that different actors accept that there are different experts. The fact that experts from industry are presented as experts, and experts from environmental NGOs are not always presented as experts is a power game. Kolb’s and Rüdig’s arguments about expert dissent thus need to be developed. Acceptance of expert identity of those who present themselves as experts is an aspect that should be included in the analytical claim about the role of expert dissent.

In theory, social movements can create opportunities out of allying with other social movements (Zdravomyslova 1993). However, alliances with other social movements are not really noticed in the studied countries. One such connection was noted in the Polish context, with anarchist groups taking part in the anti-nuclear actions, but this seems to be an exception.

International cooperation can provide opportunities for social movements as well. Activists in the three countries consider that cooperation with other movements and environmental organizations at the international level opens up some opportunities. International cooperation is deemed to be crucial for the survival of civil society in Russia, since it provides informational as well as moral and financial support:

If the government says that you have no right to enter the international arena, to receive international support, international money, you are deprived from the only protection you can get when you enter into a relationship with these organizations (V, researcher, Russia).
Activists engage in international cooperation, in case it is needed, for instance, with the Coalition Clean Baltic\(^4\) (B, environmental NGO, Russia) and with a number of international organizations from other countries. Swedish activists also rely on international cooperation (U, environmental NGO, Sweden; G, environmental NGO, Sweden), such as inviting researchers from Germany and activists from Finland and Denmark. There is also an exchange of information and contacts with Japan (H, local anti-nuclear group, Sweden). International cooperation benefits anti-nuclear movements in a number of ways, including information, resources and support.

To sum up, anti-nuclear movements in Russia, Poland and Sweden emphasize cooperation with experts, while they also state the role of international cooperation and interaction with political parties in some contexts. Anti-nuclear movements have involved experts, while some anti-nuclear activists are experts as well. However the expertise coming from anti-nuclear movements is sometimes considered biased and questioned by nuclear industries (with exceptions). There are thus limited opportunities for anti-nuclear movements in Russia, Poland and Sweden related to the structure of their allies.

**Public opinion**

Movements base their actions on their perceptions of public opinion. The more social movements see public opinion aligning with their ideas, the more they can rely on it. According to most interviewees in Russia, public opinion is rather negative towards nuclear energy development, in particular if the question is about building a nuclear power plant in the region of a respondent (G, environmental NGO, Russia; R, environmental NGO, Russia; H, environmental NGO, Russia). The interviewee states that public opinion helps them in their work and they rely on it. They also connected citizens’ negative opinions regarding nuclear energy with citizens’ direct and indirect experiences with nuclear energy. One instance would be when a neighbor took part in the clean-up of the Chernobyl accident, but now is experiencing health issues and yet does not receive any benefits and is seemingly forgotten by the state, certainly leaving an

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\(^4\) Coalition Clean Baltic is a non-profit association comprised of non-governmental environmental organizations in the Baltic Sea region. More information at the official webpage, Available at http://www.ccb.se/about-cc accessed 11 January 2017
impression. It makes citizens consider the consequences of potential nuclear accidents. According to interviewee R (environmental NGO, Russia) there is technocratic romanticism among the population left over from the Soviet times, and citizens believe in the power of Soviet, and nowadays Russian, science. This belief in science, and in particular nuclear science, leaves citizens without direct contact with nuclear power plants a positive impression regarding nuclear energy.

The matter of public opinion did not come up in the interviews in Poland as it did in Russia. The interviewees rather pointed to the processes of individualization going on since the fall of the communist regime (D, environmental NGO, Poland). Most of the interviewees said that they are interested in influencing public opinion, but they did not discuss public opinion as an opportunity. The early stage of the nuclear program and absence of the nuclear power plants in operation could provide some insight. In Poland, the anti-nuclear movements consider that, in general, citizens do not want to live close to a nuclear power plant and thus there is some potential for wider mobilization (M, local anti-nuclear group, Poland). Interviewee F (local anti-nuclear group, Poland) emphasizes that mobilization depends on knowledge and awareness about the issue in the society. However, there is not much public awareness about nuclear energy (O, researcher, Poland).

Swedish activists argue that “there has been more interest [to nuclear energy] after Fukushima” (B, environmental NGO, Sweden) and catastrophes like the accident at the Fukushima Daiichi power plant can change public opinion or at least bring more attention to the issue. But for the accidents to have an effect on nuclear energy programs, public opinion before an accident should also be different. In the words of one activist:

That got a little dented after the Fukushima I would say but we were not in the same position as Germany in terms of public opinion before the disaster. It has influenced public opinion, so if an accident happens then we would really have a debate and discussion, but it was not lifted because what can you say to nuclear opponents. Many were very focused on climate issues when it comes to energy policy and nuclear energy’s friends did not want to go out and to discuss because they felt that now it is still heading in the right direction (G, environmental NGO, Sweden).

According to Swedish activists, people trust authorities, politicians and the nuclear industry because they think that nuclear energy is “a little bit
complicated” and authorities have set rules and take care of the issue accordingly and “one can rely on it” (Z, environmental NGO, Sweden). Citizens follow authorities in accepting nuclear energy, according to the Swedish activists. Activists say that people believe that what politicians do is for the good:

It is as it has always been in Sweden to have a kind of faith in the government or authority. They know what they are doing and make for the good. It fits very well with the image of everyone trying to keep problems outside. As with for example carbon dioxide. That the most difficult problems can only be handled by the authorities and politicians. “They will handle it fine and I do not need to worry about it. They say that nuclear power is good, it is perhaps that and I cannot be bothered” (T, local anti-nuclear group, Sweden).

The explanation for public opinion positive to nuclear energy comes from the general consensus culture of Sweden, according to P (environmental NGO, Sweden). But authorities are not the same in the era of globalization, “not the same as they were 20–30 years ago” (P, environmental NGO, Sweden).

According to activists, nuclear energy seems to have become too much of a question for technical minds to decide in Sweden. Interviewee G considers that nuclear energy has been far too long discussed by technicians and there ought to be a public discussion on this matter, especially because “the technicians are not good enough to capture the ethical dimensions” (G, environmental NGO, Sweden).

While the activists in Russia and Poland believe that citizens will be naturally against nuclear energy as they see the consequences, in particular in the regions of their residences, in Sweden anti-nuclear movements rather agree that citizens have a more accepting stance towards nuclear energy. Swedish activists probably trust public opinion polls more, as Russian and Polish interviewees shared general skepticism of public opinion polls. Public opinion is certainly seen as a resource by anti-nuclear movements, although it is rather very unpredictable and hard to rely on.

To sum up, anti-nuclear movements in Russia, Poland and Sweden consider public opinion to be supportive of the anti-nuclear agenda. However, they also note that there is a considerable difference between the national versus the local levels. At the national level, activists in the three countries see that there are citizens that support nuclear energy; however they consider that as soon as nuclear energy is near citizens, there will be a
change in opinion. Anti-nuclear movements in general seem to perceive that their ideas are more supported at the local level than at the national level, where the matter of nuclear energy is quite abstract for citizens from regions that do not have nuclear energy facilities.

Fragmented media opportunities

Opportunities for anti-nuclear movements also depend on access to national and local media, for disseminating the anti-nuclear agenda and attracting more supporters. The media is an important arena for social movements, and without it, events such as protests and actions are not visible (Carroll & Ratner 1999).

In Russia, activists see media opportunities as fragmented. The dissemination of an anti-nuclear agenda is certainly considered to be problematic by the movements. They mention rare chances to see the representatives of the anti-nuclear movement on federal TV channels (“one or two times I saw him [one of the leading figures in the anti-nuclear movement] on this channel” T (environmental NGO, Russia)). The respondent G (environmental NGO, Russia) argues that “critics of nuclear industry is taboo on federal television channels.” There are more opportunities in local or regional media, while much less in national media (T, environmental NGO, Russia). The respondent F (environmental NGO, Russia) mentions intensification of censorship in the media: “previously, it was easier to attract media attention to this or that information about the dangers of nuclear energy.” However, such a situation with the media does not seem to concern only nuclear energy:

Fewer opportunities for any environmental information - this is a fact, in the last fifteen, twenty years – there is much less opportunity for any environmentally-oriented information to anyone, not just related to the anti-nuclear movement, for anyone, for anti-chemical for anti-missile [information]. Everything is under the influence of cash flows. The ideology of “investments at any cost”, “profit at any cost” automatically flushes environmental information from the media (H, environmental NGO, Russia).

Poland’s national media does not engage in the theme of nuclear energy and there is little evidence of discussion there (O, researcher, Poland). Activists acknowledge that it is hard to interest the national media with the theme of nuclear energy (F, local anti-nuclear group, Poland). Many of them say that it is most important that the picture reproduced in the
national media is unified and there is no alternative voice; yet nuclear energy is presented as a theme discussed by experts. The national media is seen as reproducing the same mode of communication chosen by the decision-makers because there is almost no discussion in the national media (Y, local anti-nuclear group, Poland). The situation is generally characterized as:

> If you can only see Polish literature and Polish media you will think that nuclear power is cheap, clean and nuclear waste problem has been solved. That’s what you think if you read the media here. We have huge problem in the media. I mean there is no public debate. There has not been any public debate at all in the media (N, environmental NGO, Poland).

Despite this, they consider this channel of influencing public opinion very important because “this [creating public awareness through media] is really what counts” (C, local anti-nuclear group, Poland). However, local and alternative sources of the media are more accessible for the movements, such as local newspapers. Radio Maryja which is a religious and conservative radio station that is associated with the political opposition has been one of the channels for delivering anti-nuclear messages, according to some activists.

In Sweden, media opportunities are limited (P, environmental NGO, Sweden). For instance, the interviewee X (environmental NGO, Sweden) saw that information about the movements was published in a newspaper’s Culture section “which not many read”. Media attention is, after all, the most important for the movement since “if you are not in the media you do not exist” (B, environmental NGO, Sweden). If one writes a debate article and sends it to the national media, it can be difficult to have it published (H, local anti-nuclear group, Sweden). The media is also considered “homogeneous” (B, environmental NGO, Sweden). Swedish interviewee B (environmental NGO, Sweden) notices that the media creates fixed positive images of nuclear energy from its relation to climate change. Swedish interviewees state that nuclear energy is “not actively discussed in Swedish press” (K, environmental NGO, Sweden) and this is the main problem with the media.

> You have the experts and everything and then you notice that they never call here [to NGO dealing with nuclear energy]. We have the knowledge of the questions but I have been at the office for two years - media never
call here and ask us. So the biggest challenge is that there has been an organization … and journalists do not even contact the office to invite to those programs [TV, radio]. But they invite the Green Party, to talk about nuclear power, they invite the Green Party. But we do not count (P, environmental NGO, Sweden).

However, there are more opportunities to deliver opinions in the regional media. Most interviewees agree that it has been easier to publish something in regional newspapers and speak on regional radio.

It seems that the press has taken it upon themselves not to engage in this topic. The radio is a little bit better, they might still have some of their environmental programs. Maybe because people do not listen so much to the radio. It is difficult to get into the letters to the editor for people (insändarsidor för folk). In any case, in those major national newspapers. It is easier locally (B, environmental NGO, Sweden).

Some believe radio is preferable (B, environmental NGO, Sweden). Others admit that there are only two newspapers in their commune (Q, local anti-nuclear group, Sweden), so there is no great choice for them. Local media opportunities are limited due to the scope and audience coverage of local media channels in comparison with national media. The bigger organizations like Greenpeace have more options as they are a well-known actor in environmental politics, and are noticed by the media when they engage in some action or publish a report. The media’s scarce attention to nuclear energy creates a problem for finding new supporters and members of the movement because “The public gets its information through the usual methods, for example TV, radio and newspapers so they do not usually come in contact with critical information.” (U, environmental NGO, Sweden). “If there was more in the newspapers (about nuclear energy), it would be a bit easier” (U, environmental NGO, Sweden). In fact it seems that limited media opportunities are identified by the activists as one of the main challenges in their work.

In the three contexts, there are more opportunities to be noticed at the local and regional levels, and much less at the national level, and this is a constraint for movements attracting supporters from other regions. National media opportunities are deemed to be limited in all three countries. The activists offer three explanations for this. First, the activists think that the media is steered by the elite groups who are interested in promoting nuclear energy or who have tight relations with energy com-
panies. This also relates to the emphasis on a strong nuclear lobby. Second, nuclear energy issues are regionally bound and are discussed in relation to a certain location. According to the movements, the national media does not find these issues worth writing about and rather consider them to belong to the regional level. Third, the national media does not see nuclear energy as an issue for public discussion as it seems to be a settled matter. As nuclear energy is presented as a joint decision between the state, the companies and society in Sweden, the nuclear energy program does not attract so much media attention because there seems no point in discussing something if everyone agrees with each other.

There is alternative media that anti-nuclear movements use – social media and web pages in the internet. Anti-nuclear movements in Russia, Poland and Sweden use the internet as radical media defined by Downing as platforms for an alternative vision to hegemonic policies, priorities, and perspectives (Downing 2001: v). In Russia the internet is an important channel for communication for anti-nuclear activists, but it is just an “air hole” (рус. Отдушина) that provides some space for discussions, according to the interviewee S (environmental NGO, Russia). It is only a limited part of the society that has an internet connection and uses it for the purpose of receiving news. Anti-nuclear activists consider the internet provides limited opportunities since the “online community – it is a very narrow community, the blogosphere – if it is only for the spread of any extraordinary events, reports of extraordinary events, notice to some people” (H, environmental NGO, Russia). Another interviewee comments that

the internet, of course, remains. It is still more or less free space. The regional media remains. Because it is impossible to get in the national official channels on the TV. Neither on the anniversary of Fukushima, or the anniversary of the Chernobyl disaster the correct information will not be there. There will be a point of view beneficial for nuclear industry (F, environmental NGO, Russia).

According to Polish interviewees, the internet is deemed to have a crucial significance in Poland because it helps to spread information (O, researcher, Poland). Interviewee O underlines the importance of the internet as the communicative space that leaves a “footprint”, since it is not easy and sometimes impossible to erase information from there and the things that happen there remain for a long time. According to interviewee F (local anti-nuclear group, Poland), the internet is of significant importance, much more so than the national Polish media. Interviewee I (researcher, Poland)
considers the internet as the main source of communication. The opportunities that Facebook offers as a social network that easily connects people, and its ability to disseminate information fast is notable. The activities on the internet seem to have more impact than some local activities (O, researcher, Poland). According to Swedish activists, the internet presents opportunities, but it also takes them away as liking a web page maybe considered enough for expressing a concern (K, environmental NGO, Sweden). Internet media resources such as homepages and social media is very much appreciated and used in Sweden (U, environmental NGO, Sweden; X, environmental NGO, Sweden). To be against something means to take responsibility to protest against it, not only on the internet:

Many people think that “I click only on the things I like on Facebook so I will be listened to by politicians”. I do not know how people think. Democracy is of course not that all get their way without having done anything for it. You have to go out into the street and protest. Then you actually have the chance to influence (T, local anti-nuclear group, Sweden).

To sum up, it seems that the national media does not consider nuclear energy projects a topical issue of national concern. The media is dependent on public discourse on nuclear energy as they see how the wind blows and approach the urgent public matters. As it was shown in the previous chapter on discursive opportunities, public discourses rather communicate the apolitical nature of current nuclear energy policies, thus eliminating the public relevance of nuclear energy programs. The media’s attention to nuclear energy at the regional level may create opportunities to mobilize the local population of those regions, but it does not have impact at the national level. With the seemingly closed nature of national media due to varying reasons, anti-nuclear movements in Russia, Poland and Sweden have little opportunity to expand from the places where they are located, regions that they are connected to at the national level. The closeness of the media relates to public discourse (not interested to discuss nuclear energy) or can be caused intentionally (nuclear energy is not allowed to be discussed (censored) in the national media). There are few opportunities to change the public discourse on nuclear energy or attract new supporters within limited national media opportunities.

To conclude this section, anti-nuclear movements perceive that they have some allies: political parties with varying degrees of power, experts, international cooperation, and public opinion positive to the anti-nuclear
agenda in the localities where nuclear power is present or planned, and attention from local and regional media. However, none of these allies are really crucial for providing opportunities arising from their cooperation to change the situation with nuclear energy development at the national level. Limited opportunities in the national media may be connected with limited interest regarding nuclear energy expressed in public opinion at the national level. It is crucial that most of the support that anti-nuclear movements identify comes from the local and regional levels. Therefore, anti-nuclear movements have different opportunities at the local and national levels. Anti-nuclear movements seem to perceive that they do not have broad coverage beyond the regions of their origins or their spaces in the internet; such fragmentation could contribute to an understanding of the limitations for organizing mass campaigns.

7.3 Stability of power balance

Stability of power balance refers to the presence or absence of a political split in the government and political leadership turnover in general (Zdravomyslova 1993). A more stable power balance indicates less possibilities for a social movement to intervene and to influence nuclear energy programs. In this thesis, stability of power balance is understood only from the perspective of whether movements can change the situation with nuclear energy. To study the stability of power balance, the interviewees were asked whether and how they see possibilities to change the situation with nuclear energy. 

Russian activists do not observe opportunities for changing nuclear energy policy and the course of nuclear energy development. They focus on three different aspects in their interpretations of the present situation and opportunities. One group of activists emphasizes that the development of nuclear energy in Russia is a political process, so the shift of nuclear energy policy would require political changes (H, environmental NGO, Russia). Political change could mean a change of opinions among the elites or a change of elites. Another group expressed a position that the development of nuclear energy in general could be stopped only by a conscious recognition of the consequences of global nuclear catastrophes (T, environmental NGO, Russia). Regional politics is still more permissive and could be influenced, while national politics is not (T, environmental NGO, Russia). Even though opinions about nuclear energy among politicians seem to be
static at the moment, Russian activists together acknowledge that the political situation may change. “It is unlikely to depend on us but basically everything happens and everything is possible and it is something difficult to predict” as one of the activists puts it (O, environmental NGO, Russia). Although Russian anti-nuclear movements perceive that there are few opportunities for them to change nuclear energy programs, they still see a number of opportunities for how they can contribute.

According to some Russian activists, the shift of the focus from confrontation to discussion with the industry is a mechanism for adapting local groups and environmental organizations to current circumstances. Not all actors in movements agree to this, but the idea did appear in several interviews. The activists may refocus from an immediate phase-out of nuclear energy to joint work with the nuclear industry on such aspects of nuclear energy development as social matters (O, environmental NGO, Russia; G, environmental NGO, Russia), finding an acceptable way of dealing with nuclear waste or development of the democratic culture among stakeholders (B, environmental NGO, Russia). As the interviewee B emphasizes, there are several issues that humanity has to deal with already now, for instance, the phasing out of outdated and used nuclear reactors.

