

NGO Participation in Geoengineering in the UK and China: A Causal Study

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DECLARATION

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

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ABSTRACT

This thesis addresses the issue of why NGOs do or do not become involved in geoengineering (GE) as a policy area in the UK and China. GE refers to the employment of large-scale manipulation to exert an influence on the global environment in order to deal with climate change. Governance of GE is a key issue in the academic literature and public policy. In terms of governance related issues, public participation has been frequently discussed in the existing literature within environmental law and related fields. Among all the stakeholders involved in GE, the issue of NGOs' participation stands out due to their limited involvement. The thesis is generally based on the literature on public participation in environmental law. Although public participation has long been an interest of study, the literature has paid little attention to the causes of participation. The thesis contributes to the existing literature by way of adding a consideration of why certain groups participate or not in particular areas of environmental law and policy. The main research question of the thesis is 'why do NGOs participate in GE or not in the UK and China?' In order to explore the causes of participation, qualitative interviews were employed: notably in-depth interviews were conducted among environmental NGOs in the UK and China. The thesis then employs the literature on social movements and public policy to generate variables for analysing the relevant data.

Through analysing the data with variables generated from these literatures, two basic findings were identified: involvement and non-involvement of NGOs in the UK can be considered as intentional and the deliberate outcome of strategic choices; however in

China, only international NGOs make strategic decisions on non-involvement, while domestic Chinese NGOs were unintentionally not involved with GE.

In conclusion, the contribution of the thesis is three-fold. It adds to the literature on social movements and public policy by concentrating on whether NGOs make strategic choices on becoming involved in GE or not and why. It also contributes to the future governance framework of GE by understanding what may lead NGOs, as a potentially critical part of this framework, to become involved. Aside from this, the thesis makes a contribution in an empirical way by mapping the picture of NGO involvement with GE in the UK and China.

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ABBREVIATIONS

CBCGDF	China Biodiversity Conservation and Green Development Foundation
CBD	Convention on Biological Diversity
CCS	Carbon Capture and Storage
CDKN	Climate and Development Knowledge Network
CDR	Carbon Dioxide Removal
EDF	Environmental Defence Fund
EFSA	European Safety Authority
EIA	Environmental Impact Assessment
(E)NGO	(Environmental) Non-governmental Organisation
FoE	Friends of the Earth
GE	Geoengineering
GMOs	Genetically Modified Organisms
HDIEO	Hande Institute of Environment Observation
IGO	Inter-governmental Organisation
INGO	International Non-governmental Organisation
IPCC	Intergovernmental Panel on Climate Change
IPE	Institute of Public and Environment Affairs
LC/LP	London Convention and Protocol
MIP	Most important problems
PO	Political Opportunity
SMO	Social Movement Organisation
SRM	Solar Radiation Management
SRMGI	Solar Radiation Management Governance Initiative
The ETC Group	Action Group on Erosion, Technology and Concentration
TBEAS	Tianjin Binhai Environment Advisory Service
TWAS	The World Academy of Science
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wildlife Fund

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Chapter 1 Introduction

Global warming is a severe issue that has to be tackled for all human beings and other species. It refers to ‘the phenomenon of increasing average air temperatures near the surface of Earth over the past one to two centuries’.¹ It is generally accepted that human influence on the climate system is clear while recent climate changes, in turn, have had significant impacts on human beings as well as the environment.² Due to the close interaction between human activities and global warming, countermeasures must be taken to deal with it. As a result, mitigation and adaptation have been proposed as effective strategies for dealing with climate change. In addition, geoengineering (GE) has recently been proposed as a third option.

This thesis sets out to establish the role of non-governmental organizations (NGOs) in GE in order to explore the causes of NGO participation. This is significant in two respects: First, from an empirical perspective, NGOs have not, generally, been actively involved in the discussion and policymaking process around GE. It is worth exploring the reasons behind this compared with the important role that NGOs have played in other novel technology areas, such as GMOs, that possess a similar risk profile to GE. From a theoretical perspective, although public participation has long been a topic in environmental law and policy,³ little attention has been paid to the causes of participation.

¹ John Maunder, *Dictionary of Global Climate Change*, vol 2 (London: UCL Press 1994).

² Myles Allen and others, *Climate Change 2014 Synthesis Report* (IPCC Fifth Assessment Synthesis Report, 2014).

³ Maria Lee and Carolyn Abbot, ‘The Usual Suspects? Public Participation Under the Aarhus Convention’ (2003) 66 *Modern Law Review* 80; Maria Lee and others, ‘Public Participation and Climate Change Infrastructure’ (2013)

The thesis adds to the literature by considering why NGOs become involved in certain areas of environmental law and policy or not.⁴ It adopts qualitative interviews as the principal research method in order to map the picture of NGO involvement with GE in the UK and China.

