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Social innovations in climate activism: Understanding climate change activism through the multilevel perspective framework

Bots, Michiel

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Social innovations in climate activism

UNDERSTANDING CLIMATE CHANGE ACTIVISM THROUGH THE
MULTILEVEL PERSPECTIVE FRAMEWORK

Michiel Bots

THESIS MA INTERNATIONAL RELATIONS: GLOBAL POLITICAL ECONOMY

Student no.: s2920689

E-mail: m.w.t.bots@umail.leidenuniv.nl

Supervisor: Dr. J.D. London

Second reader: Dr. A.R. Shidiq

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1. Introduction

To avert a global climactic catastrophe, environmental social movement organizations (SMOs) around the world insist that humanity must transition rapidly to clean energy, even as they acknowledge that such a transition will require huge changes in the global energy system. And yet, as these same organizations will admit, marshalling the political will necessary to achieve these changes remains a central obstacle warning that, absent this political will, efforts to address the global climate crisis are doomed to fail. Confronted with this urgent challenge, environmental SMOs have adopted innovative ways of campaigning, with the ultimate aim of compelling action from key players in the energy system, including states and multi-national energy firms. Two particularly interesting instances of such innovations can be observed in the Netherlands, where environmental SMOs have had success in using litigation and shareholder activism to advance their social movement objectives. Given the stakes of the environmental crisis and the formidable obstacles SMOs face, understanding the sources and limits of Dutch environmental SMOs' success is of both theoretical and practical significance.

Theoretical literature on social movements has sought to understand the conditions under which SMOs succeed and fail but encounters limits in providing a satisfactory analysis of SMOs efforts to influence the global energy system. This stems in part from the specific complexities of the global energy system and the energy transition. To develop a satisfactory account of the energy transition, we require a theory of change that is attentive both to its socio-technical and political aspects.

Additionally, the unconventional nature of new campaigning strategies used by SMOs requires a theory of change that is capable of capturing how innovative campaigning strategies ('social innovations') manage to perpetrate into the main stream socio-political regime. We therefore require a theory of change that revolves around the social innovation itself rather than social movements. Taking up this challenge, this thesis uses an analysis of recent experiences in the Netherlands to contribute to our understanding of the nature of climate politics and the energy transition and advance theoretical treatments of one of the most important questions of our time.

An important characteristic of the global economy in general and the energy sector in particular is the importance of non-state actors, in particular large multinational corporations. Large publicly traded multinational oil and gas firms have both enormous financial and economic investment capacities as well as political influence. (Vormedal et al., 2020) SMO strategies aimed at mobilising these firms to effectively accelerate the energy transition is an under researched area of particular interest. The experiences in the Netherlands discussed in this thesis represent insightful instances of such.

2. The climate change emergency and the global energy system: Instances of social movement innovations in the Netherlands

Climate change poses threats to the ecosystem and human wellbeing and for this reason has been characterized as a global emergency. That responses to this emergency have lacked urgency owes both to the vested interests and profits from the global energy market and the formidable technical and social challenges posed by the need to transition from carbon based to clean energies. This, in turn, poses challenges to environmental SMOs, which have historically struggled to raise the profile of climate change and energy policies from a 'niche' issue to an issue that fundamentally questions and challenges prevailing fossil-fuel dependent socio-political regimes. At this critical juncture in human history, understanding SMOs successes and failures in achieving this transformation have attained considerable salience and, indeed, represents a problem of profound social significance.

In this context, recent developments in the Netherlands are of special interest. In particular two types of innovative activist strategies targeting multinational oil and gas firm Shell plc – climate litigation and climate shareholder activism – have recently seen significant breakthroughs in the Netherlands. Considering the urgency of the energy transition and the significant impact of multinational oil and gas firms on this transition, this represents a compelling area of research. It is imperative to understand these developments in ways that acknowledge the specific features of the socio-technical and political aspects of the energy transition. The energy transition demands a theory of change that is capable of capturing its socio-political and sociomaterial complexity. We therefore need to extend social movement research with insights from the realm of transition studies, which is better suited to address complex non-linear processes of change.

2.1. Climate emergency and non-response: The global challenge to SMOs

To fully understand the tremendous implications of the global energy transition it is imperative to understand both the challenge that the sector is facing as well as the main characteristics of the fuels that power the global economy today. The energy transition not only challenging in terms of its size and societal, political and economic implications, it also requires a complete technical overhaul of the world's energy system. This in turn complicates the challenge that SMOs addressing climate change are facing.

2.1.1. *The imperative of emergency response*

Human induced greenhouse gas (GHG) emissions are causing global warming. Amongst scientists and policymakers world wide a consensus has grown in recent years that this is a dangerous process that should be stopped. As per the ‘Paris Agreement’ on climate change countries across the globe have committed themselves to try to limit global warming to well below 2 degrees Celsius, preferably to 1.5 degrees Celsius. The energy sector, in particular via the combustion of fossil fuels, is responsible for the vast majority of human induced GHG emissions over the course of the last century. (IEA, 2021; SEI et al., 2020) Therefore, to align the carbon emissions of fossil fuels with the ‘Paris Agreement’ targets, fossil fuel production and consumption will need to decline, leaving fossil fuel reserves ‘in the ground’.

Analysis of the International Energy Agency (IEA) shortly after COP26 negotiations shows that if all stated policies and announced pledges “are met in full and on time, they would be enough to hold the rise in global temperatures to 1.8 °C by the end of the century.” (Biol, 2021) Hence, more action is required to meet the preferred 1.5 degrees Celsius target and to take into account the potential failure of countries to deliver on their promises. The difference between fossil fuel production levels consistent with the 1.5 degrees Celsius target and actual planned and projected production levels is called the ‘production gap’. Fossil fuel production and consumption will need to decrease by an estimated 6% per year from 2020 to 2030, but is instead projected to increase by 2% annually. (SEI et al., 2020) More specifically, according to the Net Zero Emission by 2050 scenario of the IEA “demand to 2030 falls by nearly 10% for natural gas, 20% for oil and 55% for coal”. (IEA, 2021) This has enormous effects on the global energy system and brings about a huge change for the entire energy sector.

2.1.2. *The global energy market, fossil fuels, and clean energy*

The energy market is a large-scale industrial system that fuels the world economy. Over the last century, it has evolved into a completely globalized system with many interdependencies. As described by Van de Graaf & Savacool (2020) the global energy system is best understood as a “socio-technical system – comprising not just energy sources and technologies, but also user practices, cultural meanings, as well as infrastructure and supply networks.” The importance of non-technical factors to the energy market is also reflected by the pricing of oil and gas on commodity markets, which reflects geopolitical trends as well as user practices as seen during the global COVID-pandemic.¹ Importantly, the global energy market is shaped by powerful political and economic interests that derive benefits from energy and rents the industry generates. Global energy firms and large oil-producing states have

¹ Global energy consumption reduced significantly as a consequence of the COVID-19 pandemic.

not only governed global energy markets, they have actively slowed efforts to transition away from fossil fuels as seen in efforts to discredit climate science and expand production worldwide. To grasp the technical and social challenges of transitioning to clean energy systems, it is important to understand features of fossil fuels and clean energy in relation to the global energy market. In what follows, fossil fuels and clean energy sources are discussed in turn.

The main categories of fossil fuels used today are oil, gas and coal. These fossil fuels have very different characteristics with respect to three important characteristics: globalization of the market, CO₂-footprint, and application. First of all, the oil market is heavily globalized. It accounts for one third of global energy consumption and due to the large amounts of international trade in oil, international oil prices “tend to converge”. (van de Graaf & Savacool, 2020) Oil is particularly important for the transport sector, where it supplies circa 92% of energy demand. (van de Graaf & Savacool, 2020) When used for the production of electricity (which is relatively uncommon), the CO₂-footprint of oil is typically less than that of coal, but higher than the footprint of natural gas. Within the oil sector large variations exist in terms of how the oil is extracted, transported and refined, which all affects both costs and CO₂-emissions. Deepsea oil for example is relatively capital-intensive. And oil from tar sands has a relatively high carbon footprint. As per the IEA (2020a): “15% of global energy-related GHG emissions come from the process of getting oil and gas out of the ground and to consumers.” Reduction of methane leakage (methane has a global warming potential 25 times as high as CO₂ (Boucher et al., 2009)) during oil and gas production is an example of a cost-effective and feasible way to reduce these emissions. However, the extent to which oil and gas companies take action to reduce these emissions varies significantly across the industry. This illustrates the importance of not just reducing the consumption of oil and gas, but also making the production of these products less carbon intensive.

The second main category of fossil fuels is natural gas. Its gaseous form makes it expensive to store and transport over long distances compared to oil. Consequently, natural gas is not as globalized as the oil market, but instead is typically traded on regional markets and transported via pipelines. Its carbon footprint when used for production of electricity is approximately half of that of coal. Worldwide the majority of natural gas is used by industry (e.g. process heating or feedstock), residential use (e.g. heating of homes) and electricity production. The relatively low carbon footprint combined with the fact that gas power plants can typically ramp up very fast compared to coal fired power plants (which is favourable in an electricity system with many weather dependent renewable energy sources), makes that gas is sometimes portrayed as ‘transition fuel’. (Gürsan & de Gooyert, 2021)

Coal is the third main category of fossil fuels. Being the backbone of the industrialization of the world economy, it still plays a major role in the global energy system. It finds the majority of its application in the production of steel, iron and other minerals as well as production of electricity. (IEA,

2020b) As opposed to oil and gas, international trade of coal is rather limited, with approximately 15% cross border trade. Countries that are large consumers of coal also tend to have their own coal reserves and thus use it domestically. Due to the abundance of coal across a wide range of geographical areas, it is not widely seen as a geopolitical 'weapon'. (van de Graaf & Savacool, 2020)

Renewable energy,² such as solar, wind, hydro and bioenergy, has grown rapidly in recent years. Renewables currently make up almost a quarter of global electricity generation. (IEA, 2020b) However, the electricity sector represents only a fifth of the global energy consumption, meaning that the global energy system is currently for only ca. 5% powered by renewable energy. (bp, 2021) In other words, there is still a long way to go in reducing the carbon footprint of the energy industry. On this road from a fossil fuel based energy system towards a renewable energy system, a number of problems are expected to be encountered.

Technically speaking, introducing sources of renewable energy requires an overhaul of the entire energy system and related industries due to specific technical characteristics of renewable sources of energy. Weather dependency of wind and solar power, for example, causes large intermittency of energy production. Adjusting to this requires considerable adjustments of energy infrastructure for which large amounts of capital investments are required. Also transport and storage of renewables requires different technologies, many of which are not yet fully developed. This in turn affects possibilities for energy trade flows across the globe.

The introduction of renewables faces resistance due to vested interests. In particular, the oil and gas industry is known for putting its corporate political power to use to protect its interests. (Ford & Newell, 2021; Vormedal et al., 2020) Compliance with the 'Paris Agreement' targets would imply that significant parts of the world's fossil fuel reserves would not be extracted, translating into a financial burden for companies that have already invested in exploration of these reserves. (McGlade & Ekins, 2015) An estimated three-quarters of the stranded assets in 'Paris' compliant scenarios belong to governments, "implying formidable political obstacles in nations with nationalized fossil fuel ownership." (Hansen, 2022, p. 1) Besides the business of extraction of fossil fuels, also other parts of the economy related to fossil fuels are at risk of ending up with stranded assets (e.g. fossil fuel power plants or feedstock applications). Furthermore, the cost-level of renewable energy is typically higher than that of fossil fuels and profitability of renewable energy is significantly lower than that of fossil fuels. (Hansen, 2022) To date most renewable energy projects have been dependent on government support schemes, which makes the sector vulnerable for political changes.

² Nuclear energy, which is also an energy source with a low carbon footprint, is not discussed here in detail. Although in some regions nuclear energy provides the majority of electricity production, in 2019 nuclear energy represented approximately 4% of global primary energy demand. (bp, 2021)

Despite these challenges, environmental social movements have taken up the challenge to fight against vested interests, aiming to accelerate the energy transition. Understanding how successes are realised by these organisations will be of vital importance in shaping an adequate response against climate change.

2.1.3. Changing climate policies and activism: Challenges to environmental SMOs

Ever since the ‘Club of Rome’ presented its report ‘The Limits to Growth’ in the 1970s, initiatives have been undertaken to reduce the consumption of fossil fuels. (Meadows et al., 1972) However, with international agreements being put in place and major economies such as the EU enhancing their legislative efforts in the realm of climate change, recent years have seen a significant increase in climate change policies or initiatives. In the following the existing anti-fossil fuel policies or initiatives will be discussed in two categories: supply side policies and demand side policies.

Traditionally, governments, often encouraged by environmental SMOs, have aimed to reduce carbon emissions by stimulating renewable energy production or incentivizing or enforcing energy efficiency. By stimulating renewable energy production, for example via subsidies, renewable energy is given a competitive advantage, fostering demand for this product. Energy efficiency can for example be stimulated by increasing taxes on energy or is enforced via industry standards and permits. Since these policies do not directly affect the supply of fossil fuels they are classified as ‘demand side policies’.³

On the other hand, supply side policies aim to impose burdens on the production of fossil fuels, such that they cannot be extracted, processed and/or transported to the consumer. A straightforward ban on the extraction of fossil fuels on a certain location is an example of a supply side policy. However, policies that reduce the profitability of the of fossil fuels can also be considered supply side policies, as they reduce the amount of fossil fuels that are economically viable to extract. Interestingly, a supply side policy restricting the extraction of fossil fuels can have the adverse effect of increasing supply on the medium term, as decreased demand leads to higher prices, which makes a wider range of fossil fuels economically viable to extract. The globalized nature and interconnectedness of the global energy system makes it difficult to predict the exact outcome of supply side policies.

³ Through a broader perspective on energy consumption in general, a subsidy on the production of energy could be interpreted as an encouragement of energy consumption and production on the supply-side.

2.2. Social movement innovations in the Netherlands

In recent years SMOs advocating for supply side policies have become more prominent in the public discourse and notably they have adopted a greater variety in campaigning strategies. (Green & Denniss, 2018; Verkuijl et al., 2018) Two particularly interesting types of innovative strategies, namely climate litigation and climate shareholder activism, have recently gained momentum with recent breakthroughs in the Netherlands. Targeting major actors in the energy industry and potentially being replicable in other regions, these innovative strategies have the potential to significantly alter the direction of the global energy transition.

2.2.1. Climate litigation

Climate change litigation (or climate litigation) refers to lawsuits that are brought before judicial bodies and raise an “issue of law or fact regarding the science of climate change and/or climate change mitigation and adaptation policies or efforts as a main or significant issue.” (Setzer & Higham, 2021, p. 9) In the context of this work, I focus on climate litigation initiated by social movement organisations. In these type of cases SMOs use the law to hold governments or large corporations responsible for the negative impact of their policies on climate change related issues. Many of these cases do not only aim to address a single case, but instead aim to achieve a wider societal goal by means of ‘strategic’ litigation. (Setzer & Higham, 2021, p. 12) These wider societal goals include the aim to “advance climate policies, drive behavioural shifts by key actors, and/or create awareness and encourage public debate.” (Setzer & Byrnes, 2020, p. 4)

Using lawsuits strategically to pursue societal goals is not completely new. Often parallels are drawn between strategic climate litigation and the lawsuits against Big Tobacco in the 1990s as well as asbestos litigation. (Ganguly et al., 2018) The application of it in the realm of climate change is a fairly recent development. Additionally, it is an inherently innovative way of using law, where plaintiffs are constantly “adopting innovative strategies that capitalise on new developments in climate science.” (Ganguly et al., 2018, p. 867)

The number of climate litigation cases started to rise in the mid-2000s, in what Ganguly et al. (2018, p. 846) refer to as the “first wave of private climate litigation”, spanning from 2005 to 2015. Cases in this first wave tried generally unsuccessfully in “attempts to clear judicial thresholds with regard to standing, proof of harm and causation.” (Ganguly et al., 2018, p. 841) The so-called second wave of private climate litigation, however, is deemed more successful. Tapping into rapidly developing scientific findings, discursive developments and the changing constitutional context, the second wave cases have in several instances managed the judicial body to rule in favour of their the plaintiffs. This includes both cases against governments, where governmental bodies are forced to introduce more stringent

environmental policies, and cases against private companies. In the Netherlands a recent significant breakthrough of cases against private companies is the case of *Milieudefensie v. Shell*, where the oil major was forced to set stringent companywide emission reduction targets. (Rechtbank Den Haag, 2021) As argued by Setzer & Highham (2021) a third wave of climate litigation cases is now on its way, with a more diverse approach taken to influence corporate practices. This indicates that the realm of climate litigation is constantly developing and keeps innovating.