Russian movements are divided on the matter of whether discussion with the nuclear industry should take place at all. There are some activists who consider that no discussion is possible because activists and the energy companies are opponents (R, environmental NGO, Russia) and there is a struggle between them (рус. борьба) (G, environmental NGO, Russia). This part of the environmental movement is often referred to as “radical” by representatives of the nuclear industry, by other environmental organizations (L, environmental NGO, Russia) and also by themselves (T, environmental NGO, Russia). Others think that participation in discussions and various meetings could be taken advantage of, and used for misrepresenting anti-nuclear actors as a possibly convinced and co-opted group. However, the groups who attend the meetings consider that participation through existing channels is better than not being engaged at all, as it means being included in at least the flows of information. Varying opinions regarding this issue could influence the choice of nonconfrontational and confrontational actions differently.

The anti-nuclear activists in Poland do not consider it possible to change nuclear energy policies. However, they anticipate that these policies will be changed anyway and the nuclear power plant project will be stopped. It is not a question of “whether we will be able to stop it but what will in the end
stop it” (N, environmental NGO, Poland). “The only problem that we see is and the question that is now top for me is: how much money is going to be lost before that conclusion is drawn” (N, environmental NGO, Poland). Although interviewees are certain that nuclear plans will be changed, they are unsure exactly how it will happen. For instance, interviewee O (researcher, Poland) considers that the market situation and renewable energy will change the nuclear energy project. A change of the government could also affect the current situation (H, environmental NGO, Poland).

Within the long history of the nuclear energy sector (Russia), discussion becomes possible regarding some aspects of the nuclear energy industry, such as the decommissioning of the old reactors, the lack of discussion, and essentially, in the context with new nuclear energy program (Poland) the lack of public discussion is noted (F, local anti-nuclear group, Poland; O, researcher, Poland). This is perhaps related to there being one nuclear project at the moment and no such issues as nuclear waste or decommission that has to be dealt with.

Starting a dialogue is thus seen as a necessary step for Polish anti-nuclear movements (L, environmental NGO, Poland), because if an honest discussion is pursued including a “normal and rational way of speaking” (K, local anti-nuclear group, Poland) nuclear energy will have no chance to succeed (N, environmental NGO, Poland). According to the interviewee Y (local anti-nuclear group, Poland), if people form their opinion independently, the nuclear industry will certainly lose. Even though fair discussions are seen as a desirable development of the situation, some of the activists started to boycott all the meetings with the PGE (F, local anti-nuclear group, Poland). Apparently, it is based on no progress in the discussions taking place.

In Poland the possibilities for a change of nuclear energy plans are sometimes presented from a social psychological perspective: the more citizens recognize their own potential, the more they will be able to realize it (K, local anti-nuclear group, Poland). This understanding of change implies the continuous development of civil society and democratic values in Poland as the state that has been transforming from a post-communist country to a liberal democracy. For instance, one example is the belief of the impossibility to argue with the Tax Office (Urząd skarbowy); this belief is starting to change as citizens realize that this is just a public agency as well as the PGE is just a company (K, local anti-nuclear group, Poland).

Swedish interviewees say that they see opportunities to make an impact (Z, environmental NGO, Sweden; Q, local anti-nuclear group, Sweden; H,
local anti-nuclear group, Sweden). Swedish activists engage in other issues related to nuclear energy, mainly in discussions about nuclear waste storage since they consider they could have more influence in those issues. This also shows that contexts with a long history of the nuclear energy sector provide different opportunities than contexts with new nuclear energy programs. One of the results on the way to change is that activists managed to establish a functioning network in the northern part of Sweden (H, local anti-nuclear group, Sweden). One interviewee considered cooperation with the Green Party, securing places for anti-nuclear activists (X, environmental NGO, Sweden). There is one activist who has already begun his political career as a local politician:

Precisely because of that now I am also a local politician, I have not been before. But now I am also a local politician for the Green Party in Sweden. I work in another municipality as a local politician. Before I have only worked in environmental organizations, I did not want to be a local politician because I think it seems like a really boring job. But during this process, I have seen that local politicians have so much to say. They decide almost the most important issues for the public in Sweden. School, how they should look like. Healthcare, how it should look like. The tax, how much to pay. Infrastructure, communications, streets and everything. These are local matters. This means that those we choose to be local politicians, there are those that show which direction we should have in the future (Q, local anti-nuclear group, Sweden).

Although this may not be an option for many activists, it can still work for some, particularly those who have had experience in state agencies and used their skills as resources in the movement (H, local anti-nuclear group, Sweden).

Swedish activists also notice that metaphorical expressions could change people’s understanding of the problem. The problem of nuclear waste disposal and its relation to the nuclear industry is similar to Polish activists claiming the need to re-define relations with authorities.

But the problem is that we do solve not a waste problem. We solve the nuclear industry’s waste problem. For the solution of nuclear technology, the nuclear power ... The only solution to escape the problem is to shut down nuclear power plants and do not produce more waste. But somewhere it has succeeded in doing this metaphorical change so that we sort of think that we take responsibility for humanity when we actually take responsibility for the problems facing the industry (Q, local anti-nuclear group, Sweden).
Indeed, a number of activists see the possibility to make an impact by working on changing public discourse and disrupting dominant rhetorics on nuclear energy. Swedish activists see that changes of public opinion will lead to parties with anti-nuclear policies getting more votes in the next election. This means that Swedish activists see opportunities in political turnover in Parliament.

There are parties with anti-nuclear views in Sweden, one party with an anti-nuclear position in Poland and no parties in Parliament protesting against nuclear energy in Russia. This difference in the parties’ disposition regarding nuclear energy results in different opportunities for anti-nuclear movements in case there is a political change in the parliaments. The activists’ perceptions of opportunities to influence voting behavior is connected to their perceptions about available political channels and the presence of political parties with similar views. Activists from different contexts have varying aspirations regarding how they can act within their political systems, with or without relying on parties with views similar to theirs getting into Parliament.

To conclude, anti-nuclear movements seem to perceive that they have limited opportunities for changing the course of nuclear energy programs. These opportunities guide their strategies. They do not plan to alter the course of nuclear energy industry drastically, but they could still be active in some way. In case there is a possibility to be involved in the discussion where activists could make an impact, they would take on these opportunities. This has occurred in contexts where other issues such as nuclear decommissioning and nuclear waste storage have been discussed (Russia and Sweden). In contexts with less institutional channels (Poland), activists see possibilities to change the power balance by initiating a public discussion on nuclear energy that is their priority. In context with the active presence of political parties with similar views, activists consider their ideas to be able to gain power as the result of the political turnover in Parliament (Sweden).

7.4 Concluding remarks

This chapter has investigated how activists from anti-nuclear movements perceive their political opportunities. Perceptions of their political opportunities play a role in the choice of nonconfrontational or confrontational actions. Political opportunities are perceived as limited in Russia,
Poland and Sweden to varying degrees. Political contexts of anti-nuclear movements suggest nonconfrontational strategies due to the lack of national media attention or/and open structures and also due to some opportunities for influencing the nuclear energy sector through institutional channels.

The presence of institutional channels is crucial for the choice of nonconfrontational actions of anti-nuclear movements. As most of the respondents stated, there are some opportunities to take part in discussions of nuclear energy. However, they repeatedly state that the presence of such channels may not necessarily lead to them being heard or their points taken into consideration. The conclusion is that perceptions about presence of any kind of institutional channels are probably even more important for the choice of actions than, for instance, different political regimes. Different political contexts lead to engagement in various kinds of institutional channels, and in democratic contexts (Sweden) there is more trust in political systems and thus activists deliver their opinions with the aid of political parties. In democratic contexts, activists may also rely on freedom of expression and functioning of the judicial system (Poland and Sweden). They consider political parties as possible allies and they think about changing the situation through established political channels. In less democratic contexts (Russia), activists do not really consider these channels. The bottom line for opting for nonconfrontational actions is not through the kind of institutional channels movements engage in, but the presence of these institutional channels at all. This could be an important contribution to the understanding of the concept of political opportunities.

It is the phase the nuclear energy industry is actually in that appears to be crucial for the existence and availability of institutional channels for anti-nuclear movements. In contexts with a long history of nuclear industry, as in Russian and Swedish contexts, environmental NGOs have opportunities to act through public committees, meetings with energy companies and similar activities, to be included in the discussions on decommissioning and nuclear waste storage. However, in the context of a new nuclear industry (Polish context), there are no such opportunities, and this points to a more closed context and suggests more confrontational strategies. In Poland, with the possibility to intervene in political discussions about nuclear energy, activists are more prone to confrontational actions, while in Russia and Sweden relatively open political structures and opportunities to discuss other issues prompts activists for more nonconfrontational actions, thus strengthening the argument of Kitschelt about the role of political
opportunities (1986). At the same time this study brings forward the idea that institutional channels that are indirectly related to the analyzed issue should be taken into account as well, as they may matter for the choice of actions. For instance, it seems that environmental NGOs would rather engage in discussions of nuclear decommissioning than turn to confrontational actions because they do not have opportunities to discuss nuclear energy development.

There are few opportunities to publish critical stakes on nuclear energy in the media, in particular at the national level, and to attract more members to the movements, according to activists. Aspects related to the media seem crucial for actions of anti-nuclear movements in Russia, Poland and Sweden. This aspect of political opportunities needs to be incorporated into the concept of political opportunities as one of the permanent aspects that characterize the political contexts of social movements.

It is of significant importance that activists consider that their political opportunities are different at local and national levels. There are more opportunities to take part in some institutional channels for public participation, although with limited opportunities to be heard at the national level. At the local level opportunities come from local support; there are limited opportunities to engage in institutional channels, but this is balanced by broader opportunities to attract local media attention and supporting public opinion. Different kinds of organizations operate on different kinds of levels, with environmental NGOs mainly at the national level and local anti-nuclear groups at the local level. As opportunities are perceived differently at these levels, environmental NGOs and local anti-nuclear groups engage in different kind of actions. Environmental NGOs have more opportunities for nonconfrontational actions while local anti-nuclear groups have more opportunities for confrontational actions. It appears that movement actions need to be distinguished on local and national levels for a better understanding of these actions.

Both discursive and political opportunities for anti-nuclear movements have been discussed in Chapters 4–7. Now the findings from those chapters will be brought together for analysis. This includes the action repertoires of anti-nuclear movements from the perspective of their opportunities and in connection with actions that have taken place within the studied time period.
This chapter analyzes repertoires of anti-nuclear movements by scrutinizing their actions in relation to the findings in Chapters 4–7. The study of nuclear energy discourses in Chapters 4–6 demonstrates that the discursive opportunities of anti-nuclear movements are quite similar. Chapter 7 showed that environmental NGOs and local anti-nuclear groups have varying perceptions about political opportunities. Perceptions differ because these actors operate at different levels, national and local respectively. In addition, perceptions about political opportunities lead environmental NGOs to adopt nonconfrontational strategies at the national level. Local anti-nuclear groups perceive political opportunities differently than environmental NGOs do, and this leads them to adopt confrontational strategies at the local level. Given the findings in Chapter 7, it is necessary to analyze repertoires of anti-nuclear movements as repertoires of environmental NGOs and of local anti-nuclear groups. This distinction between two kinds of actors will be followed in this chapter since repertoires of social movements depend on the capacity for coalition building among actors in movements. This chapter begins with an analysis of nonconfrontational and confrontational action repertoires, and what kind of actions environmental NGOs and local anti-nuclear groups carry out. Actions are analyzed from the perspective of political and discursive contexts where they take place. After that, an analysis of how anti-nuclear movements as whole, consisting of environmental NGOs and local anti-nuclear groups, carry out collective actions together is presented.
8.1. Nonconfrontational strategies: engaging through institutional channels and influencing public opinion

Anti-nuclear movements in the three studied contexts carry out nonconfrontational actions of two kinds, which is similar to categorization of actions found in Dalton et al (2003). The first kind of actions includes participation through institutional channels, such as contacts with political parties, various kinds of meetings between different groups of actors (e.g. forums, panel discussions) and public consultations. The second kind of nonconfrontational actions is influencing public opinion. This section is structured with the first and second subsections discussing nonconfrontational actions through institutional channels of environmental NGOs and of local anti-nuclear groups respectively. The third subsection discusses actions aimed at influencing public opinion by both environmental NGOs and local anti-nuclear groups.

Environmental NGOs acting through institutional channels

The study of action repertoires of environmental NGOs in the three studied contexts reveals that environmental NGOs indicated they have access to three types of institutional channels: (a) interaction with political parties; (b) taking part in state committees and working groups; and (c) public reviews and public consultations during the EIA procedures. Respondents from different NGOs stated that they have access to some institutional channels, but not necessarily to all of them. In general, Russian and Polish environmental NGOs consider the possibilities to act through institutional channels to be rather limited while Swedish environmental organizations stated that both formal and informal contacts with authorities and energy companies are common. The fact that environmental NGOs engage through institutional channels indicates that these actors have professionalized. This strengthens the general argument about the professionalization of environmental movements (e.g. Mol 2000, Dalton 2015).

Some environmental NGOs interact with political parties, the first type of institutional channel. NGOs may use their connections with parties for delivering ideas and opinions to decision-makers, doing so through party politics, if parties take into account the movements’ claims. Although both environmental NGOs and local anti-nuclear groups may be engaged in this type of action, it seems that it is mostly environmental NGOs that have taken interest in it. Swedish respondents perceive communication with political parties as a much more possible strategy than Russian and Polish
respondents do in the interviews. Positive perceptions about possibilities to change the power balance regarding nuclear energy together with positive perceptions about opportunities to cooperate or at least interact with political parties lead Swedish respondents to consider engaging in political processes through political parties.

At the same time, NGOs are less interested in engaging with political parties in the contexts with lower trust of their political systems and where NGOs perceive limited and very limited opportunities to change the power balance regarding the issue of nuclear energy, as in the Polish and Russian cases. Political trust in political institutions is considered to be lower in these contexts since some activists feel vulnerable because they connect some events that I consider to be of a repressive nature to their anti-nuclear positions. Several activists used to be engaged politically before the studied period or are currently engaged to a minor extent. Interaction with political parties seems to be connected to perceptions about political regimes since, in the context of an established democracy (Sweden), respondents consider interaction with political parties (a kind of lobbying) to be a nonconfrontational strategy more often than in new democratic contexts (Poland) or less democratic contexts (Russia). The concept of political opportunities thus help us to understand why environmental NGOs focus on some institutional channels rather than others.

From time to time, environmental NGOs receive access for participation in state committees, working groups, conferences, forums and other forms of interaction with a wide spectrum of the concerned actors, in particular authorities and the nuclear energy industry, the second type of institutional channel. Some examples follow. The environmental NGO Bellona as well as several environmental NGOs have been members of Public Council of Rosatom at different points of time. Polish Greenpeace and the Committee Against Nuclear Power in Żarnowiec participated in the conference in Sejm, called “YES for energy democracy. NO for Polish Fukushima”. The Swedish environmental organizations MILKAS and MKG have been part of the working group on nuclear waste storage led by SKB. As activists perceive that they have access to some state committees and working groups, at least on the formal level and even if they have the possibility to be present but not necessarily heard, they are able to engage through this kind of institu-

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1 Political regimes are presented according to perceptions of respondents and not according to any analytical classification of regimes.
tional channel. This illustrates the argument on the connection between access to institutional channels and choice of nonconfrontational strategy (e.g. Kitschelt 1986). This second type of institutional channel may be regulated by law or provided by energy companies. Large-scale energy companies could organize meetings (e.g. in the form of extra participatory mechanisms), meaning more opportunities for nonconfrontational actions. That is the case with Forum-Dialogue organized by Rosatom, the meeting point for the nuclear energy industry and public in Russia. The point worth making here is that perceptions that there are some formal channels do not have to come from legally embedded participatory mechanisms, but can be the reflection of ad hoc meetings, such as those organized by the nuclear energy company in Russia. The effect of these ad hoc meetings is similar to participatory mechanisms regulated by law: environmental NGOs have some possibilities to carry out nonconfrontational actions. While the concept of political opportunities usually refers to the political system, the case with ad hoc meetings established by energy companies suggests that in some cases large-scale business have a significant impact on action repertoires. A similar argument has been made by Gustafsson (2015). This concept thus has to be used flexibly enough in order to accommodate situations with the role of large-scale business as described here (or potentially some other crucial stakeholders).

Possibilities to write public reviews of projects and take part in public consultations during the Environmental Impact Assessment procedures is the third kind of institutional channel that environmental NGOs may engage in. Although public consultations are targeted at local populations, sometimes activists from environmental NGOs visit public consultations as well. The presence of these institutional channels in the three studied contexts leads to perceiving political systems as relatively open or open, even though these channels are not activated in all contexts (not in Sweden). To my knowledge, public consultations during the Environmental Impact Assessment procedures have not taken place yet. There have not been any public consultations organized in Sweden because no decisions regarding replacing reactors have been made. However, it has been possible to discuss nuclear energy policy due to the procedure of referrals (remiss) where some actors in society, including several environmental NGOs, were invited to comment the proposal. In general, as activists perceive that they could express their opinions through the three different kinds of institutional channels, they acknowledge that there are opportunities for nonconfrontational actions. The study of anti-nuclear movements in the
three studied contexts strengthens the argument of Kitschelt that social movements tend to carry out nonconfrontational actions if their political contexts provide opportunities for these kinds of actions (1986, also by Piven & Cloward (1979)). Access to institutional channels are such opportunities. As environmental NGOs have access to institutional channels for communicating with authorities and energy companies, they engage in nonconfrontational actions.

However, NGOs often do not perceive interactions through institutional channels as real channels for influence. Opportunities to make an impact during various meetings are limited because nuclear energy companies hold significant power in their hands, according to the respondents. For instance, nuclear energy companies can change the usage of language and the ways in which interactions with civil society are organized. I argue in this thesis along with the researchers who introduced the concept of discursive opportunities (e.g. Ferree 2002, Koopmans & Duyvendak 1995, Koopmans and Olzak 2004), that actions of activists have to be legitimate in discourses and there should be discursive opportunities for activists to carry out such actions. Concerns about how communication about nuclear energy is held signal that engagement of environmental NGOs through institutional channels is shaped by power over discourse (following Fairclough & Fairclough 2012:113), one of the aspects structuring the order of discourse, constitutive for discursive opportunities. Environmental NGOs perceive that they have less control over public discussions than authorities or energy companies. Their legitimacy may be questioned and they could be considered biased because they are part of social movements. This implies that environmental NGOs have less power over the discourse of nuclear energy. These perceptions sometimes cause some environmental NGOs to abstain from engaging through institutional channels or choosing carefully where they would like to engage. They consider that it may lead to co-optation or legitimation of ideas and actions of energy companies, which is more possible if NGOs have less power over discourse. Environmental NGOs that do not choose to engage in institutional channels are more involved in actions aiming to influence public opinion, which will be discussed further in this chapter. Other environmental NGOs continue to interact with authorities and energy companies despite not rating the quality of these interactions as high. This probably happens because by not doing so and avoiding them is considered even worse, as it means being excluded from the flow of information, as suggested by Dalton (1994). That could also be considered a manifestation of power over discourse as NGOs
seem to be concerned about limited information beyond institutional channels.