This introductory chapter comprises three sections. The first part deals with the research background and motivation. A general background of mitigation, adaptation and GE including their interactions within the context of global warming will first be introduced as well as an analysis of the definition of GE. The motivation for this research will then be introduced to explain why I became interested in this area and decided to research on it. This section includes discussion of why GE creates governance problems, the gap in the literature, why the thesis focuses on NGOs, and why the research chose to investigate NGOs in the UK and China. The second section addresses the design of the research project, notably what has been done concerning this research and why, as well as setting out, in an initial manner, the findings and conclusions of the thesis. The third part provides an outline of the thesis, drawing a chapter-by-chapter summary. Therefore, the first section addresses the question of ‘Why’, and the second focuses on the question of ‘What’, while the last section deals with the question of ‘How’.

25 *Journal of Environmental Law* 33; Sally Eden, ‘Public Participation In Environmental Policy: Considering Scientific, Counter-Scientific And Non-Scientific Contributions’ (1996) 5 *Public Understand Sci* 183.

⁴ It is necessary to acknowledge that there has been some research done in recent years on reasons for participation, such as Heike Klüver, *Lobbying in the European Union: Interest Groups, Lobbying Coalitions, and Policy Change* (Oxford: Oxford University Press 2013). However, there is not that much on it and it is not well known outside the public policy field.

1.1 Research Background and Motivation

This section introduces the background of the topic area – GE – and the motivation for conducting the research. The background includes three interrelated climate change concepts of mitigation, adaptation and GE. In terms of the motivation for research, I will explain it from several aspects, including why GE creates governance problems and the gap identified in the literature.

1.1.1 Research Background

When it comes to introducing the background of GE, two important concepts need to be mentioned – mitigation and adaptation. Mitigation and adaptation are traditional ways of counteracting global warming or climate change. Due to the fact that they may not in the end be effective enough to meet the pace of rising temperature, GE has been proposed in some circles as a quicker way to address global warming. Therefore, before focusing on GE technology, mitigation and adaptation should first be introduced.

Mitigation and Adaptation

Mitigation and adaptation are two kinds of strategies to deal with global warming although there are major differences between them. Mitigation refers to ‘technological change and substitution that reduce resource inputs and emissions per unit of output’⁵ while adaptation is ‘a response to climate change that seeks to reduce the vulnerability of social and biological systems to climate change effects, which presents the challenge of mainstreaming climate change planning into more general development goals’ for both

⁵ Ottmar Edenhofer and others, *Meeting Report of the Intergovernmental Panel on Climate Change Expert Meeting on Geoengineering* (2012).

developed and developing countries.⁶ As can be extracted from these definitions, while mitigation focuses on the source of climate change – Greenhouse Gases especially carbon dioxide – adaptation addresses its consequences.

The relationship between adaptation and mitigation can be summarised to the effect that, the ‘more mitigation that takes place, the less adaptation will be needed, and vice versa’.⁷ Adaptation does not necessarily fall within the domain of pollution control or even environmental law.⁸ In addition, adaptation refers to adjustments to the impacts of climate change with policy-driven measures and is proposed as a standard element in programs of development agencies in both developed and developing countries.⁹ Adaptation policies in development can be identified in a wide range of agendas, such as development agencies and sectoral ministries.¹⁰

Geoengineering

The definition of GE has been discussed among academics for some time. The generally accepted definition is proposed by the 2009 Royal Society Report. According to this report, GE is ‘the deliberate large scale manipulation of the planetary environment to counteract anthropogenic climate change’.¹¹ In much of the existing literature, there are other terms used to describe GE, such as climate engineering or climate geoengineering. However, it can be confusing in that these terms are not always clearly defined in the existing

⁶ Ibid.

⁷ Freya Schipper and Emma Lisa, ‘Conceptual History of Adaptation in the UNFCCC Process’ (2006) 15 Review of European Community and International Environmental Law 82.

⁸ Thomas Gremillion, ‘Setting The Foundation: Climate Change Adaptation At The Local Level’ (2011) 41 *Envtl L* 1221. This is because climate change will have influences on various aspects of people’s daily life, in this regard, adaptation is required in a wide range of areas.

⁹ Ibid.

¹⁰ Schipper and Lisa (n 7).

¹¹ John Shepherd and others, *Geoengineering the Climate: Science, Governance and Uncertainty* (The Royal Society, Science Policy, London, 2009).

literature.

In order to address this issue of terminology, it is worth looking back to the period before geoengineering had been proposed as a means of combating climate change. Geoengineering techniques were employed in mining, energy, infrastructure and environment at that time; moreover, the discipline of geoengineering in universities has been considered as identical to geological engineering.¹² In other words, geoengineering is a conception from the engineering or geosciences area. However, as far as climate engineering is concerned, it involves the deliberate and large-scale intervention in the Earth's climatic system with the aim of reducing global warming. Thus, climate engineering can be seen as seeking to achieve the goal of solving the global warming problem by using geoengineering methods or approaches.

Although there is a slight difference between climate engineering and geoengineering, in climate science, these two terms refer to the same thing. This is because, in climate science, when talking about geoengineering, it obviously means the content of geoengineering related to the climate science area,¹³ which stands for the same thing as climate engineering. Similarly, the term, "climate geoengineering", can be seen as synonymous with climate engineering.¹⁴

¹² For example, University of Nevada, 'Degree Programs: Geo-Engineering' <<https://www.unr.edu/geology/degree-programs/geo-engineering>> University of Minnesota, 'Geoengineering' <<https://cse.umn.edu/r/geoengineering/>> .