2.2.2. *Climate shareholder activism*

Another recent trend and social innovation through which social movements aim to pursue societal goals with regards to climate change is via shareholder activism.⁴ Shareholder activism comes in different forms and shapes and in a very broad definition includes “the efforts of any investor to leverage their rights and privileges as an owner to change a company’s practices or strategy.” (Castañón Moats et al., 2021, p. 2; Sjöström, 2008) Within the context of this work, however, I focus on the role of social movement organisations that strategically use shares and shareholder rights to put pressure on the board of directors of publicly traded companies to enhance their measures to mitigate climate impact.⁵ This can be both directly or indirectly. Firstly, direct shareholder activism by SMOs occurs for example via filing shareholder resolutions that urge the board of a company to change its GHG emission policies and practices. Secondly, an indirect approach aiming to influence corporations’ policies and practices by means of shareholder actions occurs via SMOs urging institutional investors to divest from companies with a bad performance with regards to climate impact (e.g. fossil fuel divestment) or by trying to convince shareholders to vote in favour of resolutions aiming at more stringent environmental policies. (Healy & Barry, 2017a; Ritchie & Dowlatabadi, 2015a, 2015b)

Shareholder activism has been used before by social movements organisations to reach societal goals. (Goranova & Verstegen Ryan, 2014; Rodrigue & Michelon, 2021) Examples hereof include the activists filing shareholder resolutions to curtail activities in South-Africa in protest against the apartheid regime (Broyles, 1998), and resolutions targeting tobacco companies about more transparency

⁴ Another somewhat related trend is the fossil fuel divestment (FFD) movement. This movement calls upon investors to divest from fossil fuel companies. FFD has recently gained support of major institutional investors promising to divest from the fossil fuel industry. (Blondeel, 2019; Ritchie & Dowlatabadi, 2015a, 2015b)

⁵ Note that this shareholder activism can sometimes go hand in hand with the aforementioned climate litigation. In Poland for example, the SMO ClientEarth filed a lawsuit against the energy company Enea, urging the company to cancel the construction of a coal-fired power station. (The Economist, 2022) According to ClientEarth Enea did not act in line with the best interest of the shareholders, since the decarbonisation of Europe’s electricity grid would present an indefensible financial risk. Being in the possession of ten shares of the company, worth around €20 in total, ClientEarth used their rights as a shareholder to fight the company in court. In July 2019, the court of Poznan decided in favour of ClientEarth and the construction of the coal-fired planned was cancelled. (Climate Change Laws of the World, n.d.)

about the health risks of smoking. (Sjöström, 2008) Also, shareholder activism related to climate change is not new. As indicated by Monks et al. (2004), who studied 81 US shareholder resolutions related to CSR (corporate social responsibility) in the 2000-2003 period, the highest votes were cast for topics related to climate change and renewable energy. The fact that this way of addressing climate change is not new, does not mean that climate shareholder activism does not qualify as a social innovation. On the contrary, it shows that climate shareholder activism has been developing in free social spaces (with limited success) before recently entering an period of more successful campaigns.

As indicated by research by the US law firm Gibson Dunn (2021), support for shareholder proposals on climate change has been increasing significantly in recent years, going from zero proposals receiving majority support in 2019 to 11 proposals receiving majority support in 2021.⁶ Furthermore, average levels of support almost doubled to 49.9% in 2021 compared to 2019 for climate change related proposals. (Gibson Dunn, 2021) This increase in shareholder support is mainly the result of institutional investors voting in favour of shareholder resolutions. A notable example of this represents the successful campaign surrounding the 2021 Annual General Meeting of ExxonMobil shareholders. The investment firm Engine No. 1 “coupled ‘traditional’ criticisms of performance and strategy with ESG attack vectors,” and managed to change the outcome of the election of the ExxonMobil board, electing board members with a larger focus on climate change and renewable energy topics. (Lazard, 2021)

European companies typically perform better than their US counterparts in terms of reporting on sustainability. (Rodrigue & Michelon, 2021) Due to institutional, cultural and regulatory factors European companies are less likely find themselves being targeted by shareholder proposals on environmental issues than US companies. (Cziraki et al., 2010; Horster & Papadopoulos, 2019) European shareholders typically engage with companies by means of shareholder dissent over management proposals. (Cziraki et al., 2010) Nonetheless, an increasing trend amongst European oil and gas companies in shareholder support for climate activism can be seen. The Dutch SMO Follow-This is one of the most prominent examples of this. Since 2016 Follow-This has been filing climate resolutions at Shell’s Annual General Meeting (AGM). Support for their resolutions has increased substantially from 2.7% in 2016 to 30% in 2021. Their work has now extended to include other oil and gas firms as well, including Equinor (Norway), BP (UK) and Total (France). (Follow-This, n.d.)

⁶ The data from Gibson Dunn (2021) is based on Russell 3,000 companies (3,000 largest publicly traded companies in the US) and was derived from the Institutional Shareholder Services database.

2.3. The necessity for a theory of change

Environmental SMOs in the Netherlands have recently set into motion two innovative processes of change that have the potential to radically change the global energy system. These changes are 1) the use of lawsuits and human rights to urge multinational corporations to address climate change (climate litigation), and 2) pressuring multinational corporations via shareholder resolutions to address climate change. Gaining a better understanding in how exactly these ‘social innovations’ have developed can help to improve our understanding of possible strategies to respond to the climate emergency.

Owing to specific features of the energy transition, social movement literature provides necessary but insufficient means to analyse and understand the emergence and impact of social movements in the context of the energy transition. A systems perspective and appreciation of complexity thinking are crucial elements of an analysis capable of understanding the emergence and impact of these innovative activist techniques. We therefore need a theory of change of how social innovations breakthrough to the socio-political regime. Insights from international political economy (IPE) emphasise the necessity for such a transitional perspective on climate change.

Climate change policies are sometimes framed as apolitical issues, which can be overcome technocratically. The introduction of technocratic concepts such ‘emissions reduction’ or ‘decarbonisation’ aims to move climate change discourse out of the political sphere, turning it into a purely technocratic issue. (Paterson, 2021) This trend fits within what is referred to as ‘agnostic politics’ (Machin, 2013) and ‘post-politics’ (Rice, 2016; Swyngedouw, 2010) in academic literature. This however, tends to neglect the “complex sociomaterialities of getting rid of fossil fuels.” (Paterson, 2021, p. 932) Paterson (2021) therefore argues for the repoliticization of climate change by means of a more transformational understanding of the topic: an understanding which recognises the huge transformational impact and political conflicts which inherently arise from climate change politics. Also other IPE scholars, such as Newell (2019, p. 26) argue for “energy to take up its rightful place” in the political economy discourse and to consider concerns about “who and how and for whom production is organized and re-organized” in the context of the energy transition.

At the same time, however, we should be wary of oversimplification for the sake of enlightening political conflicts. The energy system is a highly complex socio-technical system and cannot be simplified into “a struggle between heroic social movements representing humanity and fossil fuel corporations and their allies in government.” (Paterson, 2021, p. 923) With this in mind, Paterson (2021, p. 932) argues that “the form of agency that might open up political space for new forms of intervention aimed at more radical transformations may not be the same forms of agency as those needed to effect the ‘accomplishing’ of those transformations.” This idea, where actors on different levels in a socio-

technical system take up different roles, requires a different perspective on social movements. Transition studies provides such a perspective.

3. Theorizing social movements & transitions

Theoretical literature on social movements has sought to understand the conditions under which SMOs are able to elevate social problems to a point that compels fundamental societal change. In this context, the notion of "tipping points" or "breakpoints" refers to instances or moments when SMOs achieve success in garnering the political support and power to achieve fundamental social change. This, in turn, requires SMOs to identify ways of compelling prevailing political and economic interests to comply with social movement demands. This speaks to a fundamental dilemma of environmental politics that confronts all SMOs: i.e., to advocate changes in and reforms to regulatory regimes, or to pursue more "radical" or "revolutionary" strategies that take aim at the capitalist energy market itself.⁷ Three distinct theoretical approaches towards social movement organisations are discussed: political opportunity, cultural framing, and resource mobilization. (Edwards et al., 2018). From here, we take a closer look at revolutionary and reformist SMOs with specific reference to the environmental movement. Once this distinction is made, it is useful to appreciate efforts to theorize SMOs strategies and tactics and the determinants of their effectiveness, as has distilled in the emerging literature on social movements and environmental SMOs. As will be observed, social movement theory faces problems in addressing many aspects of the climate crisis owing on the highly socio-technical aspects of the world energy market. For this reason, and finally, environmental social movements and SMOs are discussed in the context of transition studies, an especially relevant emerging body of theoretical literature focused specifically on understanding socio-technical and socio-political transitions. Overall, a critical reading of the aforementioned literature informs the research questions that guide this study's empirical analysis.

3.1. Theoretical perspectives on social movements

Social movement theory studies the emergence and behaviour of social mobilization. As described by Aberle (1991), a social movement is "an organized effort by human beings to affect change in the face of resistance by other human beings." A particular form of a social movement is a social movement organization (SMO). SMOs are formally organized forms of a social movements and thus only represent a certain subset of social movements. The environmental movements considered in this thesis can be considered social movement organisations. Academic literature aiming to explain the successes and failures of social movements can be categorized in three distinct theoretical

⁷ The term radical appears in quotation markets here to draw attention to the fact that the "radical" designation is frequently part of efforts to delegitimize efforts to address the environmental crisis that are deemed threatening to prevailing interests.

perspectives: political opportunity, cultural framing, and resource mobilization. (Edwards et al., 2018)
Each of these perspectives will be discussed in this section.

3.1.1. Resource mobilization theory

Resource mobilization theory aims to explain the emergence of social movements with a focus on the availability of resources. The theory supposes that a core group within social movement organizations works strategically towards raising resources in support of the SMO. The organization of SMOs, according to resource mobilization theory, is considered a crucial element for success of the SMO. The capacity of a SMO to acquire resources is considered the main reason behind success or failure of a SMO. (McCarthy, 1977)

The following categories of resources are distinguished in resource mobilization theory (Edwards et al., 2018). A short explanation or illustration for each of these categories will be provided based on Edwards et al. (2018):

- material resources;
 - e.g. “financial and physical capital, including monetary resources, property, office space, equipment, and supplies.”
- human resources;
 - e.g. “labour, experience, skills, expertise and leadership.”
- social-organizational resources;
 - e.g. “formal organizations, infrastructures, social ties and networks, affinity groups, and coalitions.”
- cultural resources; and
 - e.g. “symbols, beliefs, values, identities, and behavioral norms of a group of people that orient and facilitate their actions in everyday life.” But it also includes “movement- or issue-relevant productions, such as music, literature, blogs, web pages, or film/videos.”
- moral resources.
 - e.g. “legitimacy, authenticity, solidary support, sympathetic support, and celebrity.”

The nature of the availability of resources available for more radical and for reformist SMOs generally differs. For example, Yziji and Doh (2013) describe the impact that ideological radicalism has on the nature of resource providers of SMOs. Based on a large set of empirical data from SMOs in the US, they describe a process where “ideological radicalism leads to more homogenous resource providers for SMOs,” with a particular focus on SMOs targeting individual corporations in their campaigns. As

described by Yziji and Doh (2013), the homogenization of the resource providers in turn affects the strategy of the respective SMOs.

3.1.2. Political opportunity structures

Another classical approach towards the study of social movements is provided by the concept of political opportunity structures. According to political opportunity theory, the success of social movements is primarily determined by political structures. In particular, this theory argues that actions undertaken by activists depend on the lack or existence of political opportunities. (Meyer, 2004) As per Tarrow (1998), political opportunities are “consistent – but not necessarily formal or permanent – dimensions of the political struggle that encourage people to engage in contentious politics.” With this approach, the environment in which the SMO operates is considered the independent variables, whereas the movement itself is considered the dependent variable. The environment or context in which the SMO operates entails the entirety of the political, institutional and economic context. (della Porta & Diani, 1999, p. 223)

Within the realm of political opportunity structures, two broader traditions can be distinguished: the American and the more recent European tradition. (McAdam et al., 1996, p. 3) The early works of the American tradition sought to “explain the emergence of a particular social movement on the basis of changes in the institutional structure or informal power relations of a given national political system.” (McAdam et al., 1996, p. 3) This approach has led to historical case studies, focussing on single protest cycles or movements. In more recent works, European scholars have sought a more comparative approach towards political opportunity structures. Their aim was to account for “cross-national differences in the structure, extent, and success” of social movements in subject to environments with different political characteristics. (McAdam et al., 1996, p. 3) This has led to the emergence of different types of research, introducing a comparative dimension, based on cross-national research of comparable movements in different states.

In an attempt to synthesize the variety of interpretations of political opportunity, McAdam (1996, p. 27) defined a list of four dimensions of political opportunity, namely:

1. The relative openness or closure of the institutionalized political system
2. The stability or instability of that broad set of elite alignments that typically under- gird a polity
3. The presence or absence of elite allies
4. The state's capacity and propensity for repression

3.1.3. *Cultural framing*

Another major field within social movement studies is cultural framing. This concept emphasizes the centrality of the cultural context of a social movement for it to be successful. Studying social movements from the perspective of culture, has opened up the inclusion of the study of emotions, identities and decisions within this area of study. (Jasper & Poletta, 2018) As per Jasper (1997, p. 12) culture can be defined as “shared mental worlds and their embodiments”. It is the integral realm of social life, the economy and the state. Importantly, it includes the “symbolic or meaningful dimension of people, things, and actions.” Social movements always act within a certain cultural context. A commonly used way to conceptualize this context is as the “widely shared beliefs, assumptions, and practical knowledge that define a kind of cultural common sense.” (Jasper & Poletta, 2018, p. 64) However, the cultural context can also be thought of as cultural materials that are available to recruit support of a movement. Finally, the cultural context can be seen as the “shared beliefs and feelings” about targets, tactics and strategies. (Jasper & Poletta, 2018)

The aim of cultural framing is to alter dominant cultural beliefs or to produce frames that mobilize people for the cause of a specific social movement. For example, this is done by speaking to people’s imagination (of the future), including people in a collective identity, or making them feel deprived or threatened. (Jasper & Poletta, 2018, p. 68) “Frames provide answers to such questions as: What is going on here? What is being said? What does this mean? And how should I (or we) act or respond?” (Snow et al., 2018, p. 393) Frames offer a way to interpret reality, offering three core functions. (Snow et al., 2018, p. 393) First of all, frames work by focussing attention to certain aspects. Similar to picture frames, frames leave certain aspects ‘in-frame’ and others ‘out-of-frame’. Secondly, frames can function as articulation mechanisms. This function refers to the concept of frames tying together elements of reality, such that one coherent meaning can be constructed out of it. Finally, frames can have a transformative function. This function helps to reconstruct how parts of the scene are considered to be related to each other or to the actor.

An important concept regarding framing and social movements is the idea of frame-alignment. (Snow et al., 1986) The idea behind frame-alignment is that messages of social movements are connected to pre-existing beliefs or the target group. These frames draw from so-called ‘master-frames’ that are already common frames within a certain cluster of social movements. (Jasper & Poletta, 2018) Snow et al. (1986) have identified four forms of frame-alignment:

1. *Frame bridging*

This refers to linking “two or more ideologically congruent but structurally unconnected frames regarding a particular issue or problem.” (Snow et al., 1986, p. 467) For example, linking

a unorganised group of people with similar grievances to an organised group (i.e. people that are already 'on your side').

2. *Frame amplification*

This refers to "the clarification and invigoration of an interpretive frame that bears on a particular issue, problem, or set of events." (Snow et al., 1986, p. 469) This way of frame-alignment uses existing opinions and beliefs to persuade people.