The limited possibility of environmental NGOs to discuss what they would like to discuss is another example of power over discourse. In particular, it is reflected in a few opportunities to discuss nuclear energy development. Such power relations over what can be discussed are overcome by occasionally provided opportunities to engage in discussions on other issues, mainly nuclear waste storage and decommissioning of old reactors. It leads to the situation that, as interviewee O puts it, environmental NGOs, instead of saying “do not build a new nuclear power station” to Rosatom, say “let us discuss how you will close the old station, as an expert with an expert” (O, environmental NGO, Russia). While in the context of old nuclear industries (Russia and Sweden) environmental NGOs have opportunities to discuss nuclear waste and decommissioning of old reactors, there are no such issues as aging reactors or nuclear waste storage to discuss in the context of a nuclear energy program in the initial stage (Poland), which seems natural at that stage of development of nuclear energy programs. Russian and Swedish environmental organizations have more opportunities for nonconfrontational actions due to the stage of development of nuclear energy programs (and despite power over discourse) than Polish environmental NGOs have. This situation exemplifies Tarrow’s argument that social movements may engage in related issues if they do not have much access to the topic they are really concerned with (1998). Asymmetrical relations of power between actors in society (between energy companies and environmental NGOs) provide the means for actors with power to control how nuclear energy is discussed. Therefore, nonconfrontational actions are shaped by power over discourse: environmental NGOs use available opportunities for nonconfrontational actions and discuss other themes related to nuclear energy, but not nuclear energy development per se. This analysis strengthens the argument of Bröer and Duyvendak (2009) that power is a crucial component of discursive opportunities, in the case of organization of communication with civil society expressed as power over discourse (to remind the reader, there is also power of discourse, discussed in Chapters 2, 4, 5 and 6).

The possibility to be engaged in institutional channels is conditioned by the identities of these actors. Identities are shaped discursively. Identities of ecologists, environmentalists and experts seem to provide opportunities for environmental NGOs to be able to take part in the meetings with authorities and energy companies. Expert identities are expressed through publishing
lengthy reports, short statements and writing public reviews of EIA materials. Expert identities of environmental NGOs may be used strategically in order to get access to these institutional channels, similar to Bernstein’s finding that movements may use their identity strategically (1997). The expert identity of environmental NGOs reflects developments in environmental discourse, in particular discourse of ecological modernization and pragmatic rhetoric of environmental movements (Mol 2000). Expert identities reflect transformations in environmental movements: professionalization of environmental NGOs has led them to enroll more people with specialized education and knowledge and therefore greater use of an expert voice. Expert kinds of actions are legitimate since they resonate with instrumental rationality and economic rhetoric that dominate discussions on nuclear energy, which is demonstrated in Chapter 6. Environmental NGOs do not only engage through institutional channels because they have these opportunities, but also because their identities are in line with this kind of action. If these organizations were not interested in engaging in technical and expert discussions they would not be interested in these channels. Both political opportunities to access institutional channels and expert identities legitimized in public discourses provide solid ground for environmental NGOs to engage in nonconfrontational actions as experts.

Expert identity of environmental NGOs also matters for engaging in institutional channels because structures of professionalized environmental NGOs often resemble structures of authorities and energy companies. I do not claim that all environmental NGOs have similar structures, but that the outlook of these structures resemble some features of authorities and energy companies, such as a clearly appointed head of an organization (instead of an informal leader) and a clear division of functions due to separation of tasks on different programs and projects in connection with expertise. Although institutional structures of environmental NGOs could look different (and they do in fact, but that is beyond the scope of analysis in this thesis), already these resembling aspects are important for interaction between environmental NGOs and other actors. This exemplifies the argument of Staggenborg, that institutional channels are more accessible for organizations whose structures resemble structures of authorities: because authorities are keen to interact with organizations whose structure they understand better (1988). Hypothetically, if environmental NGOs had very different structures from the ones of authorities and energy companies, if they acted differently (such as horizontal umbrella organizations aimed at connecting different anti-nuclear groups at the national level, and not
having to act as experts), they would have less access and also less interest in institutional channels, which consequently could lead to confrontational actions instead of nonconfrontational ones. Therefore, professionalization of these organizations matter for the choice of nonconfrontational actions. Moreover, the discussion on discourse analysis in Chapter 6 revealed that instrumental reasoning which environmental NGOs demonstrate in talking about nuclear energy and in publishing their materials (genres of analytics) resembles the way authorities and energy companies talk about nuclear energy. These different types of actors base their ideas about nuclear energy on instrumental reasoning and economic rationality. I argue that this way of reasoning about nuclear energy functions is similar to Staggenborg’s argument on similar structures. While the literature on the role of professionalization of actors in movements acknowledges the importance of similar formal structures (as in Kriesi (1996:18)), the same literature does not focus on shared ways of reasoning. As environmental NGOs base their ideas on similar reasoning as authorities and energy companies, they have more legitimacy to participate in meetings together with authorities and energy companies because they discuss nuclear energy in similar terms. Therefore, the argument of Staggenborg about resembling structures could be extended by adding resembling reasoning to the bulk of aspects that matter for the choice of nonconfrontational actions. If environmental NGOs adopt similar reasoning as that of authorities and energy companies, they have increased their opportunities to engage in institutional channels and carry out nonconfrontational actions.

To sum up, choices of nonconfrontational actions of environmental NGOs are shaped by access to institutional channels, professionalization of environmental NGOs and order of discourse that enhances pragmatic and expert rhetoric. The analysis indicates that access to institutional channels is crucial for nonconfrontational repertoires of environmental NGOs, in line with Piven and Cloward, Kitschelt and Staggenborg. At the same time it also demonstrates that the type of institutional channels activists consider it possible to engage with is not that important; in Sweden, interaction with political parties is mentioned much more often than in Russia and Poland. Therefore, it is possible to propel the argument laid out in the previous research to the next level. I argue that as long as there are institutional channels (regardless of political contexts and whether they are incorporated in the legal framework or provided by the initiative of energy companies), environmental NGOs tend to opt for nonconfrontational actions. This is only under the condition that their identities fit with these actions and they
use a similar kind of reasoning to be able to engage through institutional channels. In the three studied contexts, environmental NGOs have expert identity and use instrumental reasoning, similar to that of energy companies and authorities.

The asymmetrical power of energy companies and authorities to influence public discourse on nuclear energy makes some environmental NGOs less interested in engagement through institutional channels because of the possible legitimation of discourses that environmental NGOs oppose. Without taking into account power over discourse, it would not be possible to provide insights into why some environmental NGOs avoid engaging through institutional channels. The difference between environmental NGOs comes from priorities set by these organizations: some wish to discuss only nuclear energy development while others are ready to be engaged in discussing other issues related to nuclear energy, fully aware of not being able to discuss nuclear energy development.

Limited access of local anti-nuclear groups to institutional channels

Nonconfrontational repertoires of local anti-nuclear groups through institutional channels are shaped by similar contexts as repertoires of environmental NGOs: access to these channels, resembling structures and reasoning and legitimization of some but not other actions in discourses. The scrutiny of actions of anti-nuclear movements in the three studied contexts revealed that local anti-nuclear groups have access to two kinds of institutional channels: public consultations as a part of EIA procedures in the regions of nuclear energy construction, and organization of local referendums. Local anti-nuclear groups have much less access to institutional channels than environmental NGOs in the studied contexts.

Public consultations in EIA procedures (the first kind of institutional channels that local anti-nuclear groups can engage in), are the main meeting arena for local anti-nuclear groups, local authorities and energy companies, so they have a particular significance in the repertoire of local anti-nuclear groups. Local anti-nuclear groups take part in these consultations and voice their opinions about nuclear power projects. However, in the contexts of Russia and Poland, they argue that existing channels do not function as they should, or do not function as local groups would expect them to (there have been no public consultations on nuclear energy development organized in Sweden in the studied period). This means that while formal political opportunities to act through these
channels exist, energy companies and authorities have more power over discourse than local anti-nuclear groups in the way communication is organized in these meetings. In other words, formal access to institutional channels is conditioned by activists’ understanding of how communication is organized. If they find the organization of these consultations unacceptable, such as being granted insufficient time for raising concerns, this could make them prefer confrontational actions.

For instance, one Polish interviewee mentioned that their group stopped interacting with the energy company. Reservations about these institutional channels legitimize confrontational actions because local anti-nuclear groups seem to be unsure whether they would be heard during this consultative process. This case of participation of local anti-nuclear groups in public consultations indicates that the argument on the role of institutional channels for opting for nonconfrontational actions (among others made by Kitschelt (1986)) needs to be improved. Not only institutional channels matter, but also how discussions during meetings are structured (power over discourse) for activists to consider taking nonconfrontational actions. Therefore, the connection between the presence of institutional channels and choice of nonconfrontational actions is not comprehensively addressed without studying order of discourse, including power over discourse.

Two local anti-nuclear groups, in the Kaliningrad region in Russia and in Mielno municipality in Poland, have tried to organize referendums. Organizing referendums is the second type of institutional channel that local groups may use to put forward their opinions regarding nuclear energy development. While the attempt to organize a referendum in Kaliningrad did not succeed, the result of the local referendum in the Mielno municipality was 94% votes against a nuclear power plant in the region. However, it is unclear how the outcome of this referendum has influenced siting of the first nuclear power plant in Poland. While the referendum was not binding, it seems to have left an impression on the energy industry and authorities since this potential site was less frequently mentioned afterwards in the media (noted by several respondents). Organizing the referendum by the initiative group in Mielno could not have been possible without perceived presence of allies and positive public opinion at the local level (according to an interviewee from this group). Thus, perceptions of supportive public opinion as well as perceptions about the presence of allies at the local level matters for carrying out this kind of nonconfrontational actions. Organization of a referendum requires specific conditions, such as specific (legal) competence in the group initiating it,
support from local authorities and supportive public opinion. Legal competence is a resource which is also necessary when local anti-nuclear groups file a lawsuit, which occurs occasionally. In general, the importance of political opportunities and resources have already been identified in the previous research while analysis here just strengthens those findings of previous research.

The interviewee E (local anti-nuclear group, Russia) considers that opportunities to organize regional referendums to be very limited. The interviewee O (environmental NGO, Russia) argues that it is hard to apply for conducting a national referendum, and authorities may find reasons to decline it. Moreover, the idea of a national referendum is questioned because “how do you explain the Chukotka region, they have to decide about a nuclear power plant to be in Kaliningrad” (E, local anti-nuclear group, Russia). Regarding what the interviewee E claimed, it is clear that local public opinion is seen as largely supportive, while public opinion at the national level is perceived as supportive to a limited extent. However, public support for organizing a referendum increases when the theme of a referendum resonates with local inhabitants. Supportive public opinion occurs when discourses resonate with the public, meaning that the resonance of messages within discourses precedes public opinion. While the resonance of a movement’s messages may be to a large extent resonant in local communities, as these communities would be directly affected by the construction of a nuclear power plant, the quote with the interviewee E shows that resonance of any claims in other regions may be lower. To resonate with distant regions, anti-nuclear discourses should resonate with public discourse, which is not the case in the studied contexts because, as analysis of order of discourse in Chapter 6 showed, official discourses of nuclear energy (scrutinized in Chapter 4) resonate with broader public discourses to a larger extent. When discourses of movements do not resonate in the distant regions, these regions would hardly embrace anti-nuclear discourses. Therefore, when scrutinizing how anti-nuclear movements come to the idea of organizing referendums, we need to think about the resonance of discourses for local public rather than wider public opinion. Discursive opportunities prevail here over political opportunities because local inhabitants support some ideas if these ideas resonate with these inhabitants. Thus it is not possible to think of public opinion as a given condition.

Resonance is one of characteristics of power of discourse that matters for local anti-nuclear groups not only in terms of organization of referendums,
but also for mobilizing supporters in general. To resonate with local inhabitants, discourses have to contain clear and coherent messages. I argue that order of discourse, what is acceptable and not acceptable to say and do, is crucial for clarity and coherence of messages since to what extent movements have a clear and resonant message depends on what is possible to say discursively. Coherent and clear messages of local anti-nuclear groups would help for allying with local populations. Without coherent and clear messages, appeals to the local public could be hindered. In the interviews, activists underline the importance of a clear and understandable message. They argue that messages sent to the public and how they are expressed have to be clear and concise (G, environmental NGO, Russia). “Anyone who will do it will be engaged only when he will clearly understand what effect he gets from this action” (R, environmental NGO, Russia). People are willing to act only when they are firmly engaged or when they have a good understanding, according to interviewee F (local anti-nuclear group, Poland). The lack of awareness in society, its passivity, is a major barrier, according to another interviewee (Y, local anti-nuclear group, Russia), which could also be related to limited understanding. The interviewees acknowledge that it is not easy to involve people in the anti-nuclear movements because it is not easy to talk about certain aspects of the nuclear energy industry. For example,

We can say that it is very complicated with nuclear power and money. It’s not so easy to explain it to ordinary people. They have been told that electricity from nuclear power is cheap. So one must begin to explain this with subsidies and that nuclear power is not insured. It is only the state that insures and must pay all accident cost if it occurs. This information people do not know. Neither did I until I joined. That makes you shocked. You do not think it happens in today’s Sweden that such activities may be carried without being insured. It is clear that the holders of nuclear power plants pay into this fund waste. But the fund is so ridiculously small that it could never cover all the costs of an accident (M, local anti-nuclear group, Sweden).

As this quote demonstrates, local anti-nuclear groups consider that it is not an easy process to mobilize new members, which may also be related to what local anti-nuclear groups try to discuss with local citizens. Due to order of discourse that legitimizes primarily instrumental reasoning (economic arguments and cost-benefit assessment of viability), anti-nuclear discourses seem to have limited power of coherent and clear messages because these discourses are based on both objective and instrumental kinds
of reasoning. While the importance of political opportunities for organizing referendums is well-known from the previous research, the analysis in this thesis demonstrates how order of discourse matters for the support from local inhabitants, which is necessary for organizing referendums.

Coherence and clarity of message of local anti-nuclear groups depends on power over anti-nuclear discourses, or who contributes to reproducing anti-nuclear discourses to a larger extent. It seems that environmental NGOs reproduce anti-nuclear discourses to a significantly larger extent than local anti-nuclear groups. This is in line with Yanitsky’s argument that environmental NGOs construct frames of conflict more than local groups do, because they have resources of expertise and accumulated knowledge for developing their arguments (2011). Materials produced by environmental NGOs are the sources of information and knowledge for local groups. As the analysis of anti-nuclear discourses has demonstrated in Chapter 5, most of the materials produced by anti-nuclear movements are written in an expert voice, and both kinds of actors in the movements are related at the level of ideas and arguments against nuclear energy. Local anti-nuclear groups adopt similar types of expert language as professionalized environmental NGOs do to some extent. Local anti-nuclear groups read what activists from environmental NGOs publish on the internet. These actors also meet in person on various occasions, so it is not surprising that they adopt a similar language. Sometimes local groups invite activists from environmental NGOs to their regions. In other words, environmental NGOs seem to have more power over anti-nuclear discourses. Order of discourse, where primarily instrumental reasoning is legitimized, has affected the actions of local anti-nuclear groups. Therefore, environmental NGOs influence local anti-nuclear groups through co-constructing discursive opportunities which local anti-nuclear groups have much less opportunities to use. Local anti-nuclear groups have significantly fewer institutional channels for realizing discursive opportunities to use their expert voice or to enable both kinds of reasoning because their identity is based on their connection with the local communities and not with expert knowledge or instrumental reasoning; this is in contrast to identities of experts among environmental NGOs. Discursive opportunities for using instrumental reasoning (for instance, referring to costs of nuclear energy development) conflict with relying on the local population (political opportunity of local anti-nuclear groups) to some extent. The analysis thus shows that political and discursive opportunities could be in conflict with each other. When local anti-nuclear groups focus on justice (one
interpretation of justice could be about being listened to and having opportunities to inform others), or in other words, base their arguments on objective reasoning, their arguments are more understandable to the public. Two cases where justice has been in focus are discussed further in this chapter in the section on confrontational actions. Reconsidering the argument of Yanitsky from the perspective of action repertoires, I argue that actors that participate less in developing arguments may not have fully adequate political opportunities for using these arguments. While local anti-nuclear groups have discursive opportunities for using expert voice and instrumental reasoning, they do not have political opportunities to realize these discursive opportunities. It seems as they would use more nonconfrontational actions if they had better access to institutional channels.

In contrast to professionalized organizations in movements that have access to institutional channels and pursue nonconfrontational actions, less professionalized actors (local anti-nuclear groups) do not have similar opportunities for nonconfrontational actions. Local anti-nuclear groups have neither similar opportunities as environmental NGOs nor similar interests (which are connected to their identities) to be present at national-level meetings with authorities and energy companies (with some exception). Structures of local anti-nuclear groups, often horizontal, resemble to a limited extent structures of authorities and energy companies. Their identities are not derived from their expert knowledge, but from their connection to their local places and local citizens. They could be thus much less seen as potential partners for dialogue, which is in line with Staggenborg’s argument on professionalized actors being better included institutional channels than other kinds of actors (1988). Even if they would be accepted to discussions, local anti-nuclear groups represent only their regions and possess less expertise than environmental NGOs; they also have significantly less resources to actually take part in the meetings, including traveling to the capitals and other cities. Therefore, even though local anti-nuclear groups share discursive opportunity of using instrumental kinds of reasoning with environmental NGOs, they do not have channels for realizing these opportunities. That is because their identity is in contrast with the identity communicated in anti-nuclear discourses; they are not experts. It is also because of much less access to institutional channels where these discursive opportunities, especially instrumental reasoning, can be exercised. In spite of previous research on professionalization of environmental movements (Mol 2000, Van Der Heijden 1999), some scholars argue that professionalization has not touched all actors of civil
society, particularly local grassroots groups (for this argument in Polish and Russian contexts see Jacobsson & Saxonberg (2013) and Haliy (2008)). The analysis in this thesis strengthens the arguments of Jacobsson and Saxonberg and Haliy about the presence of grassroots activism, which is perhaps less visible to society as it does not move beyond its geographic locations.