¹³ Shepherd and others (n 11); John Pyle and others, *Solar Radiation Management: The Governance Of Research* (Solar Radiation Management Governance Initiative, UK, 2011).

¹⁴ Rose Cairns, 'Climate Geoengineering: Issues of Path-Dependence and Socio-Technical Lock-In' (2014) 5 *Wiley Interdisciplinary Reviews-Climate Change* 649.

In the existing literature on climate change, geoengineering is also considered to be exactly the same as climate engineering, including in some official reports by research institutes, such as the 2009 Royal Society Report.¹⁵ Climate geoengineering seems to be the combination of those two terms. This short discussion on terminology does not seek to provide an opinion on which term should be employed; rather, it aims to introduce the fact that these terms, although with some different arguments on terminology in the literature, refer to the same thing in the context of climate change. Therefore, either of them can be regarded as the appropriate term for my research. In order to be consistent however, geoengineering (GE) will be the term used in this thesis. The relationship between GE, mitigation and adaptation can be summarised as follows: mitigation is the optimal countermeasure to global warming; adaptation deals with the consequences that mitigation cannot cope with; and GE is the final choice, which may yet be needed in an emergency where the other two have failed.

1.1.2 Research Motivation

As I worked on climate change for two years when doing my Master's degree, my research interest has always been in this area. Due to my focus on rising global temperatures, I first came to know about the idea of GE from websites. After exploring the dimensions of this technology by referring to the scientific literature and reports released by research institutes, I started to agree with most scholars who have worked on this area in that GE creates governance problems because of its risky and uncertain nature, as well as the idea that it does not address the root cause of global warming. This indicated to me that the

¹⁵ Shepherd and others (n 11).

technology of GE would need to come under the regulation of environmental law and policy. This was the initial motivation for research on it. From this consideration, I then examined the relevant literature from various perspectives, such as legal concerns, political and ethical considerations, and scientific issues, in order to set up a research angle for the thesis. Finally, a gap on the role of NGOs was identified in the literature based on an institutional framework including all stakeholders involved in GE. When exploring the literature both in the UK and China, I found that although China was considered by Western countries as the most probable country to conduct GE unilaterally, little literature on GE could be found in China. Therefore, I decided to include these two countries to discuss the involvement or non-involvement of NGOs with GE. In general, this paragraph shows a narrative of my research motivation, which aims to explain how I became interested in investigating NGO participation in GE in the UK and China. A detailed explanation of motivation based on the relevant literature will be introduced in the following section.

1.1.2.1 Why does GE create governance problems?

There is no international agreement covering the full scale of GE. More research aiming to reduce the uncertainties of GE is considered to be necessary in the literature before we can achieve an international agreement on GE.¹⁶ The scientific research activities on GE can be summarised as two-fold: indoor activities and outdoor activities.¹⁷ Indoor activities include non-hazardous studies and laboratory studies. Outdoor activities consist of small field trials and medium and large-scale field trials. In practise, the majority of research that

¹⁶ Jesse Reynolds and Floor Fleurke, 'Climate Engineering Research: A Precautionary Response to Climate Change?' [2013] CCLR 101.

¹⁷ Pyle and others (n 13).

has been done is indoor activities, especially computer modelling on GE, both in the UK and China. In relation to outdoor activities, a famous and controversial project in the UK – the SPICE (Stratospheric Particle Injection for Climate Engineering) Project – was carried out in 2010.¹⁸ However, the field test was finally cancelled due to controversy concerning the research, and an agreement among all project partners was achieved that more public engagement was required. Therefore, the project continued to focus on lab-based experiments.

The reasons why GE creates governance problems can be summarised in three aspects. First, according to the categories described above, medium and large-scale field trials can have regional or global irreversible effects, which can widely influence the environment as well as human beings. In addition, according to the scientific research that has been done so far, there are still many uncertainties. Due to the unknowns and uncertainties of GE, governance is important and required when conducting research activities, such as field trials, not to mention large-scale deployment. Without proper governance, human society as well as the environment may suffer a considerable loss. Second, GE techniques, especially solar radiation management, would be relatively cheap compared with mitigation activities, and could conceivably be capable of reducing global temperatures in a short period of time.¹⁹ This will potentially cause unilateral action to be taken by some nations or companies, which could lead to conflicts and disputes among relevant nations. Third, as the impacts of GE activities could be transnational or even global, how to deal with the potential transnational disputes is likely to be of significance.

¹⁸ SPICE, 'The SPICE Project' <<http://www.spice.ac.uk/>> .

¹⁹ Shepherd and others (n 11).