3. *Frame extensions*

This refers to the concept of extending the boundaries of an existing frame, in order for the frame to draw in new groups of people. (Snow et al., 1986, p. 472)

4. *Frame transformation*

This refers to frames which aim to promote of a transformation of the target group towards a completely new ideology, which "may even appear antithetical to, conventional lifestyles or rituals and extant interpretive frames." (Snow et al., 1986, p. 473)

Frames resonate differently amongst varying groups of people. As demonstrated by Ferree (2003), for example, messages that activists are appealed to, might not engage with the public that the activists aim to persuade. Also, the institutional role that people have, can affect their response to frames. The general public may be sensitive for very different frames than judges or bureaucrats. Polletta (2012), showed that for judges, bureaucrats and reporters, different frames are persuasive since the requirements of their job specify which kind of claims are acceptable. Other research (Bail et al., 2017) has shown that in many public debates a pattern of "increasing rational argumentation followed by more emotional discussion" evolves. (Jasper & Poletta, 2018, p. 69) Activists were most successful in steering the debate at the tipping point of one communication style to another. Blondeel et al. (2017) specifically studied how framing is used to change 'social norms' related to the fossil fuel industry and found that campaigns linking environmental goals with other goals (usually economic goals) were most successful: an instance of frame-alignment.

3.2. Reform or revolution? Compatibility of environmentalism and capitalism

Conventionally, energy policies are analysed from an utilitarian point of view: focussing on the effects on greenhouse gas emissions and financial performance. (Loureiro, 2020; Macpherson, 2019; Trinks et al., 2018) However, this perspective is not able explain the radical anti-fossil fuel (industry) sentiment seen amongst some SMOs. What is missing in is an appreciation of the importance of ideology of SMOs. Understanding the ideology behind environmental SMOs is imperative to understand the

strategy of these organisations. What can seem to be counterproductive from a socio-technical point of view, fits well within the ideological framework of some environmental SMOs. Underneath the often highly technical discussions about the best course of action with regards to the energy transition, lies a wide range of ideologies.

3.2.1. *Capitalism and the environment*

The in 1899 published pamphlet by Rosa Luxemburg ‘Social Reform or Revolution?’ sparked a major debate on whether a socialist society can be established from within the capitalist system via organisations such as trade unions and reformist political parties, or via a revolution and subsequent collapse of capitalism. Luxemburg pointed at the unsustainable nature of capitalism and argued that the socialist society inherently has to follow from a revolution in which capitalism is over-thrown. In contrast, Eduard Bernstein, to whom Luxemburg responds in her book, believes that the accumulation of small reformist steps can gradually transform society. This over a century old debate is still relevant today. Not only when it comes to a transition to a socialist society, but the debate also shows remarkable similarities with political economy discourse about the environment.

In political economy discourse a vibrant debate has arisen surrounding the compatibility of capitalism and environmentalism and finding a way out of the climate crisis. The core of this debate becomes particularly clear in the context of the discourse surrounding the degrowth and green growth debate. Similar to Luxemburg’s position on the establishment of a socialist society, the degrowth movement argues that sound environmental policies cannot come from within the capitalist world economy as we know it, since it is built on the premise of eternal economic growth and absolute decoupling of economic growth and material throughput is impossible. The latter is attributed to the idea that “the more efficiently we use resources, the lower they cost, and the more of them we end up using.” (Kallis et al., 2018, p. 296)

Economic growth is generally seen as a necessity in order to “avoid unemployment, reduce debt, and fund public services,” in our current economies. (Kallis et al., 2018, p. 298) Combining this with insights from degrowth literature, eco-socialists argue that a solution to the environmental crisis should be sought outside the realms of capitalism. The eco-socialist argument is well described by Smith (2010), who argues that “irresistible and relentless pressures for growth are functions of the day-to-day requirements of capitalist reproduction in a competitive market, incumbent upon all but a few businesses, and that such pressures would prevail in any conceivable capitalism.” Magdoff and Foster (2011) take a similar position in their book ‘What Every Environmentalist Needs to Know about Capitalism’. They argue that any hint to the idea that “capitalism offers the solution to the environmental problem [...] [is] rooted in an absolute denial of reality.” Instead, they find a solution to the

environmental crisis we find ourselves in in socialism. The authors suggest that a revolution is required in how we regard our relationship with each other and the planet, as well as our accumulation of wealth and our social structure.

Some recent neo-classical economic research, however, points in a different direction, suggesting that “under certain conditions, economies may function well without growth.” (Kallis et al., 2018, p. 298) Research by Irmen (2011) indicates that, based on a neoclassical supply-side perspective, market economies do not need growth to function. Lange (2018, p. 28) argues that “zero growth is not an end in itself, but a precondition for achieving social and environmental goals.” Testing several models, he shows that conditions for stable degrowth can be met with declining supply of production factors (i.e. labour, natural resources) as well as working hours reduction. Others that drew similar conclusions based on neoclassical economic models are Heikkinen (2015) and Bilancini & D’Alessandro (2012). Via this debate, we find ourselves back with the main subject of Rosa Luxemburg’s pamphlet: do we need reform, or revolution?

3.2.2. The challenge of effective ‘radical’ action

Undoubtedly, the energy transition requires a vast adjustment of the global economy. As a consequence of ideological differences as well as different strategies environmental SMOs pursue to realise change in different ways. Whereas reformist social movements aim for partial system change, ‘radical’ or revolutionary movements aim for a radical restructuring of the entire societal system rather than incorporation of specific ideas into that system. Distinguishing between revolutionary and reformist SMOs is important because it affects the organisational strategy as well as organisational goals and measures for success. In the appendix three approaches to the categorisation of social movements are discussed in-depth and an overview of academic literature addressing differences between these types of SMOs is given.

3.3. Transition studies and social movements

According to Törnberg (2018), conventional social movement theory is not suited to address social revolutions, or other radical non-linear processes of change. Therefore, SMO scholars such as Tarrow et al. (2001) and Foran (2005) have argued for the development of new approaches, that are better suited to investigate “mechanisms and processes in a way that also encompasses a non-linear relationship between cause-and-effect.” (Törnberg, 2018) In an attempt to contribute to the development of these kinds of methods, Törnberg (2018) has aimed to combine social movement literature with insights from transition studies.

The realm of transition studies, which is a relatively new area of study, is particularly interesting in the context of SMOs addressing climate change and the energy transition, since transition studies focusses specifically on understanding socio-technical transitions. (de Haan & Rotmans, 2011) A transition, as defined by de Haan & Rotmans (2011, p. 92), is “a fundamental change in the structures, cultures and practices of a societal system, profoundly altering the way it functions.” The energy transition is one of the most prominent modern day examples of such a transition. Important roots for transition studies are the realms of innovation studies and socio-technical change literature. Additionally, complexity theory, which emphasises the necessity for a systemic perspective, is a source of inspiration for this field. (Törnberg, 2018) Transition studies is often associated with technical transitions in the context of a market economy. The shift from horse-drawn carriages to automobiles (Geels, 2005b) and the transition from sailboats to steamships (Geels, 2002) are illustrative examples of such transitions. However, social innovation and grassroots movements are a matter of growing importance within transition studies. Niche-development theory plays an important role in explaining the dynamics between networks of actors and organisations involved in the generation of bottom-up solutions for civil society. (Kemp et al., 1998)

3.3.1. Multilevel perspective framework

Traditional transition studies consists of a number of theoretical perspectives that can be used to analyse transition processes. The most profound theoretical perspectives within transition studies are the multi-level perspective (Geels, 2002), strategic niche management (Kemp et al., 1998, 2001), and transition management (Loorbach, 2010). All of these perspectives derive from an “understanding of socio-technical phenomena as complex, entangled systems, consisting of various analytically separated – but interdependent – levels and subsystems.” (Törnberg, 2018, p. 386) The multi-level perspective, which is generally considered the most established transition studies framework, analyses transitions through the interplay between micro-, meso- and macro-levels. (Geels, 2005a; Törnberg, 2018) On the micro-level innovations occur in ‘niches’ or ‘free-spaces’. The meso-level refers to the socio-technical regime, consisting of the prevailing values, norms, standards, infrastructure, and technology. Finally, the macro-level describes the landscape of the wider environment, including both the material environment as well as social and cultural beliefs and values.

Törnberg (2018) adjusted the multilevel perspective to allow for the analysis of social movements via the multilevel perspective. It is via the interaction of these different levels that the role of social movements in societal transitions should be understood. Törnberg’s adjusted multilevel perspective is visualised in Figure 1, which is inspired by Geels’s (2005b) model of innovation in socio-technical

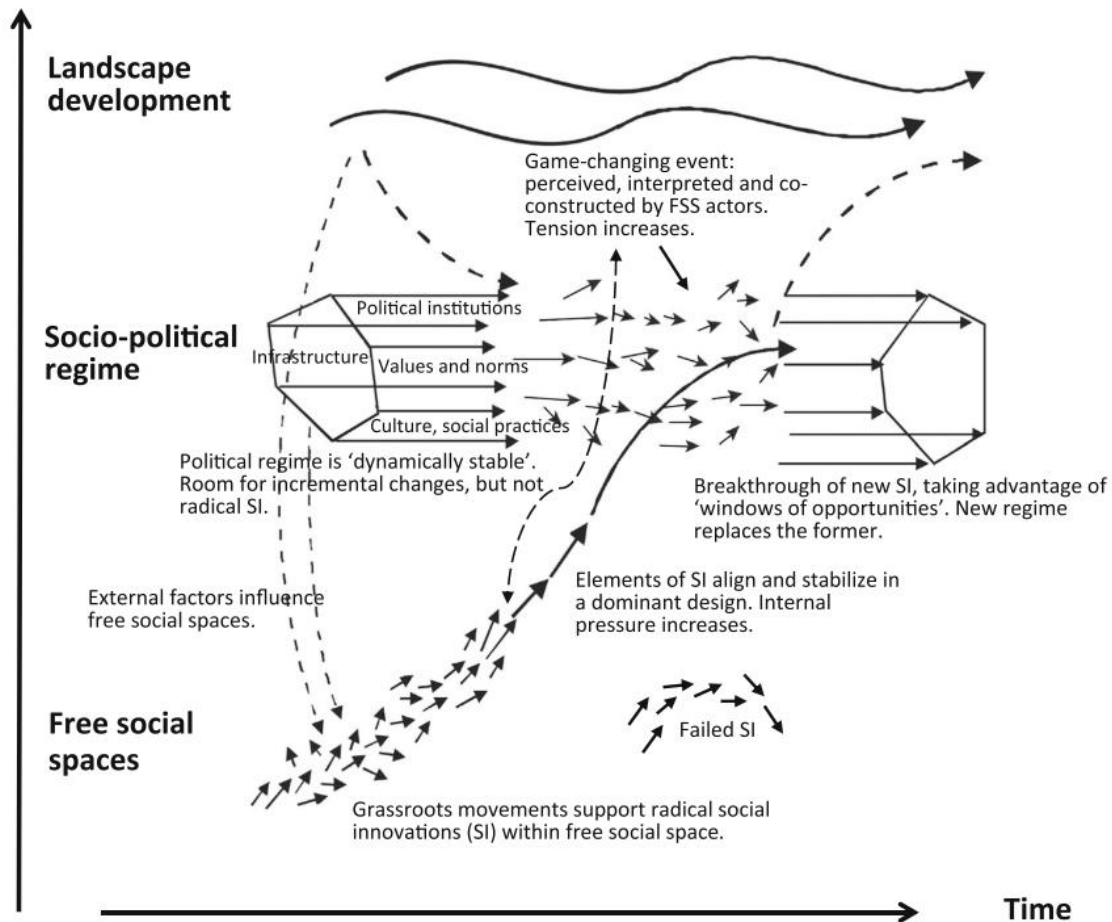


Figure 1: Illustration of the multilevel perspective theoretical framework developed by Törnberg (2008). The figure is a copy from Törnberg's (2008) figure, which was inspired by Geels's (2005a) model of innovation in socio-technical systems.

systems. Geels's model was originally developed to understand the penetration of socio-technical innovations into society. Central to Törnberg's model is the idea that societal change can be conceptualised as a form of 'social innovation'. Similar to the traditional MLP framework, Törnberg's model for social innovations distinguishes three different levels: the free social spaces, the socio-political regime, and the landscape development. The socio-political regime is the "established political system that consists of the prevailing social practices, rules, norms, values, social relations, and political institutions." (Törnberg, 2018, p. 391) It is a challenging task to define and apply the concept of the socio-political regime, because in reality the regime consists of multiple interacting layers, without clear-cut distinctions between them. Nonetheless, the concept is helpful in applying a focus on the subject that is changed by the transition and by pinpointing factors and mechanisms that have impacted the transition. (Törnberg, 2018)

In Törnberg's MLP framework social innovations develop in 'niches' or 'free social spaces'. If successful, these small scale social innovations then find their way into large-scale societal change via

what can be considered a 'transition'. (Törnberg, 2018) Similar to the original MLP framework for socio-technical innovations, the free social space provides shielding, nurturing and empowerment functions, allowing social innovations to develop. (A. Smith, 2006; A. Smith & Raven, 2012) Social movements provide a *shielding function* by providing a shelter against hegemonic ideas and ideologies from the regime level of society. The *nurturing function* means that "free spaces generate social relations and connections that people can draw upon to promote collective action." (Törnberg, 2018, p. 392) This includes activities such as knowledge sharing, strategy development and training activities. The essence of the *empowerment function* is to move an innovation to the mainstream society. This can either be by transforming the innovation such that it can be implemented into the mainstream system, or by adopting society's mainstream to the social innovation. (A. Smith & Raven, 2012) Note that the term 'empowerment' is also used in order to refer to a transition pattern discussed further down in this chapter. Törnberg (2018, p. 393) concludes that "free social spaces can be described as clandestine incubators of revolt where radical social innovations in the form of, for example, new ideas, social practices, resistance repertoires, and conflicting values can grow under the surface, connect to each other, generate support networks, and gain momentum."

Finally, the landscape level entails the broader environment of factors that affect the socio-political development. As explained by Törnberg (2018, p. 393) this "includes various material/technical, institutional, and social-cultural factors that form a wider and relatively stable structural context for both the regime and free social spaces." The landscape level could include a wide range of phenomena, including both 'objective contextual developments' and more 'discursively constructed factors'. (Törnberg, 2018) Examples of this could entail contextual factors like climate change or cultural beliefs.

3.3.2. Transition pathways

The transition of social innovations from the free social space to the regime level can occur in a number of ways. Geels & Schot (2007) identified four so-called 'transition pathways' for the multilevel perspective framework, each identifying a different trajectory of the niche/free social space level to the regime level. These pathways differ from each other with regards to the timing and nature of the multi-level interactions. Although the transition pathways were originally developed to study technical innovations, they can also be useful categorisations of transition pathways of social innovations.

First of all, the *transformation* pathway describes a transition in which the niche-developments are not yet well developed. At the same time, landscape developments exert pressure on the regime level to change. Hence, the incumbent actors on the regime level will adjust the regime rules, leading to gradual changes. Innovations on the niche level do not 'break through' to the regime level, but

experiences from innovations can nonetheless be used in the regime. (Geels, 2011; A. Smith, 2007) Hence, the innovations have a symbiotic relationship with the regime level.

Secondly, *reconfiguration* refers to a transition pathway in which well-developed niche innovations are adopted by incumbent actors, encouraged by pressure from the landscape level on the regime level. The innovations are symbiotic to the regime level: “incumbent actors can adopt them as ‘add-ons’ to solve local problems.” (Geels, 2011, p. 32)

Thirdly, (technological) *substitution* is a transition pathway which describes niche innovations of a competitive nature, i.e. it is incompatible with the incumbent regime. Typically, the well-developed innovations get the opportunity to break through to the regime level by using a “window of opportunity” caused by tensions in the regime level itself, or by tapping into high internal momentum of the innovation itself (e.g. political support, cultural enthusiasm). (Geels, 2011, p. 32)

Finally, the *de-alignment and re-alignment* transition pathway describes a process where the regime is first “disintegrated” as a consequence of “major landscape pressures”. (Geels, 2011, p. 32) This causes a loss of faith and legitimacy in the incumbents. (Geels & Schot, 2007) This process of de-alignment opens up space for multiple niche-innovations to emerge. The new entrants first co-exist and compete with each other for an extended period of time. Eventually, one of the new entrants (i.e. innovations) becomes dominant which leads to restabilisation of the regime level (re-alignment).

De Haan & Rotmans (2011) adjusted the categorisation of these transition pathways and turned them into eleven ideal types of transition paths categorised in four groups, as depicted in Table 1. For the sake of conciseness I refer to De Haan & Rotmans (2011) for a detailed description of all ideal type transition pathways identified by them. I will, however, explain the reconfiguration and transformation pathways as per De Haan & Rotmans’ definition.