Briefly then, the analysis demonstrates that non-professionalized actors (local anti-nuclear groups) have few institutional channels to engage in. The arguments of Piven, Cloward and Staggenborg about the connection between the choice of nonconfrontational actions and the presence of institutional channels functions in reverse for local anti-nuclear groups. With few opportunities to engage through institutional channels, actors would rather engage in confrontational actions. The analysis strengthens the findings of the previous research on the importance of resources, such as legal competence or financial resources for traveling from one region to another, and perceptions of political opportunities, cooperation with local authorities and local population. But the analysis also shows how order of discourse, power over discourse and power of discourse (all three constructing discursive opportunities) shape action repertoires of local grassroots groups. The analysis in this chapter demonstrates that both political and discursive opportunities appear to be necessary when opting for nonconfrontational actions. In circumstances where these opportunities do not overlap, nonconfrontational actions are unlikely to be used.

To sum up the first kind of nonconfrontational actions (through institutional channels), environmental NGOs are engaged through institutional channels much more than local anti-nuclear groups are. This finding supports the arguments of Kitschelt (1986) and Staggenborg (1988) that when actors in social movements perceive they have opportunities for nonconfrontational actions, they tend to carry out these kinds of actions. Conversely, actors perceiving they have less opportunities for nonconfrontational actions tend to opt for confrontational actions. However, order of discourse also contributes to such differences in the selected repertoires of environmental NGOs and local anti-nuclear groups. Environmental NGOs use expert identities adopted in anti-nuclear discourses in various institutional channels that they have access to. For environmental NGOs, political and discursive opportunities overlap. Even in having access to institutional channels, environmental NGOs abstain from taking part in some of them due to limitations in what can be expressed there and concerns about how it will be used. The role of power over discourse in
shaping actions is mostly visible in the contexts of Russia and Poland, where some of actors in anti-nuclear movements state in the interviews that they deliberately do not communicate with energy companies, although they acknowledge that they have such opportunities. Thus, asymmetric power over public discourse of nuclear energy between environmental NGOs and their opponents matters for this choice of action with environmental NGOs.

*Power of discourse* is based on using instrumental rationality, and plays out differently for environmental NGOs and local anti-nuclear groups, benefiting the former but not the latter. Political and discursive opportunities of environmental NGOs overlap. At the same time, political and discursive opportunities of local anti-nuclear groups only partially overlap, since local groups participate less in producing anti-nuclear discourses than environmental NGOs do. There are few political opportunities to actually use instrumental reasoning for local anti-nuclear groups. Focusing on instrumental reasoning among local anti-nuclear groups seems to reduce the potential for mobilizing supporters because this reasoning seems to have less appeal to the public than objective reasoning. For instance, discussions on the economy of nuclear energy seem to be less attractive in contrast to issues of justice.

**Influencing public opinion**

Anti-nuclear movements do not only use available institutional channels. They also influence public opinion and spread their ideas among the general public, which is another kind of nonconfrontational action. Public opinion could be influenced through mobilizing new supporters or changing media discourses. Changing media discourses requires access to the media (media opportunities). Following a similar logic as with institutional channels, it is possible to consider that to spread ideas through the media or direct mobilization requires opportunities for such actions. The majority of environmental NGOs are not membership-based organizations so they do not organize any specific actions for mobilizing new members while they are interested in changing public opinion through the media. Local anti-nuclear groups are engaged in both changing media discourses and mobilizing new supporters. Therefore, this thesis strengthens the argument that media opportunities are crucial for social movements because a lack of attention to an event would lead to its oblivion in the political process (Klandermans & Goslinga 1996, Carroll & Ratner 1999).
Actions aimed at influencing public opinion are not contrary to the first kind of nonconfrontational actions, engagement through institutional channels. Movements can combine different kinds of actions. Some of the organizations are performing flexible mobilizing activities:

It can probably vary a bit depending on the type of campaign that is run, which roads are the best to go. But we are working wide. We have traditional media to raise awareness of the issue and to create a debate in society and therefore engagement too. But then there is social media that is important and giving people an opportunity to get involved indirectly, by signing the petition and share information with friends and acquaintances and other networks that you are in. So that it is spread that way. But then, I also believe that it is an important part to influence human to human, it comes from below. I think that is an important part of the whole. Individual meetings and such. We have people knocking on the door and go to the people in town and ask if they would like to support us and how they view the environment and climate challenges we face and if they are willing to engage in or support us in this work. It becomes also a form of dialogue and opportunities for engagement. But which one is the most important, I think depends on what kind of campaign we run. It depends also on what kind of target group we have in the specific campaign (Z, environmental NGO, Sweden).

This quote resonates with Dalton’s findings that flexibility in actions is crucial for environmental organizations if they are to achieve their goals (1994). The respondent from the environmental organization in this quote argues that variation in actions is important because it reaches the public at different levels. However, as Dalton notes, only established and resourceful environmental organizations can afford such variation, which is also the case of the environmental organization in this quote.

As has been noted earlier, some environmental NGOs opt for influencing public opinion rather than using available institutional channels because opportunities to discuss what they want to discuss – nuclear energy development and not something else – are limited through these channels, according to the interviewees. They either do not use or use to a limited extent available opportunities for discussing issues other than nuclear energy development; one example would be discussing nuclear waste and decommissioning instead of nuclear energy development. Such a strategy is more common in contexts of a stable power balance with limited possibilities to change the situation with nuclear energy (Russia and Poland), since changing public discourse in general is probably one of the
few options for those who want to primarily discuss nuclear energy development.

Local anti-nuclear groups are engaged in mobilizing new supporters and influencing public opinion. Local anti-nuclear groups are dependent on the support of local citizens because this is one of the few strategies of local campaigning: to show that local population *en masse* is against nuclear energy development. Movements actively spread information about their activities through direct actions, such as spreading leaflets or engaging citizens through campaigning on the streets. Announcing their internal activities, such as film screenings, yearly meeting announcements or a lecture with guest environmentalists, these local groups do not only inform their members but they also mobilize new supporters. While Tarrow argues that conventional protest actions require engagement of large group of supporters since only in these circumstances would this protest be noticed (1998), a similar argument in fact could be made about any kind of actions carried out by local anti-nuclear groups. To make themselves visible and heard, local groups need to have supporters, both for nonconfrontational and confrontational actions. In order to be taken into account during a meeting, for example in public hearings (nonconfrontational actions), local groups need to show that they speak on behalf of some group of citizens and are not individuals speaking for themselves.

The possibilities to influence public opinion are conditioned by, among other things, the openness of the media. Anti-nuclear movements consider opportunities to deliver their agenda to the national media to be limited in Russia, Poland and Sweden, with better opportunities to reach regional or local media. Limited opportunities to have space in the national media narrow down the number of citizens who could hear about movements’ actions and possibly decide to join the movement. The public discourse that frames nuclear energy constructions as a local issue limits possibilities for anti-nuclear movements to mobilize supporters beyond the sites of planned and operating nuclear power plants. Movements can influence public opinion at regional or local levels, but due to lack of attention at the national level, they are conditioned by the limited resonance of anti-nuclear discourses, and could be on their way to oblivion in the political process at the national level. Therefore, local and national levels provide different opportunities for anti-nuclear movements and shape repertoires of movements accordingly. Considerations regarding access to local and national media again show the importance of separating actions of social movements on local and national levels. Emphasizing the role of media
attention, Carroll and Ratner (1999) do not distinguish local and national media. I argue that the distinction between local and national media can provide a more nuanced understanding of action repertoires of social movements.

The fact that anti-nuclear movements do not perceive the national media to be receptive to their messages may be interpreted in relation to resonance between anti-nuclear discourses and broader public discourses (see Chapter 6). Attention that a theme receives in the national media reflects public discourses. If there is no general interest in some theme in society, then the national media possibly would not find it desirable to highlight this theme. The presentation of nuclear energy as a local issue in public discourse provides insights to why the national media are not much interested in local issues; these issues are potentially left to the local media.

The official discourses of nuclear energy studied in Chapter 4 seem to resonate with broader public discourses to a larger extent. However, the theme of nuclear energy development does not seem to resonate in the national media since controversies of nuclear energy are often presented as solved and nuclear energy is presented through the “there-is-no-alternative” vision; this vision in turn is connected to how issues of energy security, climate change, economic development and public participation are embraced in these discourses. This means that possibilities of anti-nuclear movements to influence public opinion through the national media could be limited due to the limited resonance of their discourses. It is worth emphasizing here that access to the media can be closed because of power over discourses (some actions from the side of authorities or energy companies) but also because of power of discourses (particularly, less resonance of anti-nuclear discourses and coherence and clarity of their messages). Therefore, limited access to the media is not just something anti-nuclear movements face, but is co-constructed by anti-nuclear movements because they contribute to structuring the order of discourse with their discourses. This is a crucial argument of this thesis.

Limited access to the media leads anti-nuclear movements to explore other opportunities for spreading their messages. Environmental NGOs sometimes use their own media in the form of newspapers and journals. NGOs do not establish these media for communicating their ideas specifically on nuclear energy, but since they exist, they use these channels. The examples of such media are the newspaper Bereginya (рус. Берегиня) published by the ecological center Dront and the journal produced by Naturskyddsföreningen. However, distribution of these media is not
comparable with the national media, as the main audience of these media are those who already have shown interest in the activities of these NGOs, that is, members and activists who already support these organizations.

Environmental organizations and local anti-nuclear groups also explore opportunities to communicate their ideas through the internet. Their activities include spreading the word about their actions, informing, mobilizing supporters, and exchanging ideas about new actions. Environmental NGOs have their own websites that they use to spread information about their activities and possibly about what is going on in environmental movements. Local anti-nuclear groups tend to run a page in social networks rather than a website, although there are some exceptions, as they have less resources than environmental NGOs and sometimes need a channel to reach their followers quickly. This difference also seems to be related to efficiency. While for local anti-nuclear groups, speed of spreading information and mass outreach is important, environmental NGOs, due to the amount of information, need to categorize this information and display it in a comprehensive and lasting way so it does not disappear, as it often does in social networks. Environmental NGOs may be focused more on long-term changes. Pages of anti-nuclear groups and organizations may have thousands of followers, but activists acknowledge that few of these followers attend offline actions. The transition from online to offline support certainly requires much more effort than just making information about local campaigns and groups available. This study indicates that expectations about the capacity of the internet to mobilize new supporters may be overestimated, as has been shown elsewhere (see for instance Van Laer & Van Aelst 2010). The fact that the internet does not require similar opportunities or resources as other media and is easier to use explains why it has become crucial for anti-nuclear movements. The concept of radical media by Downing helps to understand why actors in anti-nuclear movements use their own media and the internet. Movements use their own media and the internet as platforms for challenging dominant discourses on nuclear energy, which is hardly possible to do in conventional media since these media also follow the dominant discourses which are based on the “there-is-no-alternative” vision of nuclear energy.

To sum up the second kind of nonconfrontational actions (influencing public opinion), anti-nuclear movements are engaged in bringing attention to movements and influencing public opinion through the media and through direct mobilization of new supporters to a large extent. The capacity for indirect mobilization activities through the national media is
limited due to the constraints of public discourse. The “there-is-no-alternative” vision of nuclear energy in public discourse downplays the political nature of nuclear energy development and limits the resonance of anti-nuclear discourses and thus the interest of the national media. Environmental NGOs have limited opportunities to engage in the national media, which makes them use other media channels, like their own media or the internet, instead. Local anti-nuclear groups depend on local support (including local media) as they are, after all, groups and initiatives of local citizens that campaign against some project in their region. If local anti-nuclear groups have access to local media, they may pursue confrontational actions because they can mobilize local citizens. Local anti-nuclear groups do not have opportunities to move their agenda beyond their regions because of the lack of media opportunities. This shows that the dominant public discourse on nuclear energy hinders movements’ actions carried out through the national media. The fragmentation of media opportunities at different levels for actions of social movements suggests that the argument of Caroll and Ratner on media opportunities (1999) can be extended by distinguishing between different levels of media (local and national). Thus, the analysis in this thesis shows that access to the media is very important for social movements, while limited media opportunities reflect the order of discourse and limited resonance of anti-nuclear claims regarding public discourse on nuclear energy. Media opportunities and media attention are sometimes emphasized in the political opportunities of social movements (e.g. Gamson & Meyer (1996), Meyer & Minkoff (2004)). I argue that media opportunities should receive greater weight in further studies, particularly when action repertoires are in focus. Media opportunities should be placed on the same level as aspects of political opportunities such as openness of the political system, state capacity for repression, allies and stability of power balance, although it is sometimes not regarded as one of them. Such change in understanding the concept of political opportunities would reflect the significance of media opportunities for movements’ actions. The inclusion of media opportunities to the list of four aspects of political opportunities would reflect developments of framing and discursive perspectives in social movement studies to a fuller extent.
8.2 Confrontational strategies: keeping protest up at the local level but not at the national level

This section examines the confrontational actions of anti-nuclear movements. Confrontational strategies of anti-nuclear movements are presented using Tarrow’s categorization on conventional, disruptive and violent actions (1998:104). Conventional protest actions are the most frequently occurring kind of protest actions in the three studied contexts. There have been several disruptive actions (all in Sweden). No violent protest actions were observed in the three studied contexts; anti-nuclear movements do not seem to carry out violent actions. Such a finding strengthens the argument of Tarrow that violent protests have generally become rarer (1998:94). Protests either have taken place at the local level or have been organized and attended by a few core activists in capitals and cities. There have been few protest actions with mass civic engagement in the capitals. It should be noted that this cannot be interpreted as general civic passivity, as mass demonstrations related to other social and political issues occurred in 2005-2014 in the studied countries.2 Conventional and disruptive protest actions are discussed subsequently in this section. No violent actions were observed, and are therefore not further discussed.

Conventional protests actions

There are two types of situations where conventional protest actions have taken place in the three studied contexts. The first type of situation refers to cases when movements reacted with protest actions to the announcement of specific decisions by the governments or energy companies. These kinds of actions often occur in the form of demonstrations, but also in writing petitions or collecting signatures. It is rather announcements of detailed plans than strategy or policy documents that attract the attention of anti-nuclear movements and trigger actions. One exception though, was a demonstration organized in Sweden before voting on changing the nuclear waste from foreign countries in the beginning of 2000s; the mass environmentalist campaign against the construction of Eastern Siberia – Pacific Ocean oil pipeline close to the lake Baikal in 2006; recent mass demonstrations For Free Elections in 2011–2012 in Russia; protests against signing Anti-Counterfeiting Trade Agreement (Acta) in 2012 in Poland; demonstrations by Occupy-movements and protests against the far right in Sweden.

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2 Examples of mass demonstrations are the following: protests against importing of nuclear waste from foreign countries in the beginning of 2000s; the mass environmentalist campaign against the construction of Eastern Siberia – Pacific Ocean oil pipeline close to the lake Baikal in 2006; recent mass demonstrations For Free Elections in 2011–2012 in Russia; protests against signing Anti-Counterfeiting Trade Agreement (Acta) in 2012 in Poland; demonstrations by Occupy-movements and protests against the far right in Sweden.
energy law took place. Other examples of actions were car rally from Nizhny Novgorod and Murom to Moscow and protests in front of the Finnish embassy in Stockholm organized by Nuclear Free Gulf of Bothnia (Kärnkraftsfritt Bottenviken), and network protesting against a potential nuclear power plant in Pyhäjoki, Finland.

When protest actions are organized in the capitals, they typically are organized by environmental NGOs. However, these types of action are usually small in numbers. Since environmental NGOs have possibilities for nonconfrontational actions through institutional channels and they are not membership-based organizations but rather expert kind of organizations, they do not seem to be keen on organizing mass protests. Environmental NGOs could organize a small action and make claims during this action on behalf of their formal structure and expert knowledge of professional staff, regardless of how many activists these NGOs have. Formalization and professional staff, described by Staggenborg (1988) and McCarthy and Zald (1977) as the defining features of professionalization, thus provide an opportunity for environmental NGOs to organize conventional protest actions. I argue that Tarrow’s description of conditions for organizing conventional protest actions could be extended by stating that the formal professional structure allows them to organize conventional protest actions and make claims on behalf of their formal structure even without mass engagement.

Confrontational actions are usually characteristic of local anti-nuclear groups, which are able to organize demonstrations and rallies more often and in bigger groups than environmental NGOs. The majority of the protest actions have taken place in Vladimir, Kaliningrad and Murmansk regions in Russia, Pomeranian and West Pomeranian Voivodeships in Poland, and in the Värmland, Västerbotten and Norrbotten counties in Sweden. The largest protest in the studied time-period was the demonstration of approximately 5 000 people in the town of Murom, where around 111 000 inhabitants reside. This is a significant protest for a town of this size. Conventional protest actions require participants (Tarrow 1998). Since local groups often do not have the formal structure they might appeal to, they need to mobilize additional supporters for action to be noticed. Otherwise, they could be viewed as just a few persons who have no mandate to make claims. This would neither be based on formal structure nor representation of local citizens. The limited availability of institutional channels, and at the same time positive perceptions about local public support and occasional alliances with some local actors guide local anti-
nuclear groups to undertake confrontational actions. This strengthens the argument on the connection between the presence of institutional channels and selection of nonconfrontational actions (e.g. Kitschelt 1986). Confrontational and nonconfrontational actions are not mutually exclusive, but as argued before, comparably open contexts guide activists to act through institutional channels, implying that fewer confrontational actions will occur. It is possible, but it seems unlikely that some activists participate in meetings with, for example, public authorities, and strive to make their voices heard there, while they at the same time organize disruptive and violent actions. The combination of conventional protest and nonconfrontational actions could be seen as a diversification of strategies of these movements. While it is possible for some actors in movements to diversify their strategies, others do not have the resources for this.

Even though most anti-nuclear actions occurred at the local level, the cases of Murom anti-nuclear movement and the case of the Nuclear Free Gulf of Bothnia network opposing nuclear power plants in the neighboring region and country respectively demonstrate that activists do not consider nuclear energy development to be a local issue. Since the risks of nuclear energy extend beyond the border of a region, it is not surprising that neighboring regions and countries engage in discussions of nuclear power development. Engagement of groups from other regions seems to depend on how close by nuclear constructions are carried out to neighboring regions and countries.