1.1.2.2 Gaps in the literature

Another motivation for my research stemmed from a perception of gaps in the relevant literature. As a detailed review on the literature will be included in chapter 2, this section only includes a brief introduction on the gaps in the literature. In the literature on GE, two main issues have been discussed: legally related issues, and political and ethical issues. The core legal issues identified in the literature are related to various governance approaches on GE, including binding and non-binding governance approaches, and an institutional framework of stakeholders involved in GE.²⁰ However, among the stakeholders, most NGOs are currently not actively involved in GE. In terms of the literature, little attention has been paid to NGO participation in GE. This gap provides an explanation of why the thesis focuses on the role of NGOs, which will be discussed in detail in the following section. Given the gap on the role of NGOs, I then explored the literature on NGOs and public participation in environmental law and policy and identified that, although many issues have been discussed around public participation,²¹ little attention has been paid to causes of participation. Therefore, the focus of the thesis is to investigate why NGOs become involved or not in GE as a policy area.

1.1.2.3 Why an NGO focus?

As mentioned above, the thesis specifically places emphasis on the role of NGOs to explore why NGOs become involved or not in the particular area of GE. In order to explain

²⁰ David G. Victor, 'On The Regulation Of Geoengineering' (2008) 24 *Oxford Review of Economic Policy* 322; Catherine Redgwell, 'Geoengineering the Climate: Technological Solutions to Mitigation - Failure or Continuing Carbon Addiction?' (2011) 2 *CCLR* 178; Tuomas Kuokkanen and Yulia Yanmineva, 'Regulating Geoengineering in International Environmental Law' [2013] *CCLR* 161.

²¹ Maria Lee and Carolyn Abbot, 'The Usual Suspects? Public Participation under the Aarhus Convention' (2003) 66 *The Modern Law Review* 80 (n 3); Giuseppe Pellegrini, 'Biotechnologies and Communication: Participation for Democratic Processes' in Alfons Bora and Heiko Hausendorf (eds), *Democratic Transgressions of Law: Governing technology through public participation* (Boston: Brill 2010); Elizabeth Fisher, Bettina Lange and Eloise Scotford, *Environmental Law: Text, Cases, And Materials* (Oxford: Oxford University Press 2013).

why the thesis focuses on the role of NGOs and where the gap is, this section will establish an institutional framework of potential actors involved in GE. There are various kinds of actors related to GE: international treaty-based institutions, inter-governmental organizations (IGOs), NGOs, the academic community and the media.

In terms of treaty-based institutions, in general, they serve as the governing bodies in a top-down governance regime based on treaty systems. In particular, the relevant Conference of the Parties (COP) typically plays a core role in implementing and supervising the development of treaties. There are several treaties relevant to GE activities, such as the Convention on Biological Diversity (CBD),²² and the United Nations Convention on the Law of the Sea (UNCLOS)²³. The latter explicitly addresses ocean fertilization and can be potentially applied to general GE as well.²⁴ The COP of the former has been discussed in the existing literature in order to test out its applicability for research governance of GE.²⁵ Other relevant treaties are applicable to some aspects of GE techniques.²⁶ In relation to inter-governmental organisations (IGOs), the main focus and contribution to GE governance by a number of IGOs can be summarised as in Table 1.1 in the appendix of this chapter. With regard to NGOs, they can, for present purposes, be

²² Convention on Biological Diversity, June 5, 1992, Rio de Janeiro, 1760 UNTS. 79, 31 ILM 818 (1992), *entered into force on* Dec.29, 1993. The main objectives of the CBD are conserving biological diversity and making use of the components of biological diversity in a sustainable manner. It addresses not only ocean fertilization explicitly but also general geoengineering although it is not binding.

²³ United Nations Convention on the Law of the Sea, Dec 10 1982, Jamaica, 1833 UNTS 3/[1994] ATS 31 / 21 ILM 1261 (1982), *entered into force on* Nov 16 1994.

²⁴ Ocean fertilization is a form of GE technology, which aims to increase the rate of absorbing carbon dioxide by manipulating the ocean carbon cycle through adding nutrients into oceans. See Shepherd and others (n 11). There can be implications of governance regimes on ocean fertilisation for other GE activities.

²⁵ Chiara Armeni and Catherine Redgwell, 'International Legal and Regulatory Issues of Climate Geoengineering Governance: Rethinking the Approach' (2015) <<http://www.geoengineering-governance-research.org/perch/resources/workingpaper21armeniredgwelltheinternationalcontextrevised.pdf>> accessed 09 March 2015.

²⁶ I.e. the London Convention and London Protocol on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, United Nations Framework Convention on Climate Change and the Kyoto Protocol (UNFCCC and KP), the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol, ENMOD Convention, Space law, the Antarctic Treaty system, the OSPAR Convention and the LRTAP Convention.

classified into three types according to the extent that they are involved with GE as a policy area. The first type consists of NGOs which maintain a general interest in climate issues, such as the Red Cross and Oxfam. The second encompasses environmental campaign groups working within the environmental protection area but not specifically on GE, such as Greenpeace and Friends of Earth. The last type is made up of campaign groups who work specifically on GE, such as the ETC Group. The relationship of the three types of NGOs can be found in Figure 1.1 in the appendix. It is evident that the missions of the NGOs range from those very specifically focused on GE to those more generally interested in climate. The categories of NGOs based on their objectives can be found in Table 1.2 in the appendix of this chapter. However, as we shall see, few NGOs have been involved in GE discussion or policymaking activities, and it is worth exploring the reasons behind their limited participation given the active involvement of NGOs in campaigning against other controversial technologies, such as GMOs.