Firstly, the reconfiguration path of De Haan & Rotmans (2011) is very similar to Geels & Schot’s (2007) socio-technical reconfiguration path and the re-alignment/de-alignment path. It describes path where “one or several niches are empowered and become a niche-regime which in turn takes on the role of the dominant constellation thus becoming the new societal regime.” (de Haan & Rotmans, 2011, p. 99) In other words, the scaling up of the niches is supported by the regime, rather than opposed.

The transformation path is also highly similar to the definition by Geels & Schot (2007) and describes a path where “the regime essentially transforms on its own, successfully adapting to the point that societal needs are again met adequately and no tensions or stress plague it.” (de Haan & Rotmans, 2011, p. 100)

Table 1: Transition paths as defined by De Haan & Rotmans (2011).

Category	Dominant pattern	Pathways
<i>Top-down</i>	Reconstellation	<ul style="list-style-type: none"> • Radical reform • Revolution • Collapse
<i>Bottom-up</i>	Empowerment	<ul style="list-style-type: none"> • Reconfiguration • Substitution • Backlash
<i>Squeezed</i>	Reconstellation and empowerment	<ul style="list-style-type: none"> • Teleological • Emergent • Lock-in
<i>Transformation</i>	Adaptation	<ul style="list-style-type: none"> • Transformation • System breakdown

3.3.3. *Regime destabilisation mechanisms (conditions)*

In order for a transition to successfully take place a combination of two factors is a fundamental condition. First of all, radical social innovations shall be “fostered in free social spaces.” (Törnberg, 2018, p. 399) Secondly, ‘cracks’ or opportunity windows should present themselves, acting as openings “an opening in the selection environment within the socio-political regime.” (Törnberg, 2018, p. 399) This process of opening up windows of opportunity is referred to as regime destabilisation. De Haan & Rotmans (2011) described three ‘regime destabilisation mechanisms’ (also referred to as ‘conditions for transitional change’), namely: tensions, stress, and pressure.

The first regime destabilisation mechanism, *tensions*, refers to a process in which external circumstances and events initiate a disbalance between the in- and outflux of *structural* or *cultural* resources. (de Haan & Rotmans, 2011) This disbalance then introduces the necessity for the regime to re-organise. Structural tensions can be thought of as physical, legal or formal aspects that are in disbalance (e.g. pollution or resource depletion). Cultural tensions would apply to disbalances with regards to “cognitive, discursive, normative or ideological aspects” of the socio-political regime with the environment (e.g. hostile political climate, public opinion).

Secondly, *stress* in a regime is the result of internal inconsistency or inadequacy to meet societal demands. It can be thought of as a mismatch between structures and cultures of a regime.⁸ (de Haan & Rotmans, 2011) An example of this would be the healthcare system in some European countries,

⁸ Structures, cultures and practices are defined by De Haan & Rotmans (2011, p. 92) as follows:

Structures: “[t]he formal, physical, legal and economic aspects of functioning restricting and enabling practices.”

Cultures: “[t]he cognitive, discursive, normative and ideological aspects of functioning involved in the sense-making [...] of practices.”

Practices: “[t]he routines, habits, formalisms, procedures and protocols by which actors, which can be individuals, organisations, companies, etc., maintain the functioning of the societal system.”

where “the regime adheres a policy philosophy of free market thinking whereas the structures are based on organised solidarity.” (de Haan & Rotmans, 2011, p. 94) Finally, the term *pressure* refers to a regime destabilisation mechanism which is characterised by competition between the regime and alternatives to its functioning. (de Haan & Rotmans, 2011) The alternatives compete with (parts of) the regime or even make (parts of) the regime obsolete. In socio-technical terms, one could think of e-mail replacing the fax as an example of the pressure mechanism.

3.3.4. Mechanisms of rising to power (patterns)

As per Törnberg (2018, p. 399), the presence of regime destabilisation mechanisms (conditions) “are necessary but not sufficient for transitional change.” Internal tendencies steer towards stabilisation of the regime by integrating social innovations into the incumbent regime. Studies by Geels & Schot (2007) and Pel & Bauler (2014) indicate that the default trajectory for social innovations is to turn into incremental change, contributing to system reproduction. Some cases, however, manage to ‘rise to power’ successfully. De Haan & Rotmans (2011, p. 95) have developed three ‘patterns’ which can be seen as building blocks with which “any transition story can be told.” These three patterns are: empowerment, reconstellation and adaptation.

Reconstellation refers to a top-down change in which another societal constellation (a new one or an existing one) gains power through influence from outside the initial societal system. A regime change due to a foreign invasion in a country would be an example of reconstellation. (Törnberg, 2018) In contrast with reconstellation, the empowerment pattern is a bottom-up change from within the societal system. Or, as described by De Haan & Rotmans (2011, p. 95): “Empowerment is what happens when small scale initiatives become viable alternatives to mainstream ways of doing.” Finally, adaptation is a constellation change induced internally. In this pattern the existing regime adapts itself in order to “mitigate the conditions for transitional change and meet the societal needs better again.” (de Haan & Rotmans, 2011, p. 96)

4. Research questions, methods, and analytical framework

This chapter establishes the research question and the variables of interest that inform the theory of change to be explored. In what follows, the variables of interest are established, including the dependent variable, independent variables and intervening variables. With this in place I discuss case selection and establish the context of the study. This sets the scene for the subsequent section, which discusses the analytical approach and research methods.

4.1. Research question and selection of variables

On the basis of the foregoing literature review, this thesis seeks to explain how and under what conditions social innovations, in this case climate litigation and shareholder activism, understood as independent variables, generate the transformation of climate issues from niche level to the level of the socio-political regime. In this study, then, the development of climate issues to the level of the socio-political regime is the dependent variable of interest, i.e. the phenomenon to be explained. The causal mechanisms of interest in this study are those hypothesised to determine the success or failure of efforts to achieve such a break through. The transition studies literature identifies a number of causal mechanisms. Following Gerring (2006), King (1994) and Weller & Barnes (2014), I consider these causal mechanisms as intervening variables. The following causal mechanisms/intervening variables were identified: (de Haan & Rotmans, 2011; Törnberg, 2018)

- Regime destabilization mechanisms (conditions)
- Mechanisms of rising to power (patterns)
- Transition pathways

4.2. Case selection

The aim of this work is to unpack the causal mechanisms behind the breakthrough of social innovations into the socio-political regime. As described in 4.3.2, the process-tracing method will be used to investigate these causal mechanisms. Because this is a within-case method, the analysis of this work will focus on a limited number of cases. Namely, one case of climate litigation and one case of climate shareholder activism. With regards to the climate litigation case, the lawsuit of the Dutch SMO Milieudefensie against the multinational oil corporation Shell plc (formerly known as Royal Dutch Shell plc) will be used. For the climate shareholder activism case, the campaign(s) of Follow This targeting Shell is selected. Both cases have been one of the first of their kind world-wide to be successful, but

they also use a very different approach.⁹ Milieudefensie tries to force Shell in a certain direction by law, whereas – as mentioned before – Follow This aims to change Shell ‘from the inside’.

Both organisations (Milieudefensie and Follow-This) operate in the same regional context (i.e. the Netherlands) and target the same actor (Shell). This allows for a better comparison of both SMOs, despite their differences in terms of history of the organisation, size and ideology. The data used for the analysis of these two cases is sourced from publicly available data such as position papers, vision documents, annual reports and interviews with the press.

4.3. Research method and analytical framework

This study extends the multilevel perspective framework explored above to an analysis of Dutch environmental SMOs use of lawsuits and shareholder activism in their efforts to achieve organizational objectives. Following Törnberg (2018), the MLP framework is put to use to study social innovations, as opposed to socio-technical innovations for which the framework was originally developed by Geels (2002). In what follows I describe the suitability and added value of the analytical framework employed to examine the interrelation between the variables of interest. I then describe the research method used for the analysis.

4.3.1. Multilevel perspective framework

The MLP framework offers a useful research method for analysing social innovations. As argued by Törnberg (2018), technical and social innovations have three important similarities, based on which an extension of the MLP framework from technical to social innovations can be motivated. First of all, an important assumption is that both socio-technical systems and social movements are both complex systems. Transition studies is particularly well suited to address non-linear dynamics between actors, in contrast with social movement theory.¹⁰ Secondly, the core element of the study of the innovation dynamics of technology is the innovation dynamics itself, not the technology. Instead of the “materiality of the innovation”, innovation dynamics concentrates on the relationship between incumbents and challengers as well as “effects of exogenous shocks”. (Törnberg, 2018, p. 388) These dynamics are similar for both technical and social innovations. Finally, both types of innovations find their origins in “protected social spaces” (niches), where ideas can develop before they are ready to face the “rigid incumbent structures of mainstream society”. (Törnberg, 2018, p. 388)

⁹ Although none of the resolutions filed at Shell’s Annual General Meeting (AGM) has received a majority vote, support for Follow-This resolutions has increased from 2.7% in 2016 to 30% in 2021. (Follow-This, n.d.) Over the same period of time the company has set more stringent environmental goals for itself.

¹⁰ In this work the conventional definition of complex systems as non-linear systems is used. These systems are characterized by emergence and far from equilibrium. (Byrne & Gallagher, 2014)

Hölsgens et al. (2018) identified two important characteristics of social innovations if they are to be analysed with the MLP framework. First of all, the social innovation should lead to system change. Geels (2005c, p. 682) defined system innovation as a “shift from one socio-technical system to another”. The same can be said about social innovations: they should be transformative, leading to change at a “level higher than that of businesses or firms and populations (i.e. industries).” (Hölsgens et al., 2018, p. 11) Secondly, social innovations must be such that their relationship with the existing regime is of a competing or symbiotic nature. Social innovations originating from niches that aim to replace the existing regime, for example, have a competitive relationship with the regime. On the other hand, when the social innovation can be used to enhance the existing regime, one can speak of a symbiotic relationship. (Hölsgens et al., 2018) Both case studies discussed in this thesis comply with the characteristics identified by Hölsgens et al. (2018).

4.3.2. *Process-tracing method*

Throughout this work the process-tracing research method is used. This method can be used to trace causal mechanisms based on within-case empirical analysis. (Beach, 2017) As described by Törnberg (2018, p. 388) “statistical approaches have serious troubles in dealing with causal complexity and emergence.” Therefore, process-based explanations and theorising are generally used when working with transition frameworks. Process-tracing is typically used with the aim to enhance the understanding of causal dynamics that caused a particular outcome. That is also the aim of this study: to assess the relation between social innovations and changes in the socio-political regime.

Two variants of process-tracing can be distinguished in academic literature: minimalist and systems understandings of the mechanisms that connect a cause to an outcome. (Beach, 2017) Firstly, in the minimalist understanding of process-tracing the causality between cause and outcome is not assessed in detail. The causality is based on “diagnostic evidence,” but the underlying mechanism remains a black box. (Bennett & Checkel, 2014, p. 7) The second variant of process tracing is a systems understanding of mechanisms connecting cause and outcome. The aim hereof is to “unpack” the causal process in between a cause and an outcome. In this variant of process tracing the causal mechanism does not remain a black box, but instead is the main subject of study.

With the systems understanding of process tracing, causal mechanisms are “theorized as systems of interlocking parts that transmit causal powers or forces between a cause [...] to an outcome.” (Beach, 2017, p. 5) Furthermore, each mechanism is considered to consist out of two important parts: activities and entities. Entities are defined as the factors (e.g. actors, organisations, structures) that engage in the activities that are analysed. The activities itself are the “producers of change,” i.e. the things that transmit causal powers or forces throughout the causal chain. (Beach, 2017, p. 5) By

engagement in activities by entities, the causal mechanism is moved forward through the causal chain. The aim of process tracing is then to theorise “activities that are expected to leave empirical fingerprints for each part of the mechanism.” (Beach, 2017, p. 6)

The systems understanding of process tracing forces one to showcase some form of “productive continuity”. (Machamer et al., 2015, p. 3) This means that all parts of the causal mechanism should be proven to logically lead to the next part of the mechanism. Hereby the necessity to exhibit a form of productive continuity leads to the exposure of significant logical holes in the causal chain. A more critical assessment of causal logics helps to develop better causal theories.

The process-tracing method can be used in three different ways, namely for (Beach, 2017):

- theory-testing,
- theory building, or
- case-centric process tracing.

The aim of this work is to engage in theory testing and to assess the applicability of the multilevel perspective theoretical framework on social innovations.

5. Analysis

In this section two case studies are analysed, following the method described by De Haan & Rotmans (2011) for working with the multilevel perspective theoretical framework. This method involves describing the chain of patterns of system change, starting with a description of the state of the system in terms of composition (identification of MLP levels) and conditions for transitional change. Then the transitional change is described in terms of transition pattern and pathway, followed by a description of the system state after the transitional change. This procedure is followed throughout this chapter for both case studies. To start with, however, I will aim to provide the reader with a better understanding of the entirety of social movements in the Netherlands.

5.1. Environmental social movement organisations in the Netherlands

The Netherlands has a wide variety of environmental movement organisations. Since both selected case studies are Dutch organisations, this section aims to describe the broader context of environmental SMOs in the Netherlands. In particular the main SMOs of the two case studies – Milieudefensie and Follow-This - are introduced to the reader.

Whereas many ordering principles can be used to structure the field of environmental SMOs, I choose to order these organisations in two main categories: revolutionary and reformist. This typology is based on Aberle's classification of social movements, which is discussed in more detail in the appendix. (Aberle, 1991; Kristine & Alvarez, 2010) In particular, the revolutionary and reformist characterisations defined by Aberle are relevant for environmental SMOs, as these characterisations apply to social movements addressing a problem with a collective nature (such as climate change).

Within the groups of revolutionary and reformist SMOs, one can distinguish between established organisations and new SMOs using new tactics, targeting new groups or emphasizing new points of view. Naturally, established organisations partly follow the tactics of new groups, but I nonetheless find the distinction between 'new' and 'old' organisations useful to map the scene of environmental SMOs in the Netherlands. In the following, I will elaborate on the Aberle's classification of social movements and I will present the array of environmental SMOs in the Netherlands.

5.1.1. *Revolutionary environmental SMOs*

Revolutionary environmental SMOs in the Netherlands are characterized by the fact that their ideology is inherently at odds with the capitalist economy of the Netherlands. They tend to see the

environmental crisis as a symptom of a malfunctioning, unjust economic system. Generally, these organisations tend not to refer to themselves explicitly as anti-capitalist or eco-socialist, instead the ideological orientation should be derived implicitly from statements, proposals or actions. A central concept amongst many revolutionary environmental SMOs, for example, is ‘climate justice’. As per Fossielvrij NL, this idea means that “justice and equality (equity) should be on the basis of any climate solution or alternative.” (Fossielvrij NL, n.d.) According to Fossielvrij NL, this means that climate change should be tackled in conjunction with other problems, such as racism, extractivism, and social and economic inequality. Friends of the Earth International, a network of which the Dutch organisation Milieudefensie is a member, goes a step further in explicitly rejecting capitalism in their ‘People Power Now: An Energy Manifesto’, by stating that “international law [should place] peoples’ rights before corporate profit” and “our energy system should not be run for profit, but should exist to meet the needs of the peoples.” (Cadena et al., 2018)

On a more detailed level, a distinction can be made between ‘new’ and ‘old’ or established SMOs. In the Netherlands Greenpeace and Milieudefensie (Dutch branch of Friends of the Earth) have existed since the 1970s. These organisations have addressed numerous environmental issues, ranging from campaigns against the use of chlorofluorocarbons (CFCs, contribute to ozone depletion) to campaigns against dumping of nuclear waste and whale hunting. Both Greenpeace and Milieudefensie have a multi-million euro annual turnover and employ more than 50 fte in addition a support by volunteers. In recent years, campaigns related to climate change and the energy transition have become one of the most important topics for both organisations. With a first-of-a-kind lawsuit of Milieudefensie versus Royal Dutch Shell, the organisation has recently managed to force the oil multinational via a Dutch court ruling to significantly reduce its carbon emissions, as described above.

As attention for climate change in the public discourse has grown over recent years, a couple of relatively new organisations have entered the arena of environmental SMOs. In particular Extinction Rebellion Nederland and Fossielvrij NL have developed a relatively large base of support on the Netherlands. Both organisations are based on foreign action groups and can be considered a Dutch ‘branch’ of the international network of Extinction Rebellion and the Fossil Free network. They are entirely run by volunteers and have a minimal annual turnover compared to their ‘old’ counterparts.