The second type of situation refers to conventional protest actions that represent symbolic events. This type of protest actions is even more routinized than the first kind, and therefore comprises the lowest risk for protesters. In anti-nuclear movements, the purpose of this kind of action is to commemorate nuclear catastrophes. Each year on or around April 26, anti-nuclear movements organize rallies, demonstrations, publications or other actions in commemoration of the 1986 Chernobyl catastrophe. Sometimes a movie screening or other sorts of meeting occasions are organized in parallel with demonstrations against nuclear energy. The meanings of these actions are twofold: to remind citizens about this tragedy and to emphasize that similar accidents should be avoided. This can be done by preventing construction of new nuclear reactors and by abstaining from prolonging the life cycle of those in operation. Recently, March 11th has also become commemorated worldwide, recalling the date of the accident at Fukushima Daiichi power plant in Japan in 2011. It follows a similar pattern as the one on April 26th and it has the same meaning: to
remind and to warn. Apart from these two important events, there are actions organized in relation to other dates when nuclear energy accidents occurred. The Russian organization “Nature and Youth” and Kola Ecology Center organized a meeting in commemoration of the Kyshtym accident from 1957 in the Ural Mountains. Swedish anti-nuclear movements have held activities on August 6th, the day when atomic bombs were dropped on Hiroshima in 1945. This reflects the focus of the movement, as the main umbrella organization is in fact called People’s Campaign against Nuclear Energy – Nuclear Weapons.

The connection between nuclear energy and nuclear weapons is emphasized more in Sweden than in Russia or Poland, maybe due to the aftermath of the first wave of anti-nuclear movements. These kinds of actions are almost expected every year. Symbolic actions are one of the acceptable protest actions because they are legitimate in the discourse as commemorated dates and are dates when other actors in society raise the issue of nuclear energy. The media typically covers these commemorations. Using these media opportunities, movements attempt to extend the agenda by adding relevant claims and addressing current developments in the nuclear energy industry. In raising some present-day concerns when nuclear accidents are commemorated, activists seem to attempt to increase the resonance of their message with broader public discourses. Thus, these actions do not only carry symbolic roles, but also perform other functions such as bringing attention to the movement and its messages. Actions dedicated to symbolic events illustrate how movements may carry out actions that are both legitimate in the discourses and involve comparably limited risks for protesters. This illustrates how discursive and political opportunities shape confrontational action.

Actions connected to symbolic occasions are organized both by environmental NGOs and local anti-nuclear groups. The organization of such actions by local anti-nuclear groups shows that these are actors that do not only focus on nuclear power plants nearby. This supports Fischer’s argument that local protest groups are often against construction in any region, and that they are NIABY (not-in-anyone’s-back-yard) rather than NIMBY (not-in-my-back-yard) (Fischer 2000:122). Since local anti-nuclear groups are NIABY, it is not surprising that local groups organize symbolic actions, demonstrating that their interests extend more broadly than just their present-day concerns in their own regions. However, regardless of whether activists present their activities in the framework of NIMBY or NIABY, their concerns do lie primarily in their own regions because they
are, after all, local groups. However, the fact that local anti-nuclear groups are NIABY is specifically important for analysis in the next section of coalition building between different actors in anti-nuclear movements, since this implies a potential for cooperation with other actors.

Conventional protest actions are in line with instrumental reasoning. Instrumental reasoning establishes contexts for instrumental actions, but not for more radical actions such as disruptive or violent protests. There are, however, cases where movements focus not only on instrumental reasoning (implying cost-benefit assessment) but also on objective reasoning (such as reference to justice and assessment of an issue in itself). It is worth noting that it could be the result of a strategic choice to frame a message in one or another way, but that it is not necessarily so. The largest protests against nuclear energy development with broad public support of anti-nuclear movements took place in two cases when injustices had been emphasized. Calling for justice demonstrates that objective reasoning rather than instrumental reasoning has been employed in these cases. This means that activists focus less on the viability of nuclear energy development and cost-benefit assessments of these plans, and more on the developing nuclear energy per se. The two cases with high degrees of perceived injustice were the actions in Murom, Russia, and Mielno municipality, Poland. Murom is located near the border with Nizhny Novgorod region. A potential nuclear power plant would have been built very close to Murom, but far from the city of Nizhny Novgorod. A public hearing was at first organized only in the region of Nizhny Novgorod. This is the first source of perceived injustice. The second is the claimed mismatch between assessment of the grounds for a nuclear power plant construction and the political decision to construct a plant there. The ground is considered inappropriate for heavy construction since the location is characterized by karst terrain, a form of ground filled with air holes, meaning there is a high risk of land collapse.

In Mielno municipality, injustice comes from the fact that this site was not mentioned in the long list of potential sites for a nuclear power plant in Poland, while it was suddenly mentioned in the short list together with Żarnowiec and Choczewo. Thus, this serves a source of injustice and creates opportunities for movements to mobilize. For instance, it is hard to imagine similar mobilization in Żarnowiec as in Mielno since the former one was a site for a nuclear power plant already in the 1980s. It seems that appeals to justice and equality (objective reasoning) make the messages of movements clear and coherent to their audience and potential supporters. Actions framed with emotional appeal have better possibility to stick to the minds of
those who have seen or heard about these actions. This is because they could be clearly formulated as based on instrumental reasoning, which is important for spreading these messages (Koopmans et al 2005). These two cases demonstrate that when movements focus more on objective than instrumental reasoning, they tend to have better opportunities to mobilize supporters. Although the study of discursive opportunities in Chapter 6 revealed that objective reasoning is less legitimate in public discourses (particularly in appealing to emotions), movements may benefit from using this kind of reasoning, going against their discursive opportunities. While McCammon et al argue that “groups responding to discursive opportunities…are more likely to be politically effective” (2007:732), the analysis of these two cases shows that movements may not benefit from following their discursive opportunities. In both cases movements were more able to focus on injustice because they perceived great opportunities for allying with other local actors and because their political and discursive opportunities were adjusted to each other. In other words, the presence of local allies and resonant formulation of movement messages allowed the limits of what is legitimate in order of discourse to be overcome. While discursive opportunities are defined as the capacity of the public sphere to make the messages and actions of social movements legitimate or illegitimate and create conditions for movements to act in one or another way, it does not necessarily mean that what is legitimate for movements to do is what brings them forward in achieving their goals (e.g. mobilizing supporters). This is an important finding that should be kept in mind in further studies on discursive opportunities.

To sum up, conventional protest actions seem to take place because local anti-nuclear groups identify few institutional channels to deliver their ideas and opinions, while environmental NGOs rarely participate in protest actions due to their access to institutional channels. The fact that conventional protest actions occur more often in the three studied contexts strengthens Tarrow’s argument that conventional action has “the advantage of building on routines that people understand and that elites will accept or even facilitate” (1998:104). Conventional protest actions seem to have the lowest political costs for participants, which may be a reason why there are more conventional protest actions than other kinds of protests. This is line with Tarrow’s argument that conventional protest actions are usually less risky for organizers, but to be noticed these actions require more participants than other kinds of protest actions (1998). Possibly, local groups engage in confrontational actions because they perceive local inhabitants to
be supportive of them. At the same time, conventional protest actions are in line with the discursive opportunity of using more pragmatic rhetoric and actions. In the three studied contexts, disruptive and violent actions seem unlikely to occur, since they could detract or frighten movement supporters. In other words, instrumental reasoning in discourses and limited opportunity to appeal to emotions contribute to the choice of conventional protest actions. Conventional protest actions fit better rhetoric based on instrumental reasoning. Given the spread of instrumental reasoning and conventional protest actions, actions of movements are not repressed by police, which in turn does not seem to cause movements’ radicalization and undertaking of violent actions. The analysis of conventional protest actions thus demonstrates that the choice of these actions is shaped not only by political opportunities (limited access to institutional channels), but also by discursive opportunities (instrumental reasoning fosters instrumental actions; emotional appeal or radical actions are not legitimate). However, movements mobilize more protesters when they do not follow discursive opportunities, as in Mielno and Murom. This implies that convergence of reasoning between anti-nuclear movements and their counter-agents does not seem to benefit movements in terms of mobilizing their supporters and by this achieving their goals.

Rare disruptive actions

From what has been said above it follows that, like any other kind of protest action, disruptive actions need to be in line with discourses of movements and considered acceptable to movement supporters. Otherwise activists would not opt for these actions because they can frighten their supporters. As shown in Chapter 6, anything apart from acting following instrumental reasoning (and thus through institutional channels and conventional protest actions) is not favored in nuclear energy discourses in the three studied contexts. That makes disruptive actions unlikely to appear legitimate. However, Greenpeace Sweden organized three disruptive actions. Greenpeace activists broke into Swedish nuclear power plants three times. The first incident occurred in Forsmark NPP, right before the voting on the new bill on replacing old reactors with new ones in the Swedish Parliament.
in 2010. The second time it was in Forsmark and Ringhals in 2012, and the third time in Oskarshamn in early 2014. The intention behind these actions was to show that nuclear power plants are not safe and that anyone can easily access them. This form of action, breaking into an operating nuclear power plant, is illegal, and it contrasts with other conventional protest actions of anti-nuclear movements. Such patterns of action can be attributed to the known provocative character of the campaigning strategies of Greenpeace. As Dalton argues, organizations have institutional histories and their organizational identities matter for actions they pursue (1994). It is a part of the Greenpeace identity to pursue disruptive actions. Moreover, if an organization can dissociate from negative effects of disruptive actions (such as ability to engage in conventional actions afterwards despite disruptive actions), they can benefit from these actions through media attention (Barkan 1979). Disruptive and violent protests usually receive more attention (Barkan 1979:33). Established international NGOs with varied resources and opportunities can afford this kind of action. Greenpeace is an example of such an organization. Its actions illustrate that established organizations with particular repertoires can still pursue their repertoires without seeking to adapt to existing political and discursive opportunities. This finding illustrates that institutional histories of organizations may influence the choice of actions even more than political and discursive opportunities in some cases. The connection between institutional histories of organizations and repertoires has been established previously, as it has already been emphasized that both internal and external conditions matter for choice of actions (Taylor & Van Dyke 2004). However, it is important to emphasize here that institutional histories of organizations seem to matter only for strong and established organizations like Greenpeace, as no other actor in movements attempted disruptive or violent actions. This means that external factors tend to prevail over institutional histories in the studied contexts, indicating that organizations

adapt to their contexts rather than follow actions in line with their institutional histories. It is hardly possible to make an argument here about the relation between internal and external factors shaping repertoires, based on the findings of this thesis. However, I consider this to be of interest in further studies.

Motives for actors in anti-nuclear movements to not carry out disruptive actions may be manifold. It is possible to think that break-ins did not occur in other contexts because, for instance, in less democratic contexts (Russia) activists would not risk organizing disruptive actions because of low trust in the political system, since there is higher degree of uncertainty in terms of consequences for protesters⁶. However, this reasoning only partly provides insights to the absence of disruptive actions because there were several cases of disruptive protest actions in Russia before 2006, related to the import of spent nuclear fuel. As for the more democratic contexts of Poland and Sweden, it is possible to say that disruptive actions should be even more possible than in Russia because in democratic regimes activists would face lower risks of repression from police. This is the argument of Della Porta, that radicalization of movements takes place when actions of movements are repressed, for instance, by police (e.g. Della Porta 1995). Limited discursive opportunities to appeal to emotions and the necessity to act in accordance with instrumental reasoning seem to provide a more comprehensive insight into why actors do not choose disruptive or violent actions. The limited capacity of public discourse to legitimize appeals to emotions reduces the likelihood of emotionally based actions. It makes movements follow more “reasonable” forms of communication such as conventional protest actions. It is worth noting that several activists in the anti-nuclear movements have taken part in disruptive actions in the past before the studied period. This supports the argument that discursive contexts matter for the choice of protest actions, since, bearing the previous actions of these activists in mind, it is not possible to claim that non-choice of disruptive actions relates only to the personalities of the activists involved. What seems to matter most is that disruptive actions, and even more so violent actions, are not acceptable and legitimate in the present order of discourse. The

⁶ To understand what could happen in case of a similar break-in in Russia, one could study the case of the Greenpeace boarding the oil station Prirazlomnaya in 2013. The Greenpeace activists spent several months in prison in Russia. An international large-scale campaign for the release of the activists was organized.
analysis shows that while political contexts to some extent provide opportunities for actors to carry out protest actions, disruptive and violent kinds of actions are not legitimate in the three studied discursive contexts. If the access to institutional channels was limited, these actions would be more legitimate.

To sum up the section on protest actions, the analysis strengthens the argument that confrontational actions are carried out outside of institutions (Taylor & Van Dyke 2004) when opportunities to use institutional channels are limited (e.g. Kitschelt 1986). However, it also illustrates that legitimacy of a particular type of protest action in order of discourse matters for choice of action. Confrontational actions are more common to local anti-nuclear groups compared to environmental NGOs because they do not have political opportunities to be part of various committees and groups to the same extent as environmental NGOs do, but at the same time, disruptive and violent actions are not acceptable in the present order of discourse. Therefore, the choice of a kind of protest action could not be understood without an investigation of order of discourse, of what is acceptable and thinkable to say and do.

8.3 Building coalitions in anti-nuclear movements

The previous sections analyzed how nonconfrontational and confrontational repertoires of environmental NGOs and local anti-nuclear groups are enabled. This section investigates the capacity to organize coalitions between actors in anti-nuclear movements and by this carry out a mass campaign as a part of the repertoires of movements. As the point of departure in this thesis is the current absence of mass campaigns against nuclear energy at the national level, the task of this section is to analyze under what conditions actors in anti-nuclear movements prefer to act on their own, rather than to engage in organizing mass campaigns at the national level. I have argued in Chapter 2 that to study how external sociopolitical contexts shape repertoires of anti-nuclear movements as a whole, one internal aspect needs to be scrutinized, that of the capacity for coalition building within movements. It is worth remembering here that other internal aspects (that have received considerable share of research attention previously) are not taken into account in this thesis as the deliberate focus is placed on external conditions. Following the definition by Diani (1992), where social movements are networks of various actors,
repertoires of these movements are conditioned by their capacity to cooperate. In other words, to understand repertoires of anti-nuclear movements as a whole, the relations between various actors in movements need to be examined. Relations of actors within movements depend on whether they share goals, values, beliefs, identities, frame arguments similarly and have political opportunities for cooperation (Van Dyke & McCammon 2010). In this section, I investigate these aspects as they matter for actors in movements organizing collective actions together. It was demonstrated in Chapter 5 that actors in anti-nuclear movements share anti-nuclear discourses to a great extent. The aspects of values, beliefs, identities, and framing arguments are covered by the study of discourses. Discourses of actors in one movement do not necessarily have to be homogeneous, and local groups could be just focused on their regions without searching for external knowledge and information. However, this is not the case in the studied movements.

Before discussing what a capacity for coalition building in movements look like, it is crucial to state that movements are in fact organized as networks. They are not disconnected floating units, but are related to each other. The study of lists of actions and interviews demonstrates that environmental NGOs and local anti-nuclear groups in Russia, Poland and Sweden interact with each other, exchange information and from time to time organize collective actions together. One example of such actions organized by several actors in movements took place after the decree on the construction of a nuclear power plant in Russia’s Nizhny Novgorod region was signed on November 3rd, 2011. Anti-nuclear groups in a number of Russian regions organized All-Russia Week of Actions of Ecologists against the construction of excessively expensive nuclear power plants. Another example is when the Polish anti-nuclear movement organized a protest against nuclear power in front of the building where the Energy Forum took place in Sopot, 2013. Furthermore, the Swedish anti-nuclear movement held a demonstration and called for writing a petition to politicians before the law regarding replacement of old reactors with new reactors was changed in 2010.

It seems that networks are organized in ways described below. In Russia, a network of organizations and groups in anti-nuclear movements is informal, while most active members of this network know each other very well. As one of the activists expresses it:
We do not have any single structure that would fight with nuclear power, there are no headquarters. Well, it is all done, as it should be at the level of self-organization, we do not have a major organization in Russia, who is the main opponent of nuclear power plants. We cannot say that it is Greenpeace, one cannot say that it is Bellona, or any other organization. I do not know whether it is good or bad, well, that is the situation (F, environmental NGO, Russia).

Sometimes there is no full agreement and organizations and activists take varying stances, but as one of the Russian activists commented, they interact with each other, “because you can interact even if you disagree” (T, environmental NGO, Russia). In Poland, although the main form of collaboration is communication and information exchange between groups and organizations (M, local anti-nuclear group, Poland), sometimes activists take part in the actions of other groups (K, local anti-nuclear group, Poland). The three local anti-nuclear groups signed an agreement on an anti-nuclear coalition (K, local anti-nuclear group, Poland), which means that they have rather formal relations. Polish interviewees regard the role of Greenpeace in opposing nuclear energy development to be of crucial importance. In Sweden, formal relations between organizations and anti-nuclear groups are established through membership in the FmKK, an umbrella organization for local anti-nuclear activities in Sweden (K, environmental NGO, Sweden). Relations between actors in Russian, Polish and Swedish anti-nuclear movements demonstrate that actors in movements identify some common interests and goals, at least to some extent. This matters for organizing actions together, according to Van Dyke and McCammon (2010), apart from shared discourse and other aspects. This leads to discussing other aspects, such as the presence of bridge builders and political opportunities for cooperation which contribute to the potential of movements to build coalitions.

Environmental NGOs are often carriers of information between local groups in the three studied contexts. This implies that environmental NGOs could act as bridge builders for cooperation between actors in anti-nuclear movements. Acting as bridge builders is important for collective actions (Van Dyke and McCammon 2010). It seems that bridge builders are particularly needed for campaigning at the national level in order to unite local groups and environmental NGOs. However, because of their access to nonconfrontational actions, environmental NGOs do not consider mass protests a necessary instrument in achieving their goals. They do not seem to have the intention to act as bridge builders. The reasons given include
costs of organizing mass demonstrations and campaigns for civic engagement (R, environmental NGO, Russia), and needs for substantial financial and human resources, which makes mass protests not an obvious choice for the movement. According to this environmental NGO, there is no need for mass protests and mobilization at all times. The interviewees argue that mobilization should be pragmatic, considered carefully and related to specific goals (R, environmental NGO, Russia; P, local anti-nuclear group, Russia; Z, environmental NGO, Sweden). Such reasoning resonates with the development of pragmatic environmental discourses. For example, a Polish activist considers that only a single feminist is needed in order to make a change (E, environmental NGO, Poland):

The Catholic Church in Poland has just what the church of 200 square meters has – a huge structure and has a lot of power to force things. And feminists have a printer to print somewhere and can print some flyers in one city. And this is just the difference of resources – money, power, influence. But you never know whether a feminist does not change the world, more than the entire apparatus of the church. And so it is with the atom.

This statement means that sometimes the change of the situation depends on how active an individual is, or small groups of people are. The Swedish activists have not expressed similar views, possibly because anti-nuclear groups in Sweden are engaged in the discussions on different matters or because among the interviewees no one seriously consider the organization of mass protests in the current situation, with limited media attention. In brief, the professionalization of civil society transforms NGOs to formal structures that present themselves as experts who are less interested in acting as bridge builders for the whole movement because professionalization implies professional staff that focus on specialized areas of interest (McCarthy & Zald 1977). Possibly, environmental NGOs professionalize because they have access to various working groups and committees where discussions are held on specialized matters. To adjust to the presence of these participatory channels, the organizations need to recruit more professional staff. In other words, both recruiting qualified staff and gaining access to participatory channels reinforces the process of professionalization and affects organization of collective actions at the national level.