When it comes to national authorities, they play a significant role in the governance of GE. There are a few examples where GE has been addressed at Parliamentary level, such as the UK, the US and Germany.²⁷ Taking the UK as an example, GE ‘has been addressed twice by the HC Science and Technology Committee, which urged the Government to provide a clear view on GE approaches, and led the debate on ethical issues of GE’.²⁸ With regard to the scientific community, this is made up of a network of scientists, within which various

²⁷ Chiara Armeni and Catherine Redgwell, ‘Geoengineering Under National Law: A Case Study of the United Kingdom’ (2015)

<<http://geoengineering-governance-research.org/perch/resources/workingpaper23armeniredgwelltheuk.pdf>> accessed 09 March 2015.

²⁸ Catherine Redgwell and Chiara Armeni, ‘Geoengineering Under National Law: A Case Study of Germany’ (2015) <<http://www.geoengineering-governance-research.org/perch/resources/workingpaper24armeniredgwellgermany-1.pdf>> accessed 09 March 2015.

kinds of sub-communities focus on specific scientific topics. Scientific experts can play a very significant role in promoting a bottom-up governance approach to GE.²⁹ There are two types of actors making up the scientific community, which are displayed in Table 1.4 in the appendix: the first type includes individual research groups in universities, short-lived national projects and international short-lived projects. The second type includes national scholarly organizations, such as the Royal Society, and intergovernmental scholarly organizations, such as the Intergovernmental Panel on Climate Change (IPCC). The scientific community plays an important role in GE activities, especially research activities. For example, in the UK, research councils facilitate the development of research governance on GE.³⁰ In addition, universities, laboratory and research institutes in the UK make an effort to provide academic research findings and advice to government to improve the decision-making on GE. The stakeholders involved in GE are displayed in Table 1.3 in the appendix. A gap can then be identified in the participation of NGOs in the UK and China. Therefore, it is useful to investigate how NGOs are currently involved, and explore the causes of this situation.

However, little attention has been paid to NGO participation in GE in the existing literature; more discussion among scholars is therefore required. According to Liu, the trend of public debate concerning GE depends mainly on the perceptions of NGOs, which can be considered as the bridge among the general public, the scientific community and policy makers.³¹ In addition, Somerville holds the similar view that NGOs have the ability and

²⁹ Ibid. Text to Table 1.4 in the appendix of chapter 1.

³⁰ For example, a report on governing SRM research was made by SRMGI; Pyle and others (n 13).

³¹ Mirko Hohmann and Joel Sandhu, 'Geoengineering Governance - Global Governance Futures 2025 Interviews Rongkun Liu' (2015)

opportunity to shape the conversation on GE and inform the general public about it just as, in the past, NGOs have shaped conversations on other risk technologies such as GMOs and nuclear weapons.³² NGOs play a significant role in affecting the public debate in general and provide useful suggestions and guidelines to policymaking, such as in the governance of GMOs.³³ However, according to Liu, few NGOs in the UK notice the importance of GE or provide perceptions on it.³⁴ Although there are some NGOs publishing reports on GE (e.g. the UK-based Solar Radiation Management Governance Initiative³⁵) or that are strongly opposed to GE activity (e.g. Greenpeace UK), most NGOs in the UK prefer to keep silent about it. Some NGOs broadly related to environmental justice are reluctant to talk about GE mainly because they fear that it will ‘validate the mad science and distract the civil society, governments and business communities from focusing on’ less risky measures, such as mitigation and adaptation.³⁶ In addition, even just talking about GE can be considered to risk legitimizing the technology to some extent.³⁷ Although NGOs have started to be considered by some academics as significant in forming part of the governance framework in GE,³⁸ more discussion emphasising the role of NGOs is needed in the literature.

<<http://www.globalpolicyjournal.com/blog/09/01/2015/geoengineering-governance-%E2%80%93-global-governance-futures-2025-interviews-rongkun-liu>> accessed 9 January 2015.

³² Rachael Somerville, ‘Measuring NGO Response To NAS Climate Intervention Reports’ (2015) <<http://ceassessment.org/measuring-ngo-response-to-nas-climate-intervention-reports-rachael-somerville/>> accessed 26 February 2015.

³³ Ibid.

³⁴ Hohmann and Sandhu (n 31).

³⁵ Pyle and others (n 13).

³⁶ Tina Johnson, ‘Geoengineering Is Not Environmental Justice...So Why Are Environmental Activists Not Talking About It?’ (2014)

<<http://powershift.org/blogs/geoengineering-not-environmental-justiceso-why-are-environmental-activists-not-talking-about-i>> accessed 15 February 2014.