5.1.2. Reformist SMOs

SMOs in the Netherlands that I classify as reformist are (a.o.) Natuur & Milieu, Natuur- en Milieufederaties, Urgenda, Follow-This and Jonge Klimaatbeweging. Even though these organisations also have links with some of the revolutionary SMOs (e.g. the director of Urgenda is part of the committee of recommendations of Extinction Rebellion Netherlands), they stand out from the revolutionary SMOs

as their focus is more on providing knowledge or technocratically describing possible solutions. Additionally, they generally aim to cooperate with all kinds of stakeholders including business and government, as opposed to revolutionary SMOs.¹¹

Within the category of reformist SMOs, also a distinction between ‘new’ and ‘old’ organisations can be made. The new organisations, which are Urgenda, Follow-This and Jonge Klimaatbeweging, stand out in their innovative ways of activism. First of all, Urgenda has by means of a first-of-a-kind lawsuit against the state of the Netherlands, enforced the state to limit its GHG emissions. Furthermore, Follow-This tries to convince publicly traded oil and gas majors to reduce their emissions and shift their investments towards renewable energy by means of filing resolutions in the annual shareholders meeting. The activist shareholder group Follow-This was founded in 2015 with the idea to change multinational oil and gas company Shell plc ‘from the inside’, by filing resolutions on the Annual General Meeting (shareholder meeting) of the company, urging Shell to increase its efforts to reduce its greenhouse gas emissions and invest more in renewables. Follow-This is a small scale organisation sponsored by donations from individuals and grants, it is mostly run by volunteers. Finally, Jonge Klimaatbeweging is a group which specifically aims to represent the young people in discussions about climate change and energy policies. They aim to be ‘politically neutral’ and to represent young people from both the left and right parts of the political spectrum. They do so especially by lobbying government officials and organizing educative lectures and events.

5.2. Climate litigation case: *Milieudefensie v. Shell*

In this section I will discuss the climate litigation case of environmental SMO Milieudefensie versus oil and gas company Shell. The case summary is followed by an analysis of this case following the procedure laid out at the beginning of this chapter.

5.2.1. Case summary

In May 2021 the District Court of the Hague ordered Shell plc (at the time named Royal Dutch Shell plc) to reduce its carbon emissions by 45% in 2030 compared to the 2019 levels, including a ‘significant best-efforts obligation’ to reduce emissions throughout the entire value chain (i.e. emissions of suppliers and consumers of Shell’s products).¹² The lawsuit was initiated by Milieudefensie (Dutch branch of Friends of the Earth) and over 17,000 co-plaintiffs. (Setzer & Higham, 2021) The court ruling was

¹¹ See for example the website of Natuur & Milieu, which explicitly describes the strategy of cooperating with “people, government and business” and “letting the facts speak for themselves”. (Natuur & Milieu, n.d.)

¹² Note that in March 2022 Shell announced that it will appeal against the court ruling, which could undo the court ruling. The court ruling in the case *Urgenda v. State of the Netherlands*, which was partly based on similar arguments, already successfully withstood the appeal procedure.

considered “historic and groundbreaking” by environmental law experts. (van Asselt et al., 2021) In particular, commentators observed that the court relied on ‘soft law’. The court, for example, relied on the ‘unwritten duty of care’ following from non-binding goals of the Paris Agreement and non-binding instruments based on international human rights and business practice treaties.¹³ (Setzer & Higham, 2021) The fact that many of these ‘soft law’ criteria are internationally recognized standards makes this case replicable in other jurisdictions as well. Hereby, this particular case increases the risk of climate litigation against companies, with potential “knock-on effects expected for the cost of capital for oil and gas projects.” (Setzer & Higham, 2021, p. 31)

5.2.2. *System composition*

The MLP framework consists of three levels (see also section 3.3): the landscape level, the socio-political regime level, and the free social spaces level. The socio-political regime is the “established political system that consists of the prevailing social practices, rules, norms, values, social relations, and political institutions.” (Törnberg, 2018, p. 391) The socio-political regime is what is changed when socio-political innovations breakthrough to from the free social spaces into the socio-political regime level. In the *Milieudefensie v. Shell* climate litigation case, this includes the prevailing business practices, conceptions of corporate social responsibility (CSR), social norms, and common practices and interpretations of law.

The central theme in this case is the scope of the (legal) responsibility of multinational corporations. On the far ends of this debate, we find the interpretation of corporate responsibility as ‘economic responsibility’ on one side and ‘ethical responsibility theory’ on the other side of the debate. (Windsor, 2006) The former interpretation puts market wealth creation at the foreground. Or, as Milton Friedman (1970) put it “the social responsibility of business is to increase its profits.” On the other hand, ethical responsibility theory “advocates strong corporate self-restraint and altruism duties.” (Windsor, 2006, p. 106) In an interview in 2016 Shell’s CEO Mr Van Beurden argued that he “would pump up as much [oil and gas] as needed to cover demand.” (de Kruif, 2016) With regards to the responsibility of the oil and gas firm related to the emission reductions and the Paris Agreement, Van Beurden argued that Shell follows the ‘pace of society’, leaving it up to consumers and governments to change consumption habits of energy. He hereby aligns mostly with aforementioned concept of economic responsibility, as he does not seem to assume much self-restraint or altruism duties for Shell.

On the other hand, Shell increasingly emphasises the role it wants to play in the energy transition in its external communication outlets. In response to the court ruling in the *Milieudefensie v. Shell* case,

¹³ In particular the UN Guiding Principles on Business and Human Rights and the OECD’s Guidelines for Multinational Enterprises were used by the Dutch court.

for example, Van Beurden (2021), referring to the ‘Paris Agreement’, mentioned that “the court ruling has not changed the fact that Shell is more determined than ever to play its part and lead in this global challenge [i.e. the Paris Agreement goals].” Indeed, Shell *is* undergoing a transition towards cleaner energy, indicated, for example, by its increasing investments in renewables. A further assessment of Shell’s Energy Transition Strategy, however, suggests that this is driven by economic and strategic political concerns (rather than ideas of “corporate self-restraint and altruism duties”).¹⁴ (Windsor, 2006, p. 106) Herein, Shell’s strategy is placed in the context of mitigation of risks associated with the energy transition and ensuring the company’s profitability. (Royal Dutch Shell, 2021, p. 1) Also, research by Vormedal et al. (2020), suggests that “Big Oil’s” support for climate regulations should be seen in the context of the industry’s economic motives.

With regards to the *socio-political regime*, I consider three other aspects important to address. First of all, the role of the formal and social ‘license to operate’ should be discussed. Whereas the formal license to operate refers to the official rules and regulations giving a company permission to carry out its activities, the social license to operate refers to the acceptance of the standard business practices of a company. Until the success of the Milieudefensie v Shell case, holding a company responsible for activities which are not explicitly forbidden, or which have taken place outside of the jurisdiction (Shell’s global emissions are subject to the court ruling) has relatively been uncommon practice in the Netherlands.¹⁵ Most activities of oil and gas companies in Europe are falling under obligations of (environmental) permits or regulations.¹⁶ Although these permits or regulations generally do not cover the full value-chain of the product and do not necessarily align with requirements following from the Paris Agreement goals, compliance with existing environmental regulations grants a sense of legitimacy of polluting activities. Hence, in a way, the formal ‘license to operate’ strengthens also the ‘social license to operate’. (Blondeel, 2019; Williams, 2004)

Secondly, an important aspect to consider is the prevailing social structure, which can be defined as the “broader sets of institutionalised norms that are already accepted as legitimate bases of governance in the international system.” (Bernstein, 2002, p. 8) As described by Blondeel (2019) and Okereke (2008) the existing social structure can be characterised as a ‘liberal economic order’. More

¹⁴ In academic literature on corporate political power two schools of thought aiming to explain corporate support for public-interest policies: the strategic accommodation perspective and the economic interest perspective. (Vormedal et al., 2020) The latter perspective would argue that oil and gas firms support climate regulation because they anticipate economic gains, whereas the former perspective argues that corporate support for climate regulation stems from strategic political, aiming to camouflage opposition “by feigning support for regulation.” (Vormedal et al., 2020, p. 145)

¹⁵ Please refer to Hösli (2021, p. 195) for a discussion on why the Milieudefensie v Shell case is “an unprecedented ruling.”

¹⁶ Both local environmental permits and EU wide regulation, such as the EU Emissions Trading System.

specifically, Bernstein (2001) uses the term 'liberal environmentalism' to refer to the dominant social norms with regards to the environment. This term refers to a type of environmentalism which maintains the "fundamental liberal market norms of free trade, open markets, or the support of market instruments over regulatory mechanisms and government intervention." (Blondeel, 2019, p. 207)

Finally, another important aspect of the socio-political regime is the "fossil fuel industry's deeply embedded structural and instrumental power." (Gunningham, 2017, p. 372) McGarity (2014), for example, has studied actions of powerful industry lobbies in the context of the United States. He demonstrated the significant influence of "coordinated, well-funded, ideologically driven campaigns conducted by the business community, small coterie of conservative funders and various foundations and institutions that they created." (Mintz, 2014, p. 388) The Netherlands has a different political context, but also here the business community, of which Shell is a prominent member, is a powerful actor. The Dutch political culture is frequently described with the term 'polder model', which refers to the consensus-based social and economic policy making process. (Woldendorp & Keman, 2007) Indeed both the business community, unions and other interest groups are often heavily involved in political decision-making in the Netherlands. In 2019, for example, a 'Climate Agreement' ('Klimaataakkoord' in Dutch) was negotiated. In these negotiations the Dutch climate and energy policies were negotiated by representatives from the business community, interest groups and NGOs.¹⁷

On the *landscape level*, it should be noted that the scientific, discursive and constitutional context of climate litigation is rapidly evolving. (Ganguly et al., 2018) Developments of scientific research into climate change, for example, make the causes and consequences of climate change more and more apparent. Climate science is increasingly resilient, and as described by Ganguly et al. (2018, p. 851) "courts in civil law jurisdictions are willing to embrace the IPCC assessment reports as incontrovertible evidence of climate change as a serious humanitarian and planetary threat."¹⁸ Furthermore, the growing body of literature helps to quantify the climate impact of specific actors or businesses, or to attribute specific climate events (e.g. floodings) to climate change. (Ganguly et al., 2018) Also, climate change is an increasingly important topic for policy-makers. Especially the 'Paris Agreement' (described in section 2.1) has invigorated the development of new environmental policies, such as the EU Fit for 55 legislative package. (Schlacke et al., 2022)

Parallel to the established fossil fuel industry and governmental system, there is a variety of independent environmental social movements in the Netherlands. These social movements serve as *free*

¹⁷ Milieudefensie and a number of other (environmental) NGOs participated in the Climate Agreement negotiations, but decided not to sign the agreement because they considered the result of the negotiations unsatisfying. (Milieudefensie, 2018)

¹⁸ IPCC is the Intergovernmental Panel on Climate Change.

social spaces, providing the shielding, nurturing and empowerment functions described in section 3.3. The social movements are not isolated groups of individuals, but instead work together in many instances. During the aforementioned Climate Agreement negotiations, for example, five environmental SMOs worked closely together. Additionally, the social movements exchange knowledge and experiences, even across borders (nurturing). An illustration of this is the fossil fuel divestment (FFD) movement, which started in the US and now has ‘branches’ across the world, including the Netherlands (Fossilvrij NL). (Ayling & Gunningham, 2015; Healy & Barry, 2017b; Healy & Debski, 2017) Also the *Milieudéfensie v. Shell* case builds on knowledge sharing. In particular a climate litigation case that was won by Urgenda Foundation against the state of the Netherlands in 2015 was a source of inspiration for Milieudéfensie. Both organisations also worked with the same lawyer and the lawsuit against Shell was partly based on similar grounds. (Hösli, 2021; Setzer & Higham, 2021)

In reference to section 2.1, indicating the gap between required and realised climate policies, the inability of the actors globally to put in place climate policies that comply with the ‘Paris Agreement’ initiates conditions of stress due to inadequacy of the societal system to meet societal demands. The fossil fuel ‘production gap’ indicates a mismatch between regime structures and cultures. In the regime culture climate change is an increasingly important topic and normative ideas about energy show increasingly regard of environmental issues (see for example COP26 (2022)). This also applies to Shell, which in its own 2021 annual report describes climate change as an urgent challenge in which Shell should help to tackle. (Shell Plc, 2021) The regime structures, on the other hand, lack sufficient policies to bridge the ‘production gap’. The disbalance between the cultural and structural aspects of the regime initiates stress. This comes on top of structural tensions caused by a disbalance of global resource management, causing pollution and GHG emissions: the physical effects of global warming are more and more apparent in the form of (amongst others) extreme weather events and higher average global temperatures. These structural tensions contribute to the opening of ‘windows of opportunity’ or ‘cracks’ in the socio-political regime, which can be exploited by niche innovations.

5.2.3. Transition pattern and pathway

Following on the description of the initial system composition, this subsection will describe the mechanisms of rising to power – or patterns – applicable to the *Milieudéfensie v. Shell* case. Furthermore, based on the transition patterns, the transition pathway will be assessed.

Milieudéfensie’s campaign against Shell consisted of two major parts reinforcing each other. The first part entailed a public campaign against Shell aimed to create public support, raise funds and encourage individuals to become a ‘co-plaintiff’. After the initial announcement of the lawsuit in April 2018, Milieudéfensie welcomed over 17,000 co-plaintiffs as well as support of six other SMOs. (Hösli,

2021) The second part of the campaign involved the lawsuit itself. Donald Pols, director of Milieudefensie, explicitly considers his organisation a ‘social innovator’ aiming to invigorate new perspectives on reality (typical free social space function). (Ruitenbeek, 2021) Preparations for the lawsuit against Shell had already started in 2015. It was a deliberate strategy of Milieudefensie to completely focus on the development of the climate litigation case against Shell. (Stoker, 2021) By attracting experienced climate litigation lawyers, knowledge sharing and raising funds for an actual lawsuit the SMO stimulated nurturing and empowerment functionalities respectively. With the involvement of many ‘co-plaintiffs’ Milieudefensie aimed to strengthen the bottom-up character of the movement, framing the case as “the people versus Shell.” (Stoker, 2021)

On the one hand, the *Milieudefensie v. Shell* case is indeed an example of the empowerment pattern (i.e. bottom-up constellation change).¹⁹ The lawsuit against Shell can be seen as a niche innovation which forces the mainstream society to adapt to a radical innovation. Through this perspective the social innovation (namely the innovative application of law) has developed in the free social space until it has become an alternative to the mainstream. On the other hand this case can be seen as an example of adaptation where the existing system itself incorporates and enforces elements of corporate responsibility as add-ons in order to mitigate conditions of stress and structural tension. After all, the legal system including the (soft) law criteria that the court ruling was based on are part of the socio-political regime.

I would, however, contend that the court ruling in the *Milieudefensie v. Shell* case is more than an ‘add-on’ to the existing system. In fact, goes directly against the interpretation of corporate responsibility as economic responsibility, which until this court ruling used to be the dominant interpretation of corporate responsibility. Furthermore, the widely used qualifications such as ‘ground-breaking’ and ‘unprecedented’ of the court-ruling illustrate that this case is more than a straight-forward interpretation of application of existing (soft) law by the court. (Hösli, 2021; van Asselt et al., 2021) Although the court is part of the socio-political regime in the sense that it works based on laws that are developed within the system and it functions by the rules of the system, the shifting boundaries of ‘soft law’ offer openings (‘cracks’) for niche developments. In short, since the main driver behind the *Milieudefensie v. Shell* case is from outside the socio-political regime, I classify this case as an instance of empowerment rather than adaptation. In the words of De Haan & Rotmans (2011, p. 95) the ‘new constellation’ has gained power through “interacting or merging with other constellations within the societal system.”

¹⁹ Note that the term ‘empowerment’ is in transition studies used for the description of both a transition pattern and a functionality of the niche regime/social free space.

With regards to the classification of the transition pathway, the relation of the regime to the social innovation should be considered. Within the category of empowerment dominated transition pathways as defined by De Haan & Rotmans (2011) one can distinguish three transition pathways: reconfiguration, substitution and backlash. The latter pathway refers to a failed transition, which is not applicable to the present case study.²⁰ The reconfiguration and substitution pathways distinguish from each other in whether or not the regime adapts itself to the empowerment process. The reconfiguration pathway describes a process with a more symbiotic rather than competitive nature to the regime.