Although formal organizations such as environmental NGOs have more organizational resources and thus more capacity to unite their efforts with other actors, a coalition of local groups could also operate as a bridge
builder. As local anti-nuclear groups often expressed a NIABY attitude, it is possible that local groups from different areas organize collective actions together, something which was not denied by the interviewees. But while most environmental NGOs network with local anti-nuclear groups, local anti-nuclear groups do not always network with each other. Local anti-nuclear groups could explore opportunities through alliances that go beyond the local level through allying with environmental NGOs or experts from research institutes, which could then lead local groups to carry out actions beyond their regions. Although interviewees from local anti-nuclear groups perceive the presence of allies positively, these perceptions have not, with some exception, led to the organization of collective action beyond their regions. In practice, according to the interviewees, there are limited resources available, including human resources, and very limited political opportunities for local anti-nuclear groups to act in other regions as their opportunities come from their local allies, media and support of local citizens. To some extent, public discourse of nuclear energy does not provide opportunities to lift the issue of nuclear energy from being constructed as a local issue to a national issue partly. This occurs because the issue of nuclear energy resonates to a limited extent with broad public discourse, partly because there are limited media opportunities to reach other regions, partly because local anti-nuclear groups do not have the resources for joint actions together with other groups. In the Russian context, apart from focusing on different local agendas, activists notice that they are unable to run joint activities on a daily basis, because of large geographic distances between the regions. Environmental organizations and local groups are too far away from each other to form coalitions (F, environmental NGO, Russia). By adding the factor of geographical distance between locations of actors in movements, this extends the argument of Van Dyke & McCammon (2010) that goals, values, beliefs, identities and arguments framed similarly and political opportunities matter for cooperative potential. This proposal is almost self-evident, but nevertheless merits consideration.

Local anti-nuclear groups demonstrate a pragmatic approach to their activities by claiming to cooperate with others when needed. Such pragmatism, however, is always the result of a choice, as they could have instead decided to use their resources for cooperation with each other. As interviewees state, they only cooperate when they have a common tactical goal, which is not always the case. For instance, this is how T (local anti-nuclear group, Sweden) expresses this position:
We would like to collaborate with other groups and spread out the material that we have developed on how to replace nuclear power with renewable materials. As we have shown it to other groups, it has been appreciated. We are happy to share and gratefully accept material that we can use. At the same time our task so far to shape public opinion in [our region] and not elsewhere. As long as we do not have time and money to operate also outside [our region] there is no point in doing it.

This position is quite common among local anti-nuclear groups that are busy in their own regions. There is not much cooperation between local groups in Sweden because they see that they have different agendas at the local level, but they cooperate with organizations when they feel the need to. The only exception is when local groups from different regions, or even different countries, discuss the same power plant. Two examples are the case of a Finnish nuclear power plant near the northern Swedish border, and a nuclear power plant in Nizhny Novgorod region. In abstract terms, local groups support each other, but they often target local constructions in which other groups do not have much interest in because they do not have the resources to engage there. This means that they present themselves as NIABY kinds of movements.

Focusing on different nuclear power plants implies that local anti-nuclear groups have different tactical goals. Although I have already said above that actors in anti-nuclear movements share goals, illustrating the argument about the importance of shared goals developed in previous research (e.g. Staggenborg 1986, McCammon & Campbell 2002), a distinction between strategic and tactical goals needs to be made. Strategic and tactical goals can be distinguished in that strategic goals are goals that actors in movements want to achieve as the end result: to abolish nuclear energy because anti-nuclear movements do not find them acceptable. Tactical goals are used to achieve strategic goals. This implies that actors in movements could work for similar strategic goals, striving for interrupting the course towards developing or maintaining existing nuclear energy plans, but employing different tactical goals. For example, some local groups may deal with a nuclear power plant project in one region, while other groups engage with a project in another region. Actors in the studied anti-nuclear movements do not share tactical goals unless they campaign against the same nuclear power plant. With this, it becomes clear that actors in anti-nuclear movements rarely share tactical goals, which in turn affects their choice of campaigning together with other actors in movements.
Respondents from environmental NGOs and local anti-nuclear groups mentioned in the interviews that there are possibilities to cooperate with each other. This implies that actors in movements see political opportunities for organizing collective actions together. However, political opportunities to act together do not necessarily imply intention to use this opportunity. Actors in anti-nuclear movements do not perceive that cooperation is necessary for achieving their goals and other strategies. The strategies they already follow may lead to desired results as well. This strengthens the argument of McCammon and Campbell (2002:235) that it is not only political opportunities that are important, but the threat that without cooperation, goals would not be achieved; this leads to cooperation of actors in movements. It seems that without such a threat, activists are reluctant to adjust their strategies, which is the case in the studied contexts.

One kind of collective action where Russian and Polish anti-nuclear movements have organized together is anti-nuclear camps. These camps included lectures, seminars, workshops, meetings, debates and happenings. There are several examples of anti-nuclear camps. In Russia, a camp was organized in Nizhny Novgorod region during 2008 to show that there was opposition towards a nuclear power plant construction. In 2012, a camp was organized in Lubiatowo, Poland, one of the sites of a potential nuclear power plant construction. Anti-nuclear groups from the three potential sites of a nuclear power plant organized the camp together, bringing activists from several regions together. The purpose of these camps is to consolidate already-engaged activists. Another purpose is civic engagement (recruitment of new members). This organization of camps with united efforts by different local groups and environmental NGOs shows that joint actions are possible. Although the organization of anti-nuclear camps requires substantial resources for preparation, these kinds of actions are possible to organize because no institutional channels or alliances with other actors in society are needed. The organization of anti-nuclear camps in Russia and Poland shows that in case there are opportunities to organize collective action by different actors in movements together (or rather limited hindrances to their collective actions), it is possible for these actions to be carried out.

To sum up, anti-nuclear movements are organized in such way that relations between anti-nuclear groups and environmental organizations seem to stay on the level of exchange of information and organization of actions together only in some rare occasions. This does not include much potential for cooperation. Repertoires of anti-nuclear movements look like
predominantly nonconfrontational actions at the national level (environmental NGOs) and predominantly confrontational actions at the local level (local anti-nuclear groups). Separation of these two kinds of actors on local and national levels seems to matter to a significant extent for organization of national protest campaigns. Focusing on different levels, these actors share strategic goals but not tactical goals, which is important for acting together. The movements have little capacity for organization of a mass national campaigns. The focus on coalition-building in anti-nuclear movements provides a crucial understanding of repertoires of present-day anti-nuclear movements. If movements were seen only as individual actors without focusing on relations between them, it would not be possible to say anything about cooperative potential between these actors and possible organization of mass national campaigns. Environmental NGOs are neither interested in national protest campaigns nor able to bring up nuclear energy development through institutional channels they have access to (because they discuss issues other than nuclear energy development there). Professionalization of environmental NGOs, meaning formalization and hiring of professional staff (Staggenborg 1988, McCarthy & Zald 1977), leads to more pragmatic actions. These actors at the national level do not take on the role of bridge builders between actors in movements because they have different roles and because there are no hierarchical structures within movements, but rather loose networks. Local anti-nuclear groups can be a precondition for national anti-nuclear movements, according to Rüdig (1990). However, anti-nuclear protests do not rise beyond the regional level, because they do not have access to the national media and their political opportunities are placed in their local communities. This is due to the support of the local population, attention of the local media, and institutional channels (public consultations) in these locations. Different tactical goals, including focus on different nuclear power plants, create situations where local anti-nuclear groups have limited interests and opportunities to go beyond their regions (with the exception of targeting the same nuclear energy plant). They also do not rise beyond regions because their discourses resonate to a limited extent with broader public discourses in comparison to official discourses of nuclear energy of authorities and energy companies.

This thesis supports the argument of Saxonberg and Jacobsson (2013) and Haliy (2008) that professionalization of civil society does not characterize civil society as whole, and that there are actors that lie beyond this trend (local anti-nuclear groups in this study). However, this thesis
shows that professionalization of environmental NGOs plays a role for repertoires of non-professionalized actors in movements, local anti-nuclear groups, through a shared discourse. It seems that local anti-nuclear groups could attract more supporters if discourses were different.

8.4 Concluding remarks

In current political and discursive opportunities, there is no synergy in anti-nuclear movements that would lead to national mass campaigns regarding keeping and developing nuclear energy. Repertoires of professionalized environmental NGOs mainly consist of nonconfrontational actions. The presence of institutional channels to communicate opinions as well as expert identities contributes to environmental NGOs carrying out nonconfrontational actions. To act as experts is possibly the only way for environmental NGOs to be heard because the instrumental reasoning that their discourses are based on resonates with the broader public discourses on nuclear energy and on the environmental agenda. Since local anti-nuclear groups have fewer opportunities for nonconfrontational actions than environmental NGOs, they tend to carry out conventional protest actions because disruptive and violent actions could mean more emotional appeal, which is not legitimate in the current order of discourse. While the expert voice seems to create opportunities for environmental organizations to interact with the nuclear energy industry, it may be a hindrance for communication at the local level. It could be hard to attract supporters using this voice because it requires background knowledge that then has to be explained as well, but also because it is easier to attract attention with, for example, referring to injustices, rather than to the viability of construction plans. Shared discursive opportunities reinforce the nonconfrontational actions of environmental NGOs and their expert identity, while at the same time hindering opportunities of local anti-nuclear groups to rely on local support because of a complex message. Discursive opportunities using expert voice and instrumental reasoning thus fragment anti-nuclear movements. However, they also allow different actors in movements to perform different roles which would hardly be accessible if, for instance, environmental NGOs would not have professionalized and would not have access to institutional channels. Professionalization of environmental NGOs in anti-nuclear movements provides them with opportunities that anti-nuclear movements would not otherwise have, following Staggenborg’s
argument about the role of professionalized organizations (1988:597). Even though the movements largely stay unnoticed by national media and do not engage in organizing mass protests, this does not mean that these organizations and groups do not work on changing current nuclear energy policy at the local level or within relevant institutions.

This thesis strengthens the argument that professionalization of environmental movements concerns only parts of environmental movements (environmental NGOs), but at the same time demonstrates that professionalization of environmental NGOs has effects on other actors in movements. The fact that this trend of professionalization in fact spills over onto the actions of other actors (such as local groups) is crucial for understanding repertoires of anti-nuclear movements as a whole. These effects spread through shared discursive opportunities that are born in interaction mostly between environmental NGOs and their counter-agents. However, local anti-nuclear groups do not have the same resources or political opportunities for using discursive opportunities, which could hinder the actions of local groups. Therefore, discussion on how professionalization of some actors in movements influence the whole movement would be incomplete if developments in discourse and discursive opportunities of these movements were not considered.

This chapter also demonstrates that it is important to focus on different levels of operation among different actors in social movements. Various actors have different access to political opportunities and discursive opportunities (that could be shaped by national organizations rather than local groups) and these opportunities can have different effects on the actions of these actors. Different levels also matter in terms of media attention. While there could be possibilities to get the attention of local or regional media, it is harder to be noticed by the national media.

This thesis strengthens the arguments of Bröer and Duyvendak (2009) and Ferree (2002) that both political and discursive opportunities shape actions of actors within movements. The analysis in this chapter has shown that when the discursive dimension is included in the analysis, it is possible to reach a deeper understanding of actions of social movements. While the concept of political opportunities provides insights into how movements act because they have access to institutional channels, allies or possibilities to shift the power balance, public opinion, and access to media, the concept of discursive opportunities gives possibility to gain insight into how actions are shaped in relation to a movement’s discourse. Media opportunities or public opinion are not given conditions, but they are in fact shaped by
actions and discourses of social movements. Para-phrasing the well-known argument of Fairclough, discourses are not only constituted by political contexts, but they are also constitutive for political contexts. The official discourses of authorities and energy companies, and discourses of anti-nuclear movements, matter for the actions of the latter. Therefore, to understand how movements act and what kind of opportunities they have, we need to focus more on how they talk, what kind of reasoning they follow and what kinds of discourses they reproduce. The analytical framework developed for this thesis, based on the concepts of discursive opportunities defined through order of discourse, power over discourse and power of discourse thus provides a more nuanced picture of how repertoires of anti-nuclear movements are shaped.

It has been shown that the order of nuclear energy discourses, in particular the “there-is-no-alternative” vision of nuclear energy and the presentation of nuclear energy policies as a necessary decision, closes possibilities to discuss nuclear energy development at the national level. At the same time, local groups do not have opportunities to move beyond the understanding of nuclear energy as the local issue. Nuclear energy thus becomes a local issue, while its usage and possible risks of exploitation are not confined to one region. Van der Heijden argues that the agenda of environmental movements shifted from local issues to global environmental problems and ecological modernization (1999). This is only partly correct, at least when it comes to nuclear power in the countries studied here. What has changed is rather the understanding of what is considered global, while protests against nuclear energy that were previously considered a global or at least an international issue, now are not even lifted from the local to national levels.
This chapter summarizes the findings of the thesis, contextualizing them in previous research, reflects on the findings and makes suggestions for further research.

9.1 Overview: Anti-nuclear movements between expert voices and local protests

Anti-nuclear movements have experienced an upsurge in the last fifteen years, from 2000 to the present, the period that I consider to be the second wave of opposition to nuclear energy. The nuclear industry refers to this period as the “Nuclear Renaissance” (e.g. Ritch 2001). Anti-nuclear movements in Russia, Poland and Sweden have pursued similar action repertoires for opposing nuclear energy policies and projects despite different historical legacies, political systems, and history of nuclear energy industries. It has been showed that nonconfrontational strategies often are carried out by environmental NGOs at the national level while confrontational strategies are more common for grassroots groups at the local level. To understand why anti-nuclear movements act as they do, sociopolitical conditions of anti-nuclear movements were examined through analysis of the discursive struggles of anti-nuclear movements and other actors in society and their perceptions of political contexts, as well as their potential for mutual coalition building.

Combining discursive opportunities with CDA

One of the tasks in this thesis was to develop a definition of discursive opportunities that would be appropriate for studying how anti-nuclear movements act in their discursive contexts. The definition was made to
establish common ground between previous conceptualizations of discursive opportunities which addressed the same processes, but through different approaches. The concept of discursive opportunities was developed through applying the approach of Critical Discourse Analysis (CDA), which provided a method for studying discursive opportunities.

While discursive opportunities often are analyzed through media discourses that imply certain limitations in terms of opportunity to connect discourses and actions, the application of CDA allowed the discourses of anti-nuclear movements and discursive opportunities to be directly studied. The media proved to be a significant source of material for analyzing the dominant ideas in society, and although they do not represent the ideas and views of actors involved in discourse struggles directly, they could create additional meaning to what has been initially said by these actors. The study of media discourses provides less possibilities to understand actions and strategies of anti-nuclear movements because of mediated representations put forward by actors involved in the competition over interpretations. Movements, however, act on their own discourses and their perceptions of their opportunities, and not according to media representations. Studying media discourses is important in the understanding of public discourse in society, however it is not the most parsimonious way of examining why social movements act as they do.

I have argued along with Steinberg (1999), Bröer and Duyvendak (2009) and Fairclough (2003) that aspects of power are essential in relation to discursive opportunities. Competing discourses arise when several representations of an issue compete for a power position in the public discourse. Discourses that occupy dominant positions in the public discourse have the power to provide interpretations of discussed issues. Competing discourses are not visible when someone analyzes media discourses because a picture in the media is already the end result – what reaches the media has a more powerful position in the public discourse. But not all discourses reach the media and not all types of media draw on anti-nuclear discourses.

The concept of discursive opportunities, summarizing features attributed to discursive opportunities in the previous studies, has been defined as the capacity of the public sphere based on power relations between discourses (order of discourse) to make messages and actions of social movements legitimate or illegitimate and through this to create conditions for movements to act in one way or another. The concept of order of discourse has been applied for reconstructing relations between discourses (Foucault
1981, Fairclough 1995). Following Fairclough, I consider that ordering between discourses is established through both (1) power over discourse, power positions of involved actors, and (2) power of discourse, power of messages within these discourses. Themes inherent to discourses are studied in respect to their clarity, coherence and resonance of discourses regarding social, political and economic developments.

Conceptualizing discursive opportunities in this way contributes to social movement studies’ perspective on how repertoires of movements can be studied in their discursive contexts. This conceptualization is not specific for studying anti-nuclear movements. It can be used for studying actions of other social movements and discursive opportunities of various actors for promoting their agenda.

Discourses of nuclear energy and discursive opportunities of anti-nuclear movements

The analysis of nuclear energy discourses has led to several findings. Official discourses of nuclear energy relate extensively to economic development, climate change mitigation, and energy security, which currently are considered to be the main challenges. In the Russian context, economic and technological modernization are presented as a main task for the government. In the Polish context, the focus in the energy sector is on diversification of energy sources, since more than 90% percent of the electricity is produced from coal. Looking at the Swedish context, climate change mitigation is seen as the main challenge in the energy sector. Official discourses in the three countries have included ideas that nuclear energy is profitable, more environmentally friendly than other energy resources, and provides a safe and diversifying energy mix. The analysis in this thesis thus aligns with the statements that climate change is a crucial driver for the revival of nuclear energy and public acceptance of nuclear energy (e.g. Bickerstaff et al 2009, Baigorri et al 2012). Following Gamson and Modigliani (1989), I consider that the main idea these discourses communicate is that of “progress”. Progress and also modernization (ecological modernization in the Swedish context) are the core ideas that these discourses radiate. The themes of climate change and energy security make “progress” discourses of nuclear energy specific for our times, as these concerns have arisen in the last thirty years.

The central idea of anti-nuclear discourses is the integrity of nuclear energy usage from uranium mining to nuclear waste storage. It is striking that anti-nuclear discourses appeal to the unprofitability or unviability of
nuclear energy, which is mentioned much more often than any other argument. Together with the deficiencies of participatory practices, this argument is used for emphasizing the complexity of nuclear energy usage. Anti-nuclear materials are written predominantly as analytical texts manifesting expert identity. As the unprofitability of nuclear energy has occupied more space in argumentation against nuclear energy, themes of health issues, various kinds of risks associated with nuclear energy exploitation, and relation to nuclear weapons are mentioned less frequently. This thesis strengthens the findings of Teräväinen et al (2011) on the transformation of anti-nuclear discourse. National sovereignty or regional self-determination rhetoric which Dawson observed in the 1980–1990s movements (Dawson 1995, 1996) has not been found in present-day Russia or Poland.