³⁷ .Duncan Green, ‘Why NGOs label technology as nasty or nice’ (2013)

<<https://oxfamblogs.org/fp2p/why-ngos-label-technology-as-nasty-or-nice/>> accessed 19 August 2013.

³⁸ Somerville (n 32).

1.1.2.4 Why China and the UK?

In the thesis, China and the UK will be considered as two typical cases for discussing NGO participation in GE. The reasons for including the two countries for comparison will be addressed across three aspects: contrasting social conditions in the UK and China, methodology considerations, and justifying comparison with reference to the relevant literature on comparative politics.

The first reason to include the UK and China for comparison is related to their different social conditions, such as legal culture, the situation of public participation, and their interests in climate interventions. In terms of different legal culture, as is well known, China and UK belong to two different judicial systems: civil law and common law. The Chinese judicial system is based on civil law with its own characteristics, while the UK is based on common law. Based on two different judicial systems, the legal culture of them is different, which may lead to divergence in GE governance. There are also significant differences in China and the UK in terms of public participation in environmental matters and other issues of public concern. As the political organization in China is ‘socialist with Chinese characteristics’, public participation in governance is developing in its own way.³⁹ Normally, in China, it is the scientists in the relevant area who set the ethical guidelines for research activities through scientific research institutes. Scientists are reluctant to call for public debate on emerging technology research as they have little faith in the knowledge of the general public. Chinese scientists have also questioned the expertise of ethical

³⁹ Margaret Sleeboom-Faulkner and Seyoung Hwang, ‘Governance Of Stem Cell Research: Public Participation And Decision-Making In China, Japan, South Korea And Taiwan’ (2012) 42 *Social Studies of Science* 684.

institutions⁴⁰ and have little faith in the dialogue between scientists, regulators, ethicists and the public.⁴¹ To sum up, in China, research governance is mainly led by scientists and government with little public participation. In the UK in contrast, various stakeholders such as governments, scientists, policy makers and the general public, are involved in research governance. For example, the general public has typically been involved in health research in the UK for a number of years through ‘identifying and prioritizing research topics, being part of research advisory groups and steering groups, undertaking research projects and communicating research findings’.⁴² This type of approach could provide a model for public involvement in GE research governance. It can be concluded that the extent of public participation in research governance structures in the UK is much higher than that in China.⁴³

Despite the contrasts mentioned above, both China and the UK have showed a great interest in climate intervention technologies. There are plenty of climate interventions conducted in China, such as land creation in some mountainside cities to change the climate on a relatively small scale, and cloud seeding to make artificial rainfall.⁴⁴ It seems that GE is very appealing to China. This sounds reasonable to some extent based on the current situation facing China regarding climate change – namely, that China is already the largest absolute GHG emitter worldwide, followed by the US and the EU, and mitigation seems to be not effective or fast enough to cool down the global temperatures. The UK is

⁴⁰ A typical example of ethical institutions is the Committee on Ethical Issues in Universities.

⁴¹ Sleeboom-Faulkner and Hwang (n 39).

⁴² INVOLVE, ‘Patient and Public Involvement in Research and Research Ethics Committee Review’ (*Involve*, 2009) <www.invo.org.uk> accessed Jan 2009.

⁴³ Xijin Jia, ‘The Development and Institutional Environment of Non-Governmental Think Tanks in China’ in Yuwen Li (ed), *NGOs in China and Europe: Comparisons and Contrasts* (Burlington: Ashgate 2011).

⁴⁴ Yihui Ding, Guoyu Ren and Guangyu Shi, *China’s National Assessment Report on Climate Change: Climate Change in China and the Future Trend* (Advances in Climate Change Research, 3, 1-5, 2007).

also a large GHG emitter in the world and has experience in conducting climate interventions.⁴⁵ In addition, the UK and China have cooperated on climate change in various ways such as working on slowing down the carbon growth.⁴⁶

The social conditions discussed above imply that the UK and China are two contrasting cases with many differences. From a methodological perspective, the thesis adopts a comparative design seeking to compare two contrasting cases to explore explanations for differences and identify similarities applicable in both cases.⁴⁷ This will enable us to gain a deeper understanding of NGO participation within different national contexts. The thesis aims to distinguish the characteristics of the role of NGOs in the UK and China to act as a springboard for theoretical reflections about contrasting findings. The details of the reasons for adopting a comparative design will be introduced in chapter 3. In addition, this comparative design carries more weight when comparing a socialist country (China) with a capitalist country (the UK) in comparative politics. The comparison between the UK and China can be justified in the literature on comparative politics on two levels: in a broad sense, according to contentious politics theory, it is feasible to analyse social movements in capitalist and socialist countries in the same frame;⁴⁸ in a narrow sense, political opportunity theory in the social movements literature can and has been applied to both

⁴⁵ For example, James Hodgskiss, 'Top British Climate Scientist Acknowledges Ongoing Geoengineering Interventions' (2015) <<http://www.globalresearch.ca/top-british-climate-scientist-acknowledges-ongoing-geoengineering-interventions/5485739>> accessed 17 October 2015.