In the *Milieudéfensie v. Shell* case, the socio-political regime remains largely unaffected in terms of which actors dominate the socio-political regime. In that sense there is no niche-regime competing with and taking the place of the regime, which would be the case for the substitution pathway. However, the court ruling does limit the range of options that the regime gets to pick from (namely acting in line with the court ruling or drastically changing (international) law that the court ruling is based on). This can be seen as an adaptation of the regime. Additionally, compliance with the court ruling further enhances empowerment of the niche innovation. (de Haan & Rotmans, 2011) Although the *Milieudéfensie v. Shell* ruling is still under appeal, Shell will likely comply with the final court ruling. Shell's CEO Van Beurden already declared the company will comply with the court ruling, even though the headquarters of the company was recently moved from Amsterdam to London. (van Dijk, 2021) Also in the Urgenda case, which shows important similarities with the *Milieudéfensie v. Shell* case, the regime adapted itself to the niche regime. The outcome of the Urgenda case was a significant increase in attention for climate change policies in media and parliament and the court ruling initiated an extra set of climate policies aimed at meeting the court ruling. (Wiebes, 2020; Wonneberger & Vliegthart, 2021)

Given that the dominant transition pattern is empowerment in combination with a transition pathway in which the regime adapts itself to the niche innovation, the transition pathway classifies as reconfiguration as per De Haan & Rotman's (2011) definition.²¹ In terms of the definition of socio-technical transition pathways as defined by Geels & Schot (2007) the transition pathway of this case study would be in between the reconfiguration and re-alignment/de-alignment pathway.

²⁰ It should be noted that the lawsuit is still under appeal, which could potentially still obstruct the transition via a backlash pathway later on in the process.

²¹ If one were to make the argument that the judge should not be considered as 'part of the socio-political regime' itself, the transition pathway describing this case would be the substitution pathway. I contend, however, that the judicial system being an integral part of the socio-political regime is an essential part of climate litigation strategy in general and the *Milieudéfensie* case in particular. In transition studies language: climate litigation exploits 'cracks' in the socio-political regime and uses this as 'windows of opportunity'.

5.2.4. *System state*

The reference of the court to the *Urgenda v. State of the Netherlands* case is a fundamental part of the court ruling and shows the importance of seeing climate litigation as an iterative development process where niche developments reinforce each other. Movements engaging in climate litigation learn from cases throughout the world, and as explained by Ganguly & Setzer (2018) and Hösli (2021) climate litigation success in one jurisdiction can potentially reinforce success elsewhere. In this respect climate litigation shows some remarkable similarities with the development of technical innovations, for which the multilevel perspective framework was originally developed.

The reference of the court to recent academic sources such as IPCC reports and the UNEP Production Gap Reports, indicates the importance of landscape developments in the scientific community. It hereby highlights the relevance of the temporal dimension of the case, as well as the added value of the multilevel perspective on this particular case.²²

The ‘cracks’ in the socio-political regime created by the *Milieudefensie v. Shell* case are largely based on legal concepts which are applicable in other jurisdictions too. As explained by Hösli (2021) intangible factors like cultural differences between jurisdictions can affect the outcome of the court ruling. Nonetheless, similar to the *Urgenda* case, which was an example for climate litigation cases in several other jurisdictions “from Belgium to India and the United States”, it can be expected that the success of *Milieudefensie* will inspire social movements in other jurisdictions to follow the example. (Ganguly et al., 2018, p. 844)

5.3. **Climate shareholder activism case: Follow-This**

The other case that is analysed, is the climate shareholder activism case of the Follow-This campaign targeting Shell. Given the similarities in system composition with the previously discussed *Milieudefensie v. Shell* litigation case, the system composition of this case study will be discussed in less detail. Again, the procedure laid out at the beginning of this chapter is followed for the analysis of this case.

5.3.1. *Case summary*

Using the right of shareholders to file a resolution on the shareholder meeting, Follow-This aims to convince Shell to increase its efforts to reduce greenhouse gas emissions by annually filing a shareholder resolution at the Annual General Meeting (AGM). Since 2016, when the first Follow-This

²² UNEP Production Gap Reports are annual reports developed under the auspices of the UN Environment Programme. The reports track the gap between government’s planned production of fossil fuels and production levels in line with the goal to limit global warming to 1.5°C or 2°C.

resolution was filed, the shareholder support has increased from 2.7% to 30% in 2021. (Follow-This, n.d.) The resolutions are now supported by some major institutional investors. Additionally, Follow-This has broadened its scope to target other multinational publicly traded oil and gas companies, where shareholder support in some instances was even higher. However, in order to limit the scope of this research, this case study will focus on the resolutions targeting Shell.

Climate shareholder activism has existed already before Follow-This started its campaigns. However, their resolutions stand out in terms of how far-stretching they are. Other resolutions focused on topics like reporting and disclosure of information,²³ instead the Follow-This resolution demands Shell to set and publish short and long term targets to actively reduce their greenhouse gas emissions by levels compliant with the 'Paris Agreement'.

5.3.2. *System composition*

The socio-political regime in this case is, similar to the *Milieudéfensie v. Shell* case, characterised by a conception of corporate responsibility as economic responsibility. The ultimate goal of a shareholder is to get a return on his investment, which makes profitability imperative. Nonetheless, in Europe corporate sustainability reporting (on areas such as environmental impact) has become relatively common in recent years. (Rodrigue & Michelon, 2021) On the other hand, it is relatively uncommon practice in Europe to file shareholder proposals. Typically, shareholders engage in different ways, for example by expressing dissent by voting against management board proposals. (Cziraki et al., 2010) The field of shareholder activism is dominated by socially responsible investment (SRI) firms and institutional investors (e.g. pension funds). (L. King & Gish, 2015) In general it is very uncommon for shareholders to vote in majority against the recommendation of the management board. However, research by Lafarre & Van der Elst (2018) on shareholder sustainability activism in the Netherlands indicates that “despite the lack of mandatory regulation and the use of shareholder proposals, shareholders in the Netherlands, including institutional investors, seem to increasingly care about corporate sustainability issues.”

The landscape level for this case is very similar to the *Milieudéfensie v. Shell* case. Advancements in academic research and international standards and agreements such as the 'Paris Agreement' faces the socio-political regime with cultural tensions. Additionally, a growing group of investors considers climate change as a risk to their (other) assets and long-term investments, introducing structural tension in terms of conditions for transitional change. The fiduciary duty plays also an important role in

²³ An example of a less far stretching initiative would be the resolution filed by the 'Aiming for A' coalition in 2015 asking Shell increase its annual reporting efforts related to sustainability. This resolution was supported by the management board of the company and got a majority vote in favour. (Rodrigue & Michelon, 2021)

the supporting statement of the shareholder resolution. (Shell Plc, 2021) Additionally, the inconsistency between levels of oil and gas production and investments, and global emission reduction norms from the 'Paris Agreement' face the oil and gas industry with conditions of stress.

Also for the description of the free social spaces for this case, one can refer to the previous section of the *Milieudéfensie v. Shell* case. Additionally, it should be noted that Follow-This engages with both institutional investors with a progressive stance towards climate change, academia, and other SMOs, for example during the 'Follow-This Investor Symposium'. (Follow-This, 2022)

5.3.3. Transition pattern and pathway

In terms of the transition pattern, the Follow-This case fits best within the adaptation pattern category. Although in this case the initiative of shareholder activism originates from outside the socio-political regime, the initiative has gained support from prominent regime actors such as large institutional investors. The interaction with actors from outside the regime initiates a 're-positioning' process: the regime is forced to adapt itself by "orienting towards new markets" and "assuming a new role". (de Haan & Rotmans, 2011, p. 96) Under pressure of shareholders Shell is literally urged to enhance its efforts in investing in a 'net-zero-emission energy system' by means of the shareholder resolution. (Royal Dutch Shell plc, 2021, p. 6) With reference to the "fiduciary duty to protect all assets in the global economy from devastating climate change," the shareholder resolution does not call for a completely different understanding of the corporate responsibility (as is the case in the *Milieudéfensie v. Shell* case), but instead urges Shell to reinterpret this concept in the context of developing knowledge with regards to "climate-related risks" as "a source of financial risk". (Royal Dutch Shell plc, 2021, p. 6)

Based on the adaptation transition pattern, the transition pathway that seems to align best with the Follow-This case, is the transformation pathway as per De Haan & Rotman's (2011) definition. This adaptation pattern dominated pathway describes a process in which the regime "transforms on its own." Although Follow-This, being the initiator of the shareholder resolution, can be considered as an external niche-actor, the success of the movement is driven by adaptation of the resolution by large institutional investors. The latter base their support primarily on considerations of financial risk and the fiduciary duty of Shell with respect to the entire investment portfolio of its shareholders (which is believed to be negatively affected by climate change, e.g. through flooding). In other words, the institutional investors supporting the shareholder resolution do not fundamentally change their investment strategy, but instead assimilate new insights in financial risks of climate change into their

engagement strategy with Shell. In this sense Follow-This pursues a much less ‘radical’ change compared to Milieudefensie, which rejects fundamental parts of capitalism (see section 5.1).²⁴

5.3.4. System state

So far the Follow-This shareholder resolution at the Shell AGM never received support of the majority of shareholders.²⁵ Despite this fact, however, it did succeed in raising awareness for climate change amongst both shareholders and the company’s board of directors. Even without a majority vote Follow-This made significant contributions to changing Shell’s climate policies, and in the wake of the Follow-This campaign aimed at Shell, shareholder resolutions at other multinational oil and gas companies have emerged.

In 2017 Shell published long term carbon emission targets in response to the resolution. When shareholder support for the Follow-This resolution kept on increasing in subsequent years, Shell introduced its own climate resolution in 2021. Hereby Shell asked its shareholder to approve its Energy Transition Progress strategy and the Shell Energy Transition Progress Report. This resolution was perceived by Follow-This as an attempt to distract attention for the Follow-This resolution and to affirm support for weaker emission targets. (Follow-This, 2021) Nonetheless, more clear and transparent reporting does allow shareholders and other stakeholders to verify how Shell’s actions compare to its targets and external communication. As per its 2021 annual report, for example, “Shell supports the most ambitious goal of the Paris Agreement, which is to limit the rise in global average temperature this century to 1.5 degrees Celsius above pre-industrial levels.” (Shell Plc, 2021, p. 12) The company also says that it “aims to play a leading role to help deliver this outcome” (Royal Dutch Shell plc, 2021, p. 7) Yet, the ongoing debate about Shell’s unwillingness to commit to absolute emission reduction targets (but instead to adhere to carbon intensity targets) invigorates internal inconsistencies, contributing to higher degrees of conditions for transitional change in the form of stress.

Finally, support for the Follow-This resolutions of a substantive part of Shell’s shareholders is an encouraging sign for executives or shareholders of other companies asking themselves how to cope with the energy transition. The Follow-This resolutions have made this support explicit.

²⁴ Note that this observation is consistent with research by Yaziji & Doh (2013), who linked resource provider homogeneity with SMO strategies.

²⁵ Note that in fact for the Follow-This resolution to be binding under UK law, it requires support of a ‘super majority’ of 75% of the shareholders.

6. Conclusion

Overcoming obstacles and resistance against the energy transition as a response to the climate emergency is one of the biggest struggles environmental SMOs globally are currently facing. In order to initiate societal change, social movements have developed innovative campaigning strategies, classified as 'social innovations'. Social movement literature aims to explain the emergence and behaviour of social movements. However, in the context of large and complex societal transitions, such as the energy transition, conventional social movement literature does not suffice to analyse and explain the development of social innovations. Therefore, this thesis has drawn inspiration from transition studies literature in order to devise a theory of change that is suited to address both the socio-political and sociomaterial complexity of the energy transition.

Using the process-tracing method this thesis has sought to explain how and under what conditions social innovations, generate the transformation of climate issues from niche level to the level of the socio-political regime. For this purpose two cases have been analysed by means of the multilevel perspective (MLP) theoretical framework. A climate litigation case and a climate shareholder activism case in the Netherlands, both targeting oil and gas multinational Shell, have been used. Treating the causal mechanisms identified by De Haan & Rotmans (2011) as intervening variables, the conditions for transitional change, transition patterns and transition pathways are identified for these two cases.

This analysis demonstrates the added value of the MLP framework for the social movement research space with regards to two dimensions. Firstly, its consideration of interconnections between different levels of analysis is of interest. For both cases, for example, landscape developments, such as the increasing body of climate science literature and international recognition of the climate emergency by international institutions, have played a decisive role in development of the social innovations on niche level. Tapping only into conventional social movement literature, this co-evolution of mechanisms at different levels might have remained unnoticed. Secondly, the appreciation of the temporal dimension in the MLP framework has proven to be useful. For the climate litigation case, for example, experiences of previous lawsuits and court rulings have been of great importance for the successful outcome.

The causal mechanisms (transition conditions, patterns and pathways) as defined by De Haan & Rotmans (2011) were capable of describing the causal chain of social innovation developments in the two cases that were analysed. This allowed for classification and identification of relevant differences and similarities between both cases. The climate litigation case and the climate shareholder activism case have followed different pathways while developing from the niche level towards the socio-

political regime. The main characteristic responsible for this difference is the shareholder activism case being of a more symbiotic nature with regards to the regime compared to the climate litigation case, which goes directly against fundamental elements of the global energy system. Interestingly, both cases use important features of the incumbent regime, namely the judicial system and shareholder rights, as windows of opportunity to break through to the socio-political regime.

A limitation of this work is its focus on (relatively) successful cases. An important feature of the free social space (or niche-level) is the multitude of social innovations under development, many of which fail to perpetrate in any form to the regime-level. An analysis of a larger number of cases, including failed social innovations, is expected to enrich the understanding of the workings of social free spaces. As suggested by Törnberg & Törnberg (2017) computer simulations could be useful in unpacking these niche-level mechanisms. Furthermore, an enhanced understanding of how Milieudefensie and Follow-This engaged in shielding, nurturing and empowerment of social innovations is expected to be of practical relevance for other SMOs working to develop social innovations. Overall, an enhanced synthesis of the fields of social movement literature and transition studies is expected to be of significance for both areas of research.

Referenced literature

- Aberle, D. (1991). *The Peyote Religion among the Navaho* (2nd Ed.). University of Oklahoma Press. <https://doi.org/10.1525/AA.1968.70.1.02A00290>
- Ayling, J., & Gunningham, N. (2015). Non-state governance and climate policy: the fossil fuel divestment movement. *Climate Policy*, 17(2), 131–149. <https://doi.org/10.1080/14693062.2015.1094729>
- Bail, C. A., Brown, T. W., & Mann, M. (2017). Channeling Hearts and Minds: Advocacy Organizations, Cognitive-Emotional Currents, and Public Conversation. *American Sociological Review*, 82(6), 1188–1213. <https://doi.org/10.1177/0003122417733673>
- Beach, D. (2017). Process-Tracing Methods in Social Science. In *Oxford Research Encyclopedia of Politics*. <https://doi.org/10.1093/acrefore/9780190228637.013.176>
- Bennett, A., & Checkel, J. T. (2014). Process Tracing: From Metaphor to Analytic Tool. In *Process Tracing*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139858472>
- Bernstein, S. (2001). The Compromise of Liberal Environmentalism. In *The Compromise of Liberal Environmentalism*. Columbia University Press. <https://doi.org/10.7312/BERN12036/PDF>
- Bernstein, S. (2002). Liberal Environmentalism and Global Environmental Governance. *Global Environmental Politics*, 2(3), 1–16. <https://doi.org/10.1162/152638002320310509>
- Bilancini, E., & D’Alessandro, S. (2012). Long-run welfare under externalities in consumption, leisure, and production: A case for happy degrowth vs. unhappy growth. *Ecological Economics*, 84, 194–205. <https://doi.org/10.1016/j.ecolecon.2011.10.023>
- Birol, F. (2021, November 4). COP26 climate pledges could help limit global warming to 1.8 °C, but implementing them will be the key . *IEA Commentaries*. <https://www.iea.org/commentaries/cop26-climate-pledges-could-help-limit-global-warming-to-1-8-c-but-implementing-them-will-be-the-key>
- Blondeel, M. (2019). Taking away a “social licence”: Neo-Gramscian perspectives on an international fossil fuel divestment norm. *Global Transitions*, 1, 200–209. <https://doi.org/10.1016/J.GLT.2019.10.006>
- Blondeel, M., Colgan, J., & van de Graaf, T. (2017). What Drives Norm Success? Evidence from Anti-Fossil Fuel Campaigns. *Global Environmental Politics*, 19(4), 63–84. https://doi.org/10.1162/glep_a_00528
- Boucher, O., Friedlingstein, P., Collins, B., & Shine, K. P. (2009). The indirect global warming potential and global temperature change potential due to methane oxidation. *Environmental Research Letters*, 4, 5. <https://doi.org/10.1088/1748-9326/4/4/044007>