The official discourse embedded in public discourses resonate with general trends of socio-economic development in the studied countries, with climate change and energy security stressed anti-nuclear discourses. Anti-nuclear movements, although offering an extended argumentation against nuclear energy, do not disrupt the foundations of official discourses that are the connection between nuclear energy development/maintenance and socio-economic development. Nuclear energy and climate change are connected in different ways in anti-nuclear discourses than in official discourses, which may be seen as disruption. As anti-nuclear discourses contain a different view on energy security, anti-nuclear movements do not challenge the interpretation of energy security adopted by authorities and energy companies that emphasizes the necessity of securing energy, particularly energy supply needed for economies to grow and citizens to prosper.

Both types of discourses seem to apply cost-benefit analysis to their assessments of the (un)profitability and (un)viability of nuclear energy. The focus on profitability, viability and a cost-benefit perspective on nuclear energy in anti-nuclear discourses could be related to broader changes in the public discourse, including environmental NGOs losing their monopoly in setting the environmental agenda (Mol 2000). An “analytical” approach to nuclear energy where actors try to be convincing and substantiate their positions with solid arguments has become the essential characteristic of public discussions on nuclear energy.

The “there-is-no-alternative” vision leaves an impression that there is no essential conflict, and this consequently leads to the nuclear energy issue being uncompelling for the public and media. There is no room for politics
when a decision is portrayed as a pure necessity without alternatives. The “there-is-no-alternative” vision of nuclear energy contributes to making nuclear energy a less political issue and limits the possibilities for public debate about nuclear energy and opportunities to contest dominant views on energy. The absence of media interest contributes to such a state of affairs as well. Nuclear energy is constructed as a “solved” issue in the public discourse, with no need for broad public discussion. Without disruption of the “there-is-no-alternative” vision of nuclear energy, there are limited opportunities for deliberation to take place. The institutional power of nuclear energy proponents matters as well, since they can promote this vision on nuclear energy more effectively than anti-nuclear activists, because of better access to media. I agree with Rüdig, who suggests that the framing of nuclear energy from the perspective of climate change considerably limits the rise of strong oppositional attitudes (Rüdig 2013:90). The strong emphasis on energy security (also observed by Teräväinen et al (2011)), similar to the reference to climate change mitigation, thus limits the critical potential of other discourses to influence such rhetoric and its appeal to the public. The findings of this thesis are in line with Blowers’ suggestion to view the current nuclear energy discourses as “discourses of security” (2010).

The order of nuclear energy discourses provides discursive opportunities for anti-nuclear movements. Nuclear energy can only be discussed in the “analytical” manner in order to be able to hold at least some discussion with the nuclear industry and authorities. Emotional claims are not legitimate in the contemporary public discourse. Following this, anti-nuclear movements seem to attempt to not sound emotional in their judgments and do not appeal to emotions. Any dramatic speech is used only in cases of nuclear safety. The reference to profitability, cost-benefit analysis and expert rhetoric reinforces the established order of discourse. Anti-nuclear movements do not, however, aim to disrupt the connection between nuclear energy and broader socio-economic developments, as this extends beyond their focus. Discursive opportunities of anti-nuclear movements are thus limited to expert voice and instrumental reasoning.

**Political opportunities of anti-nuclear movements**

Anti-nuclear movements perceive that they have limited opportunities for promoting their agenda, with better opportunities in the long term democratic context of Sweden. This is not uncommon for social
movements, which generally have less power than authorities. The relative openness evidently differs between the three studied contexts. The political opportunities incorporated in their different political systems demonstrate that the role of political systems, and the embedded political opportunities in these systems, are important for social movements. In the context of Russia, the political system is less democratic than in the contexts of Poland or Sweden, but the nuclear energy company Rosatom provides forums and channels for interaction with civil society actors. In Sweden’s more democratic context, movements rely more on mechanisms of public participation and have more trust in the political system. Political contexts are relatively open in Russia and Poland, but more in Sweden, thus suggesting more nonconfrontational strategies for movements (Kitschelt 1986, Tarrow 1989). Although mechanisms for public participation sometimes seem to be forums of “guided” discussion, there are still opportunities to discuss such issues as decommissioning of aging reactors and nuclear waste storage. In the Polish context, activists consider that they can use democratic mechanisms in case they disagree with nuclear energy projects, while the energy companies are quite closed for discussion. Indeed, the energy company PGE EJ1 conducts meetings with the citizens from sites where a nuclear power plant can be built, but activists consider these meetings as only informational. The Swedish activists see the lack of interest from the national media in nuclear energy as the main hindrance in their work. Otherwise, there are formal and informal ways of communicating with the nuclear industry and many more opportunities to engage in the discussions on nuclear energy than in Russia or Poland. As nuclear waste storage has been the most discussed issue in the Swedish nuclear industry during the last decade, it is obvious that Swedish activists, similar to Russian, have better opportunities to engage in this type of discussions. The state of nuclear energy programs evidently matters, as no such opportunity exists in Poland, which has no reactors in operation. In brief, seemingly different political contexts have led to similar effects on anti-nuclear movements. Whenever there have been opportunities for nonconfrontational actions, movements have used them. Although the concept of political opportunities originates from the literature on established democracies, this thesis shows that there are some interesting implications of applying this concept to different political contexts. This thesis has shown that the character of political contexts, specifically, political regimes, may not matter for actions of social movements as long as there are channels for nonconfrontational actions, or they may matter less than expected.
Availability of political opportunities suggests more nonconfrontational strategies for anti-nuclear movements. However, there is a difference between environmental NGOs and local anti-nuclear groups. Environmental NGOs in anti-nuclear movements are professionalized organizations. This corresponds with the political opportunities of these organizations to act through meetings with authorities, environmental reviews and Environmental Impact Assessment procedures. The analysis demonstrates that the studied anti-nuclear movements seem to be similar to many other social movements that have been professionalizing. Previous research on professionalization of social movements, in particular on environmental movements, has been further supported in this thesis. Some examples of this would be by Van der Heijden (1999), Mol (2000) in the Western European context; in the Russian context by Yanitsky (1999); and in Eastern Europe by Jacobson and Saxonberg (2013). Similar to Jacobsson and Saxonberg (2013), and also Haliy (2008), who demonstrate that the process of professionalization has not influenced all forms of civil society actors. The analysis in this thesis has shown that there are actors in recent anti-nuclear movements that have not become professionalized in their actions. As local anti-nuclear groups, they rely on the support of the local population and they often, apart from public hearings, opt for confrontational actions. However, due to information exchange with environmental NGOs, these actors follow a professionalized discourse on nuclear energy. This suggests that professionalization of environmental NGOs influences local anti-nuclear groups. The analysis illustrates the argument that with more opportunities to carry out nonconfrontational actions, actors in movements would be more likely to opt for nonconfrontational actions. Both environmental NGOs and local anti-nuclear groups perceive that they have channels for nonconfrontational actions, although much less so in the case of local anti-nuclear groups than in case of environmental NGOs. This study strengthens the findings on anti-nuclear movements that took place in the 1980s-1990s, suggesting that political opportunities contribute to structuring actions of anti-nuclear movements.

Repertoires of anti-nuclear movements in discursive and political contexts

This thesis began with the observation that recent anti-nuclear movements do not seem to organize mass protests at the national level. For national protest actions to be carried out, protests as a form of action should be used by movements (Tyler & Van Dyke 2004) and some actors should raise
issues to the national level (Rüdig 1990). Actions of anti-nuclear movements are categorized as nonconfrontational or confrontational, instead of seeing them as strategy- or identity-oriented actions. Analyzed actions can be used both for realizing strategies and for manifesting identity. This is not to say that political and discursive opportunities are very similar in the three studied contexts or that the investigated processes are completely the same. There are significant differences, such as stages of nuclear energy development, attitudes of politicians towards nuclear energy, political systems and openness of media. Despite these differences, the repertoires of anti-nuclear movements seem to follow similar patterns in these various sociopolitical contexts. These differences in sociopolitical contexts contribute to shaping the repertoires of anti-nuclear movements, although there are less opportunities to act through institutional channels for Polish movements because of the newness of its nuclear energy program.

The professionalized environmental NGOs have been acting as experts, following a nonconfrontational strategy and using their expert voice and publishing analytical materials. Environmental NGOs act as experts because of discursive opportunities to take part in discussing nuclear energy as experts and political opportunities of acting through institutional channels. Actors appealing to injustice in an emotional way are considered illegitimate, particularly so in Russia and Poland, but less so in Sweden. Nonconfrontational strategies of environmental NGOs lead to de-radicalization of anti-nuclear movements to some extent. However, by this they gain access to new channels for interaction. Some activists do not agree on compromises, and together with local protest groups they continue the same kind of actions they have been involved with in efforts to influence public opinion and carry out small demonstrations. Even though local anti-nuclear groups employ a similar rhetoric as environmental organizations, they do not have the same opportunities or willingness to act as experts, and rely on the support of the local population. There is a difference in resources as well. Political opportunities lead environmental NGOs and local anti-nuclear groups to adopt different strategies, nonconfrontational and confrontational respectively.

The capacity for coalition building between environmental NGOs and local anti-nuclear groups is important, as they may include possibilities to act collectively and to organize national protests. In Russia, Poland and Sweden actors of anti-nuclear movements interact in horizontally formed relations and cooperate only when they need to. Environmental NGOs carry out nonconfrontational strategies which do not include national
protests. These NGOs have opportunities to address other issues of nuclear energy than nuclear energy development. Local anti-nuclear groups do not have the resources, opportunities or, most importantly, the intentions to consolidate anti-nuclear movements at the national level. As their repertoires of contention are diverging, mainly nonconfrontational strategies of environmental NGOs and mainly confrontational strategies of local anti-nuclear groups, there is only limited direct cooperation in terms of action, but much more in terms of exchange of knowledge. Neither environmental NGOs are interested in organizing national protests, nor are local anti-nuclear groups interested in cross-regional collective actions (if they do not address the same nuclear power plant). One of the main findings of this thesis is that professionalization of environmental NGOs, and the presentation of nuclear energy as a local issue in regions where a nuclear power plant is built, shapes the repertoires of anti-nuclear movements in such a way that national protest campaigns are not arranged. Another main finding of this thesis is that professionalization of environmental NGOs influences the non-professionalized actors in local anti-nuclear groups.

9.2 Reflections on the findings

Some of the findings in this thesis have been observed in previous studies of nuclear energy discourses and environmental movements. It has been argued that the themes of climate change mitigation and energy security have reshaped public discourses on nuclear energy, and environmental movements have been professionalized. However, studies connecting these themes have been difficult to find. The main contribution of this thesis is that it shows how these different areas of research, discourse studies and social movement studies, can be fruitfully connected in studying current developments in maintaining and developing nuclear energy and providing new explanations for repertoires of anti-nuclear actions. This thesis has showed that repertoires of anti-nuclear movements are interrelated with public discourses on nuclear energy as well as political, economic and social agendas of societal development. This has led to the following reflections.

On the importance of studying competing discourses

While some researchers have been skeptical to the alleged revival of nuclear energy (e.g. Busby 2013), the discourses in policies of the “Nuclear Renaissance” have shaped public discussions on nuclear energy. This thesis
has shown that public discourses are the result of the interaction between nuclear energy proponents, opponents and broader ideas predominant in contemporary society. Anti-nuclear movements, using expert rhetoric, shape the discourses, but at the same time they reinforce the order of discourse. Such public discourses together with political opportunities make anti-nuclear movements adopt strategies that are less visible to the general public, due to the limited scope of local protests or less newsworthy nonconfrontational actions at the national level.

It has also been demonstrated that there are important connections between political and discursive opportunities of anti-nuclear movements. The political opportunities of anti-nuclear movements alone do not provide insights as to why movements do not opt for confrontational strategies at the national level. Not only do political opportunities matter for anti-nuclear movements, but so do the possibilities to act discursively, to know what is legitimate to say. The analysis highlights the importance of investigating discourses of movements’ opponents in order to understand strategies and repertoires of social movements. This thesis serves as an illustration of how the concept of discursive opportunities combined with CDA can be applied. As emphasized by the collective action paradigm, resources and opportunities are crucial for movements to mobilize. Here it has been highlighted that competing discourses which movements engage in could also be seen as providing or hindering some types of actions. Social movements interact with other actors in society, but their discourses also interact with other discourses. This thesis has shown that the concept of discursive opportunities is crucial for understanding the actions of social movements.

On professionalization and movements’ strategies

The analysis has also brought forward that professionalization has taken place both in rhetoric and actions of anti-nuclear movements. However, even though anti-nuclear movements put forward professionalized rhetoric in their discourses, at the same time there have been actors in local anti-nuclear movements that have not become professionalized. This adds texture to the observation of Giugni and Grasso (2015) that anti-nuclear movements seem to be one of the least professionalized among all environmental movements. The construction of nuclear reactors has explicit implications for the locations where these constructions are planned or carried out. The focus on specific locations gives rise to local anti-nuclear
groups which have less opportunities for nonconfrontational actions and actions in line with expert discourse, meaning that they tend to carry out rather confrontational actions and do not act as professionalized environmental NGOs. Therefore, professionalization can be observed in anti-nuclear movements, but it seems to be restricted to certain types of actors and circumstances.

The professionalization of social movements implies that movements have become better organized and are able to act collectively in a more efficient way, which means that there are more possibilities to act at the national level. However, this claim is challenged in this thesis as the professionalization of some actors does not mean that the movements as a whole will be professionalized or interested in collective actions at the national level. Therefore, the relations between the professionalization of social movements and changes in their repertoires are not concurrent. Moreover, a crucial finding is that professionalization of environmental NGOs influence non-professionalized actors (local anti-nuclear groups) at the level of discourse.

On local, national and transnational levels

There are two important reflections to make concerning levels of social movement actions. The first reflection is about local and national levels. The diverging paths of environmental NGOs and local anti-nuclear groups are the results of discursive and political opportunities. In environmental and energy decision-making, the shift to more inclusive practices has been carried out through implementing Environmental Impact Assessment procedures. These procedures include a mandatory public review of suggested projects, which often is conducted in the form of public hearings at the local level. Local residents have the opportunity to discuss specific details of a project without questioning the realization of a project. Although discussed at regional and local levels, large-scale energy facilities affect a larger number of territories than just one region, primarily because they provide energy to other regions, but also because environmental risks may extend to neighboring and more distant regions. The channels for public participation are taken for granted as they are part of the social structures of anti-nuclear movements, but they were also in fact designed at some point, meaning there is always the possibility for change. It is possible to redesign them and make them more inclusive. Strategies of anti-nuclear movements could have looked differently if civil society and the public were
involved in the early stages of project development. In fact, their involvement would then have been more inclusive both in terms of being heard or being engaged in the longer time period. Thus, confinement of anti-nuclear protests to the local level fragments public reactions to nuclear energy development to specific locations, without much joint action between different locations. This development is worrying, because various risks of nuclear energy use are not confined to specific locations, and as stated above, nuclear energy development is not a local issue.

The second reflection concerns the transnational nature of the processes. By drawing on the three different contexts of Russian, Polish and Swedish anti-nuclear movements, this thesis has shown that the movements in these various sociopolitical contexts use similar repertories. These similarities do not have only domestic origins, but are subject to international developments. The support for this argument come from two dominant ideas in the studied processes: “Nuclear Renaissance” and climate change mitigation, both being transnational. Globalization makes practices of civic engagement converge, creates a global awareness about problems such as climate change and energy shortage and leads to sharing of discourses in different contexts. The world is shrinking, at least at the ideational level.

Three different contexts

Similar repertoires of anti-nuclear movements in three different contexts have been scrutinized. The purpose of such a research design was to investigate how and under what conditions movements’ repertoires are similar in different political contexts with varying historical legacies. However, the analysis has demonstrated that these political contexts are in fact characterized by the presence of some institutional channels in one form or another, evidently with different opinions of activists about how these channels function in practice. Political contexts have mattered for the choice of actions of anti-nuclear movements. In established democracies like Sweden, activists rely more on political parties and the political system in general for changing the situation with nuclear energy in their favor. They have higher trust in political institutions. Consequently, they have considered engaging with political parties (e.g. attempting to change their agenda) more than in Russian or Polish contexts. But the presence of institutional channels seems more important for movements’ actions than the nature of political contexts. When there are institutional channels, actors seem to engage in these channels, which leads to nonconfrontational
actions. The example of Poland with less institutional channels due to the newness of a nuclear energy program and more confrontational actions of movements than in the other two contexts confirms this conclusion. To sum up, different political contexts provide similar effects for anti-nuclear movements because these contexts present a crucial kind of political opportunity in the form of institutional channels for the choice between nonconfrontational and confrontational actions. This means that the concept of political opportunities could be used for studying different kinds of political regimes in a single research project, as long as the focus is on perceptions of these opportunities.

On complexity of opposition to nuclear energy

The calls of Sovacool and Valentine (2012) and Findlay (2011) for more studies of opposition to authorities planning extensions of their nuclear energy programs during the alleged “Nuclear Renaissance” has been addressed in this thesis. Although these scholars mention the subordination of opposition to political authorities as one of the drivers for the revival of nuclear energy, I have demonstrated that the nature of opposition to new nuclear energy policies is much more complex. My analysis suggests that the limited potential of opposition to recent nuclear energy policies is not the result of direct suppression, but more of complex changes in how priorities are set in the energy sector, the transformation of nuclear energy discourses, and the resonance with broader discourses of socio-economic developments.

On instrumental reason after modernity

While Beck may be correct that doubts, which are characteristic for contemporary society that he calls “risk society”, open up space for critical inquires initiated by the public, civil society and social movements (Beck 1997:162), we still need to see how rationalities multiplying in second or late modernity (in contrast to one rationality of “first” modernity) interact with discourses dominating in society. As has been highlighted here, economic rationality presently dominates discourses of nuclear energy, leaving little possibility for actors to be legitimate in discussing nuclear energy without focusing on the economic aspects, including the (un)viability and (un)profitability of nuclear energy. Economization of the public discourse is not specific to the issue of nuclear energy, but is rather an extension of neoliberal trends in contemporary societies.
The side effects that Beck argues become “the motor of social history” instead of instrumental rationality (1997:32) are addressed when the safety of nuclear energy is discussed. Because it is closely connected to various risks associated with nuclear energy, safety remains a theme where emotions are openly revealed and objective rationality rather than instrumental rationality becomes visible. However, this thesis shows that the side effects of nuclear energy did not take the most prominent place in the discourses of nuclear energy in 2005–2014 in Russia, Poland and Sweden. Closure of the public discourse on economic aspects, climate change and energy security shapes discursive opportunities and thus repertoires of anti-nuclear movement in ways that leave few opportunities for movements to question the type of reasoning that is activated when the role of nuclear energy in society is discussed. Therefore, the potential that the themes of risks and side effects of nuclear energy have for opening up discussion on nuclear energy, and possibly the role of energy in society in general, is closed to public discourse in terms of discussing nuclear energy.