⁴⁶ Department for International Development and others, *2010 to 2015 Government Policy: Climate Change International Action* (2015).

⁴⁷ Alan Bryman, *Social Research Methods* (5th edn, Oxford: Oxford University Press 2016).

⁴⁸ See previous studies, for example, Yunping Xie, 'From Social Movements to Contentious Politics: A Comparative Critical Literature Review Across the US and China' (Master's Thesis, Department of Sociology, Indiana University 2013).

capitalist and socialist countries, and has been proved to workable.⁴⁹ One thing worth mentioning is that NGOs are an essential component of social movements.⁵⁰ Campaigns and other efforts by NGOs to oppose GE can be considered as a sign of the emergence of an anti-GE social movement. Based on the core argument that ‘it is political opportunity structure which is responsible for the emergence and effects of social movements in different societies’,⁵¹ my research aims to examine this and then add to it that not only political opportunity structure, but also other variables can help to explain the involvement of NGOs in social movements in different societies. The details of justification on comparison between the UK and China in comparative politics will be discussed in chapter 8.

In conclusion, this section has introduced why I became interested in exploring the causes of NGO participation in GE and why this question matters. It offers explanations on research motivation in several aspects including why GE creates governance problems, what are the gaps in the literature, why the thesis focuses on the role of NGOs, and why it emphasises a comparison between the UK and China. After answering the question of ‘why’, the following section will provide a summary of the thesis to introduce what I did concerning the research and what the conclusions or findings are.

⁴⁹ Lei Xie and Hein-Anton Van Der Heijden, ‘Environmental Movements and Political Opportunities: The Case of China’ (2010) 9 *Social Movements Studies* 51.

⁵⁰ Darren Halpin, *Perspectives on Democratic Practice: Groups, Representation and Democracy* (Manchester: Manchester University Press 2010).

⁵¹ Xie and Van Der Heijden (n 49).

1.2 Research Project

This section deals with the question of ‘what’ to provide an expanded summary of the thesis. The purpose of the thesis is to explore the causes of NGO participation with GE as a policy area in the UK and China, notably understanding why NGOs in the two countries become involved in GE or not. Therefore the main research question of the thesis is ‘why do NGOs become involved or not in GE as a policy area?’ In order to establish an answer to this, the question is then broken down into the following three sub-questions. To what extent have NGOs engaged with GE in the UK and China? Why do NGOs in the UK and China become involved or not in GE as a policy area? Can NGOs be considered to make strategic choices on their involvement or non-involvement in GE as a policy area?

The main research method employed in this research is the qualitative interview. It aims to answer the research question why NGOs become involved or not in both countries. Through in-depth qualitative interview with NGOs in the UK and China, empirical data were collected on respondents’ opinions of GE, whether their organisations had engaged with GE, and why they participated or not in GE as a policy area. Empirical data with regard to whether NGOs have engaged with GE provides evidence for exploring answers to the first question in a descriptive aspect. Detailed and in-depth results in relation to the reason why they become involved or not, which is the key part of the research, provide sufficient evidence to solve the second question. After acquiring the data, independent variables were established from the literature on social movements and other, legally related fields, such as governance. The variables identified in the literature can be

summarised as political opportunity, strategy, emotion and resources.⁵² These variables were used to analyse the data in the UK and China respectively seeking to understand NGO participation with GE in the two countries. In addition, based on analysis of data, the question concerning whether NGOs can be considered to make strategic choices on their involvement or non-involvement with GE was then addressed.

From the data, a conclusion was drawn that, in the context of China, only the international NGO makes strategic choices not to engage in GE while the non-involvement of Chinese domestic NGOs is more an unintentional consequence rather than a strategic one. In the UK, empirical results have been examined with variables to form a conclusion that involvement and non-involvement of NGOs can be considered as intentional and deliberate outcomes, and hence strategic choices. Finally, NGO participation with GE in the UK and China were compared by employing the literature on comparative politics. Based on the comparison, a finding was identified that not only political opportunity but also threat, efficiency and competition, goals, funding and time, at least in the context of GE, can be useful in understanding NGO participation in GE in both capitalist and socialist countries such as the UK and China.

In terms of the original contribution of the thesis, it mainly contributes to the existing literature by way of adding a consideration of why certain groups participate or not in particular areas of environmental law and policy. The contribution of the thesis is three

⁵² John McCarthy and Mayer Zald, 'Resource Mobilization and Social Movements: A Partial Theory' (1977) 82 *American Journal of Sociology* 1212; Christopher Rootes, 'Political Opportunity Structures, Promise, Problems and Prospects' (1998) 10 *La Lettre de la Maison Française* 75; James Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (Chicago: University of Chicago Press 2006); Anne Binderkrantz, 'Different Groups, Different Strategies: How Interest Groups Pursue Their Political Ambitions' (2008) 31 *Scandinavian political studies* 173.

fold. It adds to the literature on social movements and public policy by concentrating on whether NGOs make strategic choices on becoming involved in GE or not and why. It also contributes to the potential future governance framework of GE by understanding what may lead NGOs, as a potentially critical part of this framework, to become involved. Aside from this, the thesis makes a contribution in an empirical way by mapping the picture of NGO involvement with GE in the UK and China.

1.3 Research Structure

This section includes a summary of chapters, notably an outline of the thesis, to provide a general picture of how the thesis is structured. In total, the thesis comprises nine chapters beyond this initial introductory chapter 1.

Chapter 2 addresses the literature review of the thesis. It first focuses on a literature review on GE in order to provide a background as well as to identify a gap in NGO participation there. This then links to the literature on NGOs and public participation, which is considered as the main literature on which the thesis is based. After reviewing the literature on public participation from within law and political science, a gap has been identified that although many issues have been discussed around it, little attention has been paid to the question why groups participate or not. This gap, namely the causes of NGO participation, is the focus of the thesis.

Chapter 3 deals with the methodology of the thesis. It includes the research strategy,

research design, and research methods that the thesis adopts. In terms of research strategy, the thesis employs a qualitative research strategy in general. This is because it aims to understand why NGOs in the UK and China become involved or not in GE, which emphasises understanding and explanation. The main research method employed in this research is the qualitative interview. Through in-depth qualitative interviews, empirical data concerning respondents' opinions of GE, whether their organisations have engaged with GE, and why they participate or not in GE as a policy area were collected. The research adopts a comparative design that embodies the logic of comparison. It is a comparative design because, through the identical method of investigating the reasons for NGOs' involvement or non-involvement with GE in the UK and China, it seeks to compare the two contrasting cases to explore explanations for differences and identify similarities applicable in both countries.

Chapter 4 presents the empirical results of qualitative interviews conducted in the UK and China. Based on the interviews in China, it was identified that none of the environmental NGOs (ENGOS) has been involved with GE. The results from China were presented and classified into five categories: government supported NGOs; business supported NGOs; large grassroots NGOs; small grassroots NGOs; and international NGOs. In relation to the UK, the results show that some ENGOS have engaged with GE while others have not. Therefore, the UK results will be presented in two parts, namely involved and non-involved NGOs.

Chapter 5 focuses on generating variables for analysing the data from the literature on

social movements, interest groups and governance. As a result, four categories of variables were generated: political opportunity, strategy, emotion, and resources.

Chapter 6 discusses the empirical results in China with a theoretical basis of variables identified in chapter 5. It seeks to examine the variables with empirical data in China in order to develop a theory on NGOs' involvement in GE. This chapter achieves a finding on which variables contribute to non-involvement of NGOs in China and draws a conclusion that the international NGO makes strategic choices to not to engage in GE while the non-involvement of Chinese NGOs is more an unintentional consequence than a strategic one.

Chapter 7 aims to analyse the empirical results of UK interviews and discuss them with the variables generated in chapter 5. In this chapter, empirical results in the UK have been examined with variables to form a conclusion on which of them contribute to involvement and non-involvement of NGOs in the UK. In addition, involvement and non-involvement of NGOs in the UK can be considered as intentional and deliberate outcomes. This is different compared to the conclusion on Chinese NGOs in chapter 6 in that only INGOs in China make strategic decisions on non-involvement.

Chapter 8 addresses a comparative analysis of the empirical data in the UK and China. It aims to explore and identify more profound findings contributing to the existing literature through comparison. Transnational comparison can contribute to social movements theory by generalizing theories to other societies. Social movements theory was established in the

US and then spread to Europe, which suggests that the main body of studies in this area have been limited to Western countries or developed countries. Transnational comparison including a developing country like China will help to develop the theory in terms of its application in developing socialist countries.

Chapter 9, the concluding chapter, includes a summary of what has been discussed in the thesis, how the research question was answered, and what the key difficulties were during the research. In addition, it concludes on the remaining unsolved issues and what research could usefully be done in the future.

Appendix of Chapter 1

Table 1.1: Intergovernmental organisations contributed or potentially contributed to GE

Intergovernmental Organisations	Main Focus of work	Contributions or potential contributions to GE governance
Intergovernmental Oceanographic Commission	Ocean Fertilization	Produced a report on ocean fertilization: A scientific summary for policy makers. ⁵³
United Nations	Climate change	Presidential Statement

⁵³ Doug Wallace and others, *Ocean Fertilisation: A Scientific Summary for Policy Makers* (IOC/UNESCO, 2010).

Security Council		that acknowledged security implications on climate change; possible roles for UNSC in addressing climate change. ⁵⁴
World Meteorological Organization	Meteorology, SRM	Weather Modification Statement and Guidelines
International Maritime Organisation	Safety and security of shipping and the prevention of marine pollution	Can adapt its mandate to regulate marine-based GE.
International Civil Aviation Organisation	Developing international standards of civil aviation regulations	Can be related to aircraft-based GE.
World Trade Organisation	Trade activities in the world	Dealing with disputes arising from countries seeking to impose restrictions on trade of GE goods.
World Intellectual Property Organisation	Intellectual property protection issues	Deals with the intellectual property issues involved in GE research activities.