- bp. (2021). *bp Statistical Review of World Energy 2021*.
- Broyles, P. A. (1998). The impact of shareholder activism on corporate involvement in South Africa during the Reagan Era. *International Review of Modern Sociology*, 28(1), 1–19. <https://www.jstor.org/stable/41421629?seq=1>
- Byrne, D., & Gallagher, G. (2014). *Complexity theory and the social sciences: the state of the art* (1st Editio). Routledge. <https://www.routledge.com/Complexity-Theory-and-the-Social-Sciences-The-state-of-the-art/Byrne-Callaghan/p/book/9780415693684>
- Cadena, L., Ali, A., Bhatnagar, D., & Shaw, S. (2018). *People Power Now: An Energy Manifesto*.
- Castañón Moats, M., DeNicola, P., & Malone, L. (2021). *The director's guide to shareholder activism*. <https://www.pwc.com/us/en/governance-insights-center/publications/assets/pwc-the-directors-guide-to-shareholder-activism.pdf>
- Climate Change Laws of the World. (n.d.). *ClientEarth v. Enea*. Grantham Research Institute on Climate Change and the Environment. Retrieved April 28, 2022, from https://climate-laws.org/geographies/poland/litigation_cases/clientearth-v-enea
- COP26. (2022). *Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on its third session, held in Glasgow from 31 October to 13 November 2021*. <https://www.ipcc.ch/report/ar6/wg1/>.
- Cziraki, P., Renneboog, L., & Szilagyi, P. G. (2010). Shareholder Activism through Proxy Proposals: The European Perspective. *European Financial Management*, 16(5), 738–777. <https://doi.org/10.1111/J.1468-036X.2010.00559.X>
- Dahle, K. (2007). When do transformative initiatives really transform? A typology of different paths for transition to a sustainable society. *Futures*, 39, 487–504. <https://doi.org/10.1016/j.futures.2006.10.007>
- de Haan, J. (Hans), & Rotmans, J. (2011). Patterns in transitions: Understanding complex chains of change. *Technological Forecasting & Social Change*, 78(1), 90–102. <https://doi.org/10.1016/j.techfore.2010.10.008>
- de Kruif, I. (2016, February 4). *Topman Shell: ik pomp alles op wat ik kan oppompen*. Nieuwsuur. <https://nos.nl/nieuwsuur/artikel/2084934-topman-shell-ik-pomp-alles-op-wat-ik-kan-oppompen>
- della Porta, D., & Diani, M. (1999). *Social Movements: An Introduction*. Blackwell.
- Edwards, B., McCarthy, J. D., & Mataic, D. R. (2018). The Resource Context of Social Movements. In D. A. Snow, S. A. Soule, H. Kriesi, & H. J. McCammon (Eds.), *The Wiley Blackwell Companion to Social Movements* (pp. 79–97). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119168577>

- Ferree, M. (2003). Resonance and radicalism: Feminist framing in the abortion debates of the United States and Germany. *The American Journal of Sociology*, 109(2), 304–344. <https://doi.org/10.1086/378343>
- Fitzgerald, K. J., & Rodgers, D. M. (2000). Radical Social Movement Organizations: A Theoretical Model. *The Sociological Quarterly*, 41(4), 573–592. <https://doi.org/10.1111/j.1533-8525.2000.tb00074.x>
- Follow-This. (n.d.). *Results of our resolutions*. Retrieved May 3, 2022, from <https://www.follow-this.org/resolutions-results/>
- Follow-This. (2021, May 10). *Why should investors in Shell vote FOR climate resolution 21?* <https://www.follow-this.org/why-should-investors-in-shell-vote-for-climate-resolution-21/>
- Follow-This. (2022, April 20). *Follow This Investor Symposium: How can investors support oil majors to fight the climate crisis?* YouTube. <https://youtu.be/3bznA8JLqR8>
- Foran, J. (2005). *Taking power : on the origins of Third World revolutions*. Cambridge University Press.
- Ford, A., & Newell, P. (2021). Regime resistance and accommodation: Toward a neo-Gramscian perspective on energy transitions. *Energy Research & Social Science*, 79, 102163. <https://doi.org/10.1016/J.ERSS.2021.102163>
- Fossilvrij NL. (n.d.). *Hoe gaat de verandering die wij willen plaatsvinden?* Retrieved February 1, 2022, from <https://gofossilfree.org/nl/theoryofchange/>
- Friedman, M. (1970, September 13). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine*.
- Ganguly, G., Setzer, J., & Heyvaert, V. (2018). If at First You Don't Succeed: Suing Corporations for Climate Change. *Oxford Journal of Legal Studies*, 38(4), 841–868. <https://doi.org/10.1093/OJLS/GQY029>
- Geels, F. W. (2002). Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. *Research Policy*, 31(8), 1257–1274. [https://doi.org/10.1016/S0048-7333\(02\)00062-8](https://doi.org/10.1016/S0048-7333(02)00062-8)
- Geels, F. W. (2005a). *Technological Transitions and System Innovations: A Co-Evolutionary and Socio-Technical Analysis*. Edward Elgar Publishing. <https://www.e-elgar.com/shop/gbp/technological-transitions-and-system-innovations-9781845420093.html>
- Geels, F. W. (2005b). The dynamics of transitions in socio-technical systems: A multi-level analysis of the transition pathway from horse-drawn carriages to automobiles (1860-1930). *Technology Analysis & Strategic Management*, 17(4), 445–476. <https://doi.org/10.1080/09537320500357319>

- Geels, F. W. (2005c). Processes and patterns in transitions and system innovations: Refining the co-evolutionary multi-level perspective. *Technological Forecasting and Social Change*, 72(6), 681–696. <https://doi.org/10.1016/J.TECHFORE.2004.08.014>
- Geels, F. W. (2011). The multi-level perspective on sustainability transitions: Responses to seven criticisms. *Environmental Innovation and Societal Transitions*, 1(1), 24–40. <https://doi.org/10.1016/j.eist.2011.02.002>
- Geels, F. W., & Schot, J. (2007). Typology of sociotechnical transition pathways. *Research Policy*, 36(3), 399–417. <https://doi.org/10.1016/J.RESPOL.2007.01.003>
- Gerring, J. (2006). Case study research: Principles and practices. In *Case Study Research: Principles and Practices*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511803123>
- Gibson Dunn. (2021). *Shareholder Proposal Developments During the 2021 Proxy Season*.
- Goranova, M. L., & Verstegen Ryan, L. (2014). Shareholder Activism: A Multidisciplinary Review. *Journal of Management*, 40(5), 1230–1268. <https://ssrn.com/abstract=2384280>
- Green, F., & Denniss, R. (2018). Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies. *Climatic Change*, 150(1–2), 73–87. <https://doi.org/10.1007/S10584-018-2162-X>
- Gunningham, N. (2017). Building Norms from the Grassroots Up: Divestment, Expressive Politics, and Climate Change. *Law & Policy*, 39(4), 372–392. <https://doi.org/10.1111/LAPO.12083>
- Gürsan, C., & de Gooyert, V. (2021). The systemic impact of a transition fuel: Does natural gas help or hinder the energy transition? *Renewable and Sustainable Energy Reviews*, 138, 110552. <https://doi.org/10.1016/J.RSER.2020.110552>
- Hansen, T. A. (2022). Stranded assets and reduced profits: Analyzing the economic underpinnings of the fossil fuel industry’s resistance to climate stabilization. *Renewable and Sustainable Energy Reviews*, 158(112144). <https://doi.org/10.1016/J.RSER.2022.112144>
- Healy, N., & Barry, J. (2017a). Politicizing energy justice and energy system transitions: Fossil fuel divestment and a “just transition.” *Energy Policy*, 108, 451–459. <https://doi.org/10.1016/J.ENPOL.2017.06.014>
- Healy, N., & Barry, J. (2017b). Politicizing energy justice and energy system transitions: Fossil fuel divestment and a “just transition.” *Energy Policy*, 108, 451–459. <https://doi.org/10.1016/J.ENPOL.2017.06.014>
- Healy, N., & Debski, J. (2017). Fossil fuel divestment: implications for the future of sustainability discourse and action within higher education. *The International Journal of Justice and Sustainability*, 22(6), 699–724. <https://doi.org/10.1080/13549839.2016.1256382>

- Heikkinen, T. (2015). (De)growth and welfare in an equilibrium model with heterogeneous consumers. *Ecological Economics*, 116, 330–340. <https://doi.org/10.1016/j.ecolecon.2015.05.005>
- Hölsgens, R., Lübke, S., & Hasselkuß, M. (2018). Social innovations in the German energy transition: an attempt to use the heuristics of the multi-level perspective of transitions to analyze the diffusion process of social innovations. *Energy, Sustainability and Society*, 8(1), 1–13. <https://doi.org/10.1186/S13705-018-0150-7/>
- Horster, M., & Papadopoulos, K. (2019, January 7). *Climate Change and Proxy Voting in the U.S. and Europe*. Harvard Law School Forum on Corporate Governance and Financial Regulation. <https://corpgov.law.harvard.edu/2019/01/07/climate-change-and-proxy-voting-in-the-u-s-and-europe/>
- Hösl, A. (2021). Milieudéfense et al. v. Shell: A Tipping Point in Climate Change Litigation against Corporations? *Climate Law*, 11(2), 195–209. <https://doi.org/10.1163/18786561-11020005>
- IEA. (2020a). *The Oil and Gas Industry in Energy Transitions*.
- IEA. (2020b). *Key World Energy Statistics 2020*.
- IEA. (2021). *World Energy Outlook 2021*. www.iea.org/weo
- Irmen, A. (2011). *Ist Wirtschaftswachstum systemimmanent?* (No. 509; Discussion Paper Series). <https://doi.org/10.11588/heidok.00011538>
- Jasper, J. M. (1997). *The art of moral protest*. University of Chicago Press.
- Jasper, J. M., & Poletta, F. (2018). The Cultural Context of Social Movements. In *The Wiley Blackwell Companion to Social Movements* (pp. 63–78).
- Kallis, G., Kostakis, V., Lange, S., Muraca, B., Paulson, S., & Schmelzer, M. (2018). Research On Degrowth. *Annual Review of Environment and Resources*, 43, 291–316. <https://doi.org/10.1146/ANNUREV-ENVIRON-102017-025941>
- Kemp, R., Rip, A., Schot, J., Garud, R., & Karnoe, P. (2001). Constructing Transition Paths Through the Management of Niches. In R. Garud & P. Karnoe (Eds.), *Path Dependence and Creation* (pp. 269–299). Psychology Press.
- Kemp, R., Schot, J., & Hoogma, R. (1998). Regime shifts to sustainability through processes of niche formation: The approach of strategic niche management. *Technology Analysis & Strategic Management*, 10(2), 175–198. <https://doi.org/10.1080/09537329808524310>
- Kristine, M., & Alvarez, O. (2010). On Deviance and Loving Nature: A Case Study of the Ecological Activism of Greenpeace Philippines. *Philippine Sociological Review*, 58, 97–122. <https://www.jstor.org/stable/43486334>
- King, G. (1994). *Designing social inquiry: scientific inference in qualitative research* (R. O. Keohane & S. Verba, Eds.). Princeton University Press.

- King, L., & Gish, E. (2015). Marketizing Social Change: Social Shareholder Activism and Responsible Investing. *Sociological Perspectives*, 58(4), 711–730. <https://doi.org/10.1177/0731121415576799>
- Lafarre, A., & van der Elst, C. (2018). Shareholder Sustainability Activism in the Netherlands. In *SSRN Electronic Journal* (No. 396/2018; Law Working Paper). Elsevier BV. <https://doi.org/10.2139/SSRN.3156614>
- Lange, S. (2018). *Macroeconomics Without Growth. Sustainable Economies in Neoclassical, Keynesian and Marxian Theories* (Vol. 18). Metropolis.
- Lazard. (2021). *H1 2021 Review of Shareholder Activism*. <https://www.lazard.com/media/451731/lazards-h1-2021-review-of-shareholder-activism-vff.pdf>
- Loorbach, D. (2010). Transition Management for Sustainable Development: A Prescriptive, Complexity-Based Governance Framework. *Governance*, 23(1), 161–183. <https://doi.org/10.1111/j.1468-0491.2009.01471.x>
- Loureiro, A. N. C. (2020). *The impact of fossil fuel divestment on portfolio performance*. Universidade do Minho.
- Machamer, P., Darden, L., & Craver, C. F. (2015). Thinking about Mechanisms. *Philosophy of Science*, 67(1), 1–25. <https://doi.org/10.1086/392759>
- Machin, A. (2013). *Negotiating Climate Change: Radical Democracy and the Illusion of Consensus*. Zed Books.
- Macpherson, C. (2019). The Potential Impact of Investor Fossil Fuel Divestment Behaviour on Oil Prices. *SSRN Electronic Journal*. <https://doi.org/10.2139/SSRN.3382739>
- Magdoff, F., & Foster, J. B. (2011). *What Every Environmentalist Needs to Know About Capitalism: A Citizen's Guide to Capitalism and the Environment*. Monthly Review Press.
- McAdam, D. (1996). Conceptual origins, current problems, future direction. In *Comparative Perspectives on Social Movements* (pp. 23–40). Cambridge University Press. <https://doi.org/10.1017/CBO9780511803987.003>
- McAdam, D., McCarthy, J. D., & Zald, M. N. (1996). Introduction: Opportunities, Mobilizing Structures, and Framing Processes: Toward a Synthetic, Comparative Perspective on Social Movements. In D. McAdam, J. D. McCarthy, & M. N. Zald (Eds.), *Comparative Perspectives on Social Movements* (pp. 1–20). Cambridge University Press.
- McCarthy, J. D. (1977). Resource Mobilization and Social Movements: A Partial Theory. *American Journal of Sociology*, 82(6), 1212–1241. https://www.jstor.org/stable/2777934?seq=1#metadata_info_tab_contents
- McGarity, T. O. (2014). The Disruptive Politics of Climate Disruption. *Nova Law Review*, 38(3), 393–472.

- McGlade, C., & Ekins, P. (2015). The geographical distribution of fossil fuels unused when limiting global warming to 2°C. *Nature*, *517*(7533), 187–190. <https://doi.org/10.1038/NATURE14016>
- Meadows, D. H., Meadows, D. L., Randers, J., & Behrens III, W. W. (1972). *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. In *The limits to growth*. Universe Books. <https://archive.org/details/limitstogrowthr00mead>
- Meyer, D. S. (2004). Protest and political opportunities. *Annual Review of Sociology*, *30*, 125–145. <https://doi.org/10.1146/ANNUREV.SOC.30.012703.110545>
- Milieudefensie. (2018, December 20). *Klimaatakkoord niet gedragen door milieu- en vakbeweging*. <https://milieudefensie.nl/actueel/klimaatakkoord-niet-gedragen-door-milieu-en-vakbeweging>
- Mintz, J. A. (2014). Introduction: Climate Disruption and Government Action: Approaches, Obstacles and Opportunities. *Nova Law Review*, *38*(3), 387–392.
- Monks, R., Miller, A., & Cook, J. (2004). Shareholder activism on environmental issues: A study of proposals at large US corporations (2000–2003). *Natural Resources Forum*, *28*(4), 317–330. <https://doi.org/10.1111/J.1477-8947.2004.00104.X>
- Natuur & Milieu. (n.d.). *Doel & aanpak*. Retrieved February 3, 2022, from <https://www.natuuren-milieu.nl/over-ons/doel-aanpak/>
- Newell, P. (2019). Trasformismo or transformation? The global political economy of energy transitions. *Review of International Political Economy*, *26*(1), 25–48. <https://doi.org/10.1080/09692290.2018.1511448>
- Okereke, C. (2008). Equity Norms in Global Environmental Governance. *Global Environmental Politics*, *8*(3), 25–50. <https://doi.org/10.1162/GLEP.2008.8.3.25>
- Paterson, M. (2021). ‘The End of the Fossil Fuel Age’? Discourse Politics and Climate Change Political Economy. *New Political Economy*, *26*(6), 923–936. <https://doi.org/10.1080/13563467.2020.1810218>
- Pel, B., & Bauler, T. (2014). *The Institutionalization of Social Innovation between Transformation and Capture* (No. 2; TRANSIT). transitsocialinnovation.eu/
- Polletta, F. (2012). Three Mechanisms by Which Culture Shapes Movement Strategies: Repertoires, Institutional Norms, and Metonymy. In G. Maney, R. Kutz-Flamenbaum, D. Rohlinger, & J. Goodwin (Eds.), *Strategies for Social Change*. University of Minnesota Press.
- Rechtbank Den Haag. (2021). *Klimaatzaak tegen Royal Dutch Shell C/09/571932 / HA ZA 19-379*. <https://uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2021:5337>
- Rice, J. L. (2016). “The Everyday Choices We Make Matter”: Urban Climate Politics and the Postpolitics of Responsibility and Action. In H. Bulkeley, M. Paterson, & J. Stripple (Eds.), *Towards a Cultural*

- Politics of Climate Change: divices, desires and dissent* (pp. 110–126). Cambridge University Press.
<https://doi.org/10.1017/CBO9781316694473.008>
- Ritchie, J., & Dowlatabadi, H. (2015a). Divest from the Carbon Bubble? Reviewing the Implications and Limitations of Fossil Fuel Divestment for Institutional Investors. *Review of Economics & Finance*, 5, 59–80.
- Ritchie, J., & Dowlatabadi, H. (2015b). *Fossil Fuel Divestment: Reviewing Arguments, Implications & Policy Opportunities*.
- Rodrigue, M., & Michelon, G. (2021). Shareholder activism and the environment. In J. Bebbington, C. Larrinaga, B. O’Dwyer, & I. Thomson (Eds.), *Routledge Handbook of Environmental Accounting* (pp. 151–164). Routledge. <https://doi.org/10.4324/9780367152369>
- Royal Dutch Shell. (2021). *Shell Energy Transition Strategy 2021*. 1–34. <https://www.shellenergy.co.uk/>
- Royal Dutch Shell plc. (2021). *Noice of Annual General Meeting*. www.shell.com/agm/webcast
- Ruitenbeek, A. (2021, May 28). Donald Pols is gevormd door het mooie en het lelijke van Zuid-Afrika. *Het Financieele Dagblad*, 16–17. <https://fd.nl/profiel/1385335/donald-pols-is-gevormd-door-het-mooie-en-het-lelijke-van-zuid-afrika>
- Schlacke, S., Wentzien, H., Thierjung, E.-M., & Köster, M. (2022). Implementing the EU Climate Law via the “Fit for 55” package. *Oxford Open Energy*, 1, 1–13. <https://doi.org/10.1093/oen-energy/oiab002>
- SEI, ISSD, ODI, E3G, & UNEP. (2020). *The Production Gap: 2020 Special Report*. <http://production-gap.org/2020report>
- Setzer, J., & Byrnes, R. (2020). *Global trends in climate change litigation: 2020 snapshot*.
- Setzer, J., & Higham, C. (2021). *Global trends in climate change litigation: 2021 snapshot Policy report*.
- Shell Plc. (2021). *Powering progress: Shell plc Annual Report and Accounts*.
- Sjöström, E. (2008). Shareholder activism for corporate social responsibility: What do we know? *Sustainable Development*, 16(3), 141–154. <https://doi.org/10.1002/SD.361>
- Smith, A. (2006). Green Niches in Sustainable Development: The Case of Organic Food in the United Kingdom. *Environment and Planning C: Politics and Space*, 24(3), 439–458. <https://doi.org/10.1068/C0514J>
- Smith, A. (2007). Translating Sustainabilities between Green Niches and Socio-Technical Regimes. *Technology Analysis & Strategic Management*, 19(4), 427–450. <https://doi.org/10.1080/09537320701403334>
- Smith, A., & Raven, R. (2012). What is protective space? Reconsidering niches in transitions to sustainability. *Research Policy*, 41(6), 1025–1036. <https://doi.org/10.1016/J.RESPOL.2011.12.012>
- Smith, R. (2010). Beyond growth or beyond capitalism? *Real-World Economics Review*, 53, 28–42.

- Snow, D. A., Rochford, E. B., Worden, S. K., & Benford, R. D. (1986). Frame alignment processes, micro-mobilization, and movement participation. *American Sociological Review*, 51(4), 464–481. <https://doi.org/10.2307/2095581>
- Snow, D. A., Vliegenthart, R., & Ketelaars, P. (2018). The Framing Perspective on Social Movements: Its Conceptual Roots and Architecture. In D. A. Snow, S. A. Soule, H. Kriesi, & H. J. McCammon (Eds.), *The Wiley Blackwell Companion to Social Movements* (pp. 392–410). John Wiley & Sons, Ltd.
- Stooker, C. (2021, December 13). ‘We gaan alle grote Nederlandse vervuilers aanpakken.’ *Het Financieele Dagblad*. <https://fd.nl/samenleving/1422024/directeur-milieudefensie-we-gaan-alle-grote-nederlandse-vervuilers-aanpakken>
- Swyngedouw, E. (2010). Apocalypse Forever? Post-political Populism and the Spectre of Climate Change. *Theory, Culture & Society*, 27(2–3), 213–232. <https://doi.org/10.1177/0263276409358728>
- Tarrow, S. (1998). *Power in Movement*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511813245>
- Tarrow, S., Tilly, C., & McAdam, D. (2001). *The Dynamics of Contention*. Cambridge University Press.
- The Economist. (2022). Lawsuits aimed at greenhouse-gas emissions are a growing trend. *The Economist*. <https://www.economist.com/international/2022/04/23/lawsuits-aimed-at-greenhouse-gas-emissions-are-a-growing-trend>
- Törnberg, A. (2018). Combining transition studies and social movement theory: towards a new research agenda. *Theory and Society*, 47(3), 381–408. <https://doi.org/10.1007/S11186-018-9318-6/>
- Törnberg, A., & Törnberg, P. (2017). Modelling free social spaces and the diffusion of social mobilization. *Social Movement Studies*, 16(2), 182–202. <https://doi.org/10.1080/14742837.2016.1266243>
- Trinks, A., Scholtens, B., Mulder, M., & Dam, L. (2018). Fossil Fuel Divestment and Portfolio Performance. *Ecological Economics*, 146, 740–748. <https://doi.org/10.1016/J.ECOLECON.2017.11.036>
- van Asselt, H., Kulovesi, K., Rajavuori, M., & Savaresi, A. (2021, May 28). *Shell-shocked: a watershed moment for climate litigation against fossil fuel companies*. Centre for Climate Change, Energy, and Environmental Law. <https://sites.uef.fi/cceel/shell-shocked-a-watershed-moment-for-climate-litigation-against-fossil-fuel-companies/>
- van Beurden, B. (2021, June 9). *The spirit of Shell will rise to the challenge*. LinkedIn. <https://www.linkedin.com/pulse/spirit-shell-rise-challenge-ben-van-beurden/?trackingId=yEwys4B0T%2FyD9C4CeeiCnw%3D%3D>

- van de Graaf, T., & Savacool, B. K. (2020). *Global Energy Politics*. Polity. <http://www.thijsvandegraaf.be/books/global-energy-politics/>
- van Dijk, B. (2021, November 16). Topman Van Beurden: Shell vertrekt niet vanwege het vestigingsklimaat. *Het Financieele Dagblad*, 6–7. <https://fd.nl/bedrijfsleven/1419448/we-kunnen-ons-niet-permitteren-aandeelhouders-voor-het-hoofd-te-stoten>
- Verkuijl, C., Piggot, G., Lazarus, M., Van, H., & Erickson, A. P. (2018). *Aligning fossil fuel production with the Paris Agreement*. https://newsroom.unfccc.int/sites/default/files/resource/11_12_13__SEI_Talanoa_Fossil_Fuels.pdf
- Vormedal, I., Gulbrandsen, L. H., & Skjærseth, J. B. (2020). Big Oil and Climate Regulation: Business as Usual or a Changing Business? *Global Environmental Politics*, 20(4), 143–166. https://doi.org/10.1162/GLEP_A_00565
- Weller, N., & Barnes, J. (2014). Finding pathways: Mixed-method research for studying causal mechanisms. In *Finding Pathways: Mixed-Method Research for Studying Causal Mechanisms*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139644501>
- Wiebes, E. D. (2020). *Kamerstukken II, 32 813, nr. 496*. Tweede Kamer der Staten Generaal. <https://www.tweedekamer.nl/kamerstukken/detail?id=2020Z07480&did=2020D15982>
- Williams, C. A. (2004). Civil society initiatives and soft law in the oil and gas industry. *New York University Journal of International Law and Politics*, 36(3), 457–502.
- Windsor, D. (2006). Corporate social responsibility: Three key approaches. *Journal of Management Studies*, 43(1), 93–114. <https://doi.org/10.1111/j.1467-6486.2006.00584.x>
- Woldendorp, J., & Keman, H. (2007). The Polder Model Reviewed: Dutch Corporatism 1965—2000. *Economic and Industrial Democracy*, 28(3), 317–347. <https://doi.org/10.1177/0143831X07079351>
- Wonneberger, A., & Vliegthart, R. (2021). Agenda-Setting Effects of Climate Change Litigation: Interrelations Across Issue Levels, Media, and Politics in the Case of Urgenda Against the Dutch Government. *Environmental Communication*, 15(5), 699–714. <https://doi.org/10.1080/17524032.2021.1889633>
- Yaziji, M., & Doh, J. P. (2013). The Role of Ideological Radicalism and Resource Homogeneity in Social Movement Organization Campaigns against Corporations. *Organization Studies*, 34(5–6), 755–780. <https://doi.org/10.1177/0170840613479235>

Appendix: Revolutionary and reformist social movements

In this appendix three approaches to the categorisation of social movements are discussed. Firstly, one way to classify social movement organisations (SMOs) is by Aberle's classification of social movements. (Aberle, 1991; Khristine & Alvarez, 2010) Although Aberle defined four categories of social movements, only the revolutionary and reformist characterisation are relevant for environmental SMOs, as the other two categories (redemptive and alterative) characterise movements aiming for change at the level of the individual, whereas environmental organisations aim for change at the supra-individual level almost by definition due to the collective nature of the problem. Secondly, a social movement classification defined by Dahle (2007) is discussed. He defined five characteristic 'strategies for sustainability' along which social movements can be classified. Finally, academic research with regards to radical social movements is discussed in this section.

Aberle's classification of social movements

SMOs exist in numerous forms and shapes. There are also numerous classifications of social movements available. However, in the context of this thesis David Aberle's classification of social movements is particularly useful, since it addresses the concept of change. (Aberle, 1991) The desire to change is both "a constant feature of proactive social movements," as well as a particular subject of interest throughout this work, which makes this classification very relevant for the present work. (Khristine & Alvarez, 2010) Aberle's classification can be used to classify social movements in general, but can also be used to classify social movement organizations, as a subset of social movements.

Aberle classifies social movements based on two characteristics: the *locus* and the *amount* of desired change. Locus refers to the target of change, this can either be focussed on specific individuals or virtually everyone in society (supra-individual). The second dimension along which Aberle classifies social movements, the amount of change, refers to the scope of desired change. This can either be partial change, aimed at specific behaviours or characteristics, or total change. The latter refers to change that has an all-encompassing impact on the individual or supra-individual. (Aberle, 1991)

At the locus level of the individual, Aberle distinguishes between alterative and redemptive social movements. The latter seeks total change of the individual, whereas alterative social movements only focus on partial change. At the supra-individual locus level, Aberle defines reformative and revolutionary (also referred to as transformative) movements. Reformative movements aim for partial change

on the supra-individual level, in contrast with revolutionary movements, who seek total change on the supra-individual level. These categorizations of Aberle’s ideal types are visualised in Table 2.

Table 2: Aberle's classification of social movements

		<i>Locus of change</i>	
		<i>Supra-individual</i>	<i>Individual</i>
<i>Amount of change</i>	<i>Total</i>	Revolutionary	Redemptive
	<i>Partial</i>	Reformative	Alterative

Strategies for sustainability

Aiming to draw lessons from ‘sustainability transitions’, Dahle (2007) distinguished five different ideal type ‘strategies for sustainability’. Namely, the reformists who, similar to Aberle’s classification aim for change within the ‘existing order’, and four different types of revolutionaries, who seek change outside of the ‘existing order’. The three characteristics along which Dahle orders the strategies for sustainability are based on how each of the strategies would answer on the following three questions (Dahle, 2007, p. 500):

1. Can a solution be found within the existing order?
2. Is change coming from top-down or bottom-up?
3. Is the transition now possible, (or not yet)?

Hence, Dahle distinguished the five ideal type strategic profiles as shown in Table 3.

Table 3: Strategic profiles ('strategies for sustainability') as defined by Dahle (2007). Originally published by Dahle (2007, p. 500).

Strategic profile	Solution within existing order?	Top-down or bottom-up?	Transition possible now?
<i>Reformists</i>	Yes	Top-down	Yes
<i>Impatient Revolutionaries</i>	No	Top-down	Yes
<i>Patient Revolutionaries</i>	No	Both	No
<i>Grass-root Fighters</i>	No	Bottom-up	Yes
<i>Multifaceted Radicals</i>	No	Both	Yes

Radical social movements

Radical social movements are a specific realm of studies with social movement organisation studies. The nature of radical social movements is rather close to would be called revolutionary movements in Aberle’s classification. Initiated by the predominant reformist perspective of social movement theory,

Fitzgerald & Rodgers (2000) developed a theoretical model for radical social movement organisations (RSMOs). Their definition of RSMOs aligns with Aberle's classification of revolutionary social movements in the sense that Fitzgerald & Rodgers (2000) describe RSMOs as focussing on "radical restructuring of the system rather than incorporation into that system," as per their self-defined goals and objectives. They identify five key areas in which moderate SMOs can (ideally) be distinguished from radical SMOs. These five areas are: internal structure, ideology, tactics, communication, and assessment of success (see Table 4). To what extent the environmental SMOs discussed in this work can be fit in one or the other category is open for discussion. Although Fitzgerald & Rodgers admit that "[n]o RSMO will fit every characteristic precisely," I like to stress the importance of the institutional context when classifying SMOs as moderate or radical. In particular the characteristics 'communication' and 'assessment of success' depend significantly on external societal characteristics. With regards to 'communication', Fitzgerald & Rodgers (2000) describe radical SMOs as "ignored/misrepresented by media", obviously, in regimes with a more diverse and open media landscape, SMOs are less likely to be ignored. A similar argument can be made for the 'assessment of success' characteristic, which Fitzgerald & Rodgers (2000) describe as (amongst others) "subject to intense opposition and government surveillance." In more repressive regimes, obviously "intense opposition and government surveillance" are more likely to prevail. Some well-known SMOs, that can be classified as RSMO are the Industrial Workers of the World (IWW), the Student Nonviolent Coordinating Committee (SNCC), and numerous radical second-wave feminist organisations.

Yaziji & Doh (2013) specifically focussed on the role of ideological radicalism in social movement organisations. They studied the dynamics between the ideology, overall strategy and tactics of SMOs and their resource providers. The findings of this study suggest that a radical ideology attracts a more homogeneous group of resource providers. This in turn affects the selection of strategies and tactics the that the SMOs use. The focus of this work on the role of the resource provider, makes this work fit within the aforementioned theoretical context of resource mobilisation theory.

Table 4: Ideal type characteristics of moderate and radical SMOs, description as per Fitzgerald & Rodgers (2000).

	Moderate SMOs	Radical SMOs
<i>Internal structure</i>	Hierarchical leadership; formal bureaucratic organization: development of large membership base for resource generation	Nonhierarchical leadership; participatory democratic organization; egalitarian; “membership” based upon involvement: support indigenous leadership
<i>Ideology</i>	Reform agenda, emphasis on being a contender in the existing political system: national focus; support government military involvement	Radical agenda; emphasis on structural change; flexible ideology; radical networks; global consciousness and connections; antimilitaristic stance
<i>Tactics</i>	Nonviolent legal action	Nonviolent direct action; mass actions: innovative tactics
<i>Communication</i>	Able to rely on mainstream forms of communication	Ignored/misrepresented by media; reliance on alternative forms of communication (music, street theater, pamphlets, newsletters)
<i>Assessment of success</i>	Potential for plentiful resources: manipulate resources for the self-interest of the organizations’ longevity: formal rationality: success measured in terms of reform of existing political/economic system	Limited resources; may be purposefully short-lived; substantive rationality; contribute to larger radical agenda; subject to intense opposition and government surveillance