9.3 Notes on further research

The analysis undertaken in this thesis has showed that several issues need further investigation. The three contexts chosen, Russia, Poland and Sweden, are countries where the studied processes have taken place. However, these processes are not specific to these countries. Teräväinen et al (2011), studying France, Finland and the UK, have found similar changes in the discourses of nuclear energy and prevalence of arguments on profitability or unprofitability of nuclear energy among nuclear energy proponents and opponents. Both this thesis and the work of Teräväinen et al signal the presence of similar processes. Research studying broader groups of countries is needed to better understand the scope and depth of processes influencing the actions of anti-nuclear movements.

This thesis considered the time-period of 2005–2014 as a snapshot. However, this time-period is part of the historical development of nuclear energy discourses and environmental movements. While professionalization of environmental movements has been studied to a significant extent, the transformation of nuclear energy discourses still needs to be analyzed. This raises a number of important questions. Why and how have these changes occurred? Which were the crucial time periods when these changes accelerated? When did the unprofitability of nuclear energy enter and
become predominant in anti-nuclear discourses? What was the turning point for this shift? How might we consider this shift from an ideological perspective? Moreover, to what extent are these processes connected to contemporary neoliberal economic trends?

While previous research has emphasized the role of expert dissent, this thesis has demonstrated that actors with expert identity are not always treated as experts by more powerful actors. Under what conditions can actors exercise one or another identity? How is it connected to legitimacy? While social movements often are understood as networks (Diani 1992), there is still not much known about how relations between different kinds of actors within movements result in different repertoires. This needs to be further investigated as well.

This thesis considers recent anti-nuclear movements as the second cycle of contention against nuclear energy, while the first cycle took place in the 1970–1990s. The concept of cycles of contention (Tarrow 1989), although acknowledged, has not received rigorous scholarly attention. The ways this concept may contribute to our understanding of social movements in the long-term perspective should be analyzed as well, especially when movements do not repeat in the same forms. How might the concept of cycles or waves of contention be applied further?

9.4 After 2014

The year 2014 is the final point of analysis in this thesis, and energy policies and projects have moved on since then. Several ambitious plans have been adjusted. The plans to construct a nuclear power plant in the Kaliningrad region have been significantly altered, construction has been stopped and the initial project of a nuclear energy reactor is being reviewed. It has already been announced that it will be a different kind of reactor that would have less capacity for electricity production. Not much has been heard about a nuclear reactor in Nizhny Novgorod. There is no news, and it seems that construction is currently not in operation. The Polish state authorities have recently announced that it will take a longer time to construct a nuclear power plant than previously estimated. Allegedly, there have been problems with contractors who have conducted environmental assessments. A site where a nuclear power plant will be constructed has not yet been announced. In Sweden, no detailed plans have been announced about nuclear reactor constructions, but it is known that energy companies have
considered a nuclear option. However, it has recently been made public that these considerations were interrupted after the 2014 national elections. Together with these changes, anti-nuclear movements have become less active than in 2005–2014, apart from the Nuclear Free Gulf of Bothnia network in northern Sweden. In other words, another wave of anti-nuclear movements has passed, while public discourses on nuclear energy will continue to influence nuclear energy developments as well as potential opposition to it.

This study of public opposition to nuclear energy policies during the period referred to as “Nuclear Renaissance” has demonstrated something more than unrealized or delayed energy policies and projects. We have learned that this opposition can take different forms, sometimes forms that are less visible to the public. As the issue of nuclear energy does not seem to be leaving the energy debates soon, the broader implications of this transformation are yet to be seen. It is unclear what will happen to the nuclear energy sector in the coming decades, but what is important to remember is how nuclear energy development is publicly discussed, since this will affect not only how the general public and the movements will react to potential construction and what role nuclear energy is considered to play in society, but more importantly, what kind of energy future we want for future generations.
Appendix I
Polish, Russian and Swedish sources, Chapter 4

Poland


Resolution of the Council of Ministers (2009b). Rozporządzenie Rady Ministrów z dnia 12 maja 2009 r. w sprawie ustanowienia Pełnomocnika Rządu do spraw Polskiej Energetyki Jądrowej, *Dziennik Ustaw Nr. 72 Poz. 622, p. 5609*


Tusk, D. (2012). Prime Minister meeting with representatives of the Ministry of Economy and Regional Development, 23 February

Russia


Decree №372 (2000). Об утверждении Положения об оценке воздействия намечаемой хозяйственной и иной деятельности на окружающую среду в Российской Федерации [About the approval of the Statute about the Environmental impact assessment of planned commercial or any other kind of activity in Russian Federation], Moscow: National environmental protection committee of the Russian Federation


Federal Law №7 (2002). Об охране окружающей среды [About environmental protection], Moscow: the State Duma


Framework of transition to innovative development of the economy (2011). Стратегия инновационного развития Российской Федерации [Framework of transition to innovative development of the economy], Moscow: Government of Russian Federation


**Sweden**


SOU 2009:88; *Kärnkraften - nya reaktorer och ökat skadeståndsansvar*. Stockholm: Miljö- och energidepartementet

Appendix II
Polish, Russian and Swedish sources, Chapter 5

Poland


Leaflet (2009). Inicjatywa AntyNuklearna zaprasza na Konferencję Prasową i Pokojowy Marsz w protestie przeciwko planom budowy elektrowni jądrowych oraz stworzeniu nowych składowisk odpadów promieniotwórczych w Polsce [Anti-nuclear Initiative invites to the press conference and rally against plans to build nuclear power plants and the creation of new radioactive waste in Poland], Warsaw, Available at http://www.chernobyl-day.org/IMG/pdf/varsovie-conference.pdf accessed 29 January 2017

Leaflet (2011a). Nie dla polskich planów energii atomowej. Partia Zielonych z Brandenburga startuje kampanię internetową [No to Polish plans for nuclear energy. The Green Party of Brandenburg starts the internet campaign], 5 December

Leaflet (2011b). Protest Przeciw Elektrowni Atomowej [Protest against nuclear power plant], Social Initiative Gąski, 13 December

Leaflet (2012a). Protest przeciwko elektrowni jądrowej w regionie turystycznym [Protest against nuclear power plant in tourist region. Invitation to protest rally in Koszalin], 23 February


Letter (2009). Letter of solidarity with the antinuclear movement in Poland. Friends of the Earth Europe. 24 April


WWF leaflet (2009). Energia jądrowa to zła odpowiedź [Nuclear power is the wrong answer], 9 September, Available at http://awsassets.wwfpl.panda.org/downloads/energia_jadrowa.pdf accessed 10 January 2017

Russia


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Kola NPP Online Petition (2012). Kola nuclear power plant must be shut down. Accessed
APPENDIX II

12 March 2012


Open Letter (2013). Открытое Обращение Президенту Российской Федерации, губернатору Красноярского края, Президенту Финляндии, генеральному директору Госкорпорации Росатом и другим [Open Letter from activists to politicians, including President of Russia, President of Finland, Governor of Krasnoyarsky kraj, Director General of Rosatom], Available at http://www.greenpeace.org/russia/Global/russia/report/toxics/LeningradNPP_OpenLetter.pdf 26.03.2013 accessed 10 January 2017


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Sweden

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Appendix III
List of interviewed organizations and initiative groups

Russia
Representative of the Bellona Foundation, Sankt-Petersburg, March 2013
Representative of Greenpeace Russia, Sankt-Petersburg, March 2013
Representative of Eco-Defense!, Moscow, April 2013
Representative of Rosatom, Moscow, April 2013
Representative of Greenpeace Russia, Moscow, April 2013
Representative of Bellona, Sankt-Petersburg, April 2013
Representative of Green Cross, Moscow, April 2013
Expert affiliated with Bellona, Moscow, April 2013
Environmentalist, Russian Academy of Sciences, Moscow, April 2013
Representative of Movement “No NPP in Monakovo” [Движение “Нет АЭС в Монаково!”], Moscow, April 2013
Representative of Nizhny Novgorod anti-nuclear movement [Нижегородское антиядерное движение], Nizhny Novgorod, April 2013
Representative of Eco-center “Dront” [Экоцентр “Дронт”], Nizhny Novgorod, April 2013
Representative of environmental NGO “Green World” [“Зеленый мир”], Sankt-Petersburg, March 2013
Representative 1 of Initiative group on referendum about construction termination of Baltic NPP, Moscow, April 2013
Representative 2 of Initiative group on referendum about construction termination of Baltic NPP, Moscow, April 2013
Representative of Siberian Ecological Agency, via Skype, June 2013
Researcher, Institute of Sociology, Russian Academy of Science, Moscow, April 2013
Poland

Representative of Green Institute [Zielony Instytut], Warsaw, May 2013
Representative of Anti-nuclear Initiative [Inicjatywa AntyNuklearna], Warsaw, May 2013
Representative 1 of Heinrich Böll Stiftung Poland, Warsaw, May 2013
Representative 2 of Heinrich Böll Stiftung Poland, Warsaw, May 2013
Representative of Greenpeace Poland, Gdansk, May 2013
Representative of environmental NGO EKO-UNIA, Wroclaw, May 2013
Representative of Citizens Committee “No for atom in Lubiatowo in gmina Choczewo” [Komitet Obywatelski “Nie Dla Atomu w Lubiatowie gm. Choczewo”], Gdynia, May 2013
Representative of Protest group against building of NPP in Gąski [Protest przeciwko budowie elektrowni jądrowej w Gąskach], Gąski, May 2013
Researcher, Nicolaus Copernicus University in Toruń, Gdansk, May 2013
Representative of Anti-nuclear Initiative [Inicjatywa AntyNuklearna], Warsaw, April 2014
Representative of Green Federation GAJA, Słupsk, April 2014
Representative of No for Atom [Nie dla Atomu], Żarnowiec, Gdansk, April 2014
Researcher, Professor of nuclear physics, KTH, Stockholm, May 2014
Researcher, Institute of Philosophy and Sociology, Polish Academy of Sciences, Warsaw, April 2014
Representative of PGE EJ1, Warsaw, April 2014

Sweden

Representative 1 of People’s campaign against nuclear energy – nuclear weapons [Folkkampanjen mot Kärnkraft-Kärnvapen], Stockolm, March, 2014
Representative 2 of People’s campaign against nuclear energy – nuclear weapons [Folkkampanjen mot Kärnkraft-Kärnvapen], Stockolm, March, 2014
Representative 3 of People’s campaign against nuclear energy – nuclear weapons [Folkkampanjen mot Kärnkraft-Kärnvapen], Stockolm, March, 2014
Representative 4 of People’s campaign against nuclear energy – nuclear weapons [Folkkampanjen mot Kärnkraft-Kärnvapen], Stockolm, May, 2014
Representative of the Waste Network [OSS], Uppsala, May 2014
Representative of Värmland mot Kärnkraft, Karlstad, March 2014
Representative of Värmland mot Kärnkraft, Karlstad, March 2014
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Representative of Naturskyddsföreningen, Lund, June 2014
Representative of SKB, Stockholm, May 2014
Representative of MILKAS, Uppsala, March, 2014
Representative of MILKAS, Uppsala, March, 2014
Representative of Greenpeace, Stockholm, March 2014
Representative of Network Nuclear-Free Gulf of Bothnia, via Skype, October 2014

Meetings attended

Annual Meeting of Swedish People’s campaign against nuclear energy – nuclear weapons [Folksampanjen mot Kärnkraft-Kärnvapen], Stockholm, March 2013
Appendix IV
Interview guide

Public participation in nuclear power governance and anti-nuclear movements in Russia, Poland and Sweden

The interviews are semi-structured with open ended questions. The approximate time for an interview is around one hour.

Introduction
Introducing the study, the researcher, confidentiality, consent form, timing, issues of recording

Organizations/ local anti-nuclear groups activities
What is the position of the organization you belong to regarding nuclear power sector development and the construction of new nuclear power reactors?
What does the organization you belong to do in this sphere?
Who is the target of these actions? Would you mind naming the most successful actions conducted by the organization you belong to according to your opinion?
How they were organized? Who took part in them?

Historical dimension
Were you active in the movements in the 80-90s? Do you think it differs from the situation nowadays? What has changed in the post-Fukushima period?

Political context
What are political opportunities/hindrances for the movement?
Have they changed in the last decade?

Role of the media
How do you disseminate your views regarding the nuclear power industry and anti-nuclear agenda? What are your thoughts concerning media representation of nuclear energy? How do you use the internet in your work?

Public opinion
Is public opinion helpful in your work? How do you work with public opinion? Do you think nuclear energy is a resonant issue nowadays?

**Cooperation and presence of allies**
Are you interested in the actions of other organizations in your and other regions? Do you cooperate with them? How do you coordinate with others? Who is the coordinator? Do you participate in joint meetings with representatives of other NGOs, authorities, nuclear energy sector?

**Cooperation with citizens and mobilization**
How do you involve citizens in your work? What means do you use? What do you do for movement mobilization? Does it work?

**Communication with nuclear power industry and state**
How do you communicate with the nuclear power industry and authorities?

**Participation in decision making processes**
How does your organization take part in decision making processes regarding nuclear power reactors, including construction and life cycles prolongation? What are the mechanisms of inclusion for NGOs/local anti-nuclear groups in the decision-making process?
Appendix V
List of codes used in the analysis

a) Codes in discourse analysis

Texts with pro-nuclear positions
Climate change, ecological matters, economic arguments, emotions, energy security/diversification, energy strategy principles, Fukushima reactions, future, geopolitical reasoning, innovations and modernization, legal issues, no alternatives/alternatives, Nuclear Renaissance, nuclear safety, nuclear waste, others, political participation, relation to nuclear weapons, responsibilities, risk, uranium availability/uranium deficit

Texts with anti-nuclear positions
Climate change, ecological matters, economic arguments, emotions, experiment, Fukushima reactions, future, geopolitical reasoning, innovations and modernization, legal issues, no alternatives/alternatives, Nuclear Renaissance, nuclear safety, nuclear waste, others, political, political participation, positions, relation to nuclear weapons, responsibilities, risk, systematic approach, trust, uranium availability/uranium deficit

b) Codes in analysis of interviews
Actions, authorities, being expert, catastrophes, challenge of some organizations, challenges, change opportunities, charisma, established mechanisms (institutional channels), financial opportunities, human resources, image opportunity, inappropriate actions, international arena, internet opportunities, legal opportunities, legitimization of actions, media opportunities, mobilization, movement’s goal, need for cooperation, opportunity, people of the movement, political situation, political, positions

c) Codes of actions
Camps, meetings, pragmatic, symbolic, other
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ANTI-NUCLEAR MOVEMENTS IN DISCURSIVE AND POLITICAL CONTEXTS


17. Renata Ingbrant, *From Her Point of View: Woman’s Anti-World in the Poetry of Anna Świrszczyńska*, 2007
34. Tommy Larsson Segerlind, *Team Entrepreneurship: A process analysis of the venture team and the venture team roles in relation to the innovation process*, 2009
37. Karin Ellencrona, *Functional characterization of interactions between the flavivirus NS5 protein and PDZ proteins of the mammalian host*, 2009


43. René León Rosales, *Vid framtidens hitersta gräns: Om pojkar och elevpositioner i en multi-etnisk skola*, 2010

44. Simon Larsson, *Intelligensaristokrater och arkivmartyrjer: Normerna för vetenskaplig skicklighet i svensk historieforskning 1900–1945*, 2010


47. Michael Wigerius, *Roles of mammalian Scribble in polarity signaling, virus offense and cell-fate determination*, 2010


52. Carl Cederberg, *Resaying the Human: Levinas Beyond Humanism and Anti-humanism*, 2010


57. Christina Douglas, Kärlek per korrespondens: Två förlovade par under andra hälften av 1800-talet, 2011
63. Wessam Melik, Molecular characterization of the Tick-borne encephalitis virus: Environments and replication, 2012
65. Peter Jakobsson, Öppenhetsindustrin, 2012
68. Anna Tessmann, On the Good Faith: A Fourfold Discursive Construction of Zoroastripanism in Contemporary Russia, 2012
70. Maria Wolrath Söderberg, Topos som meningsskapare: retorikens topiska perspektiv på tänkande och lärande genom argumentation, 2012
71. Linus Andersson, Alternativ television: former av kritik i konstnärlig TV-produktion, 2012
72. Häkan Lättman, Studies on spatial and temporal distributions of epiphytic lichens, 2012
73. Fredrik Stiernstedt, Mediearbete i mediehuset: produktion i förändring på MTG-radio, 2013
76. Tanya Jukkala, Suicide in Russia: A macro-sociological study, 2013
77. Maria Nyman, *Resandets gränser: svenska resenärers skildringar av Ryssland under 1700-talet*, 2013
82. Anna Kharkina, *From Kinship to Global Brand: the Discourse on Culture in Nordic Cooperation after World War II*, 2013
84. Oskar Henriksson, *Genetic connectivity of fish in the Western Indian Ocean*, 2013


105. Katharina Wesolowski, *Maybe baby? Reproductive behaviour, fertility intentions, and family policies in post-communist countries, with a special focus on Ukraine*, 2015


128. Linn Rabe, *Participation and legitimacy: Actor involvement for nature conservation,* 2017

129. Maryam Adjam, *Minnesspår: hågkomstens rum och rörelse i skuggan av en flykt,* 2017


131. Ekaterina Tarasova, *Anti-nuclear Movements in Discursive and Political Contexts: Between expert voices and local protests,* 2017
Energy policies which maintain and extend nuclear energy are often opposed by anti-nuclear movements. Ambitious plans for developing nuclear energy in Russia, constructing a first nuclear plant in Poland, and lifting the ban on nuclear energy while allowing the replacement of old reactors in Sweden are examples of such energy policies. In contrast to the massive anti-nuclear movements from the 1970s to 1990s, more recent anti-nuclear movements are not organized as national protest campaigns. There are two kinds of actors, the national-level environmental NGOs, and the localized anti-nuclear groups. This thesis examines repertoires of anti-nuclear movements from the perspective of discursive and political opportunities. The analysis demonstrates that expert rhetoric becomes a standard approach for discussing nuclear energy, while references to emotions and subjective matters are unacceptable. Political contexts of anti-nuclear movements provide opportunities for environmental NGOs to pursue nonconfrontational strategies and engage in institutional channels, where they can contribute their expert knowledge. Concurrently, local anti-nuclear groups, on the one hand, share argumentative structures with environmental NGOs, but on the other hand, attempt to mobilize local population and organize local protests. The differences in repertoires between these two kinds of actors and the absence of actors opting for mass engagement provide some insight into repertoires of anti-nuclear movements as a whole.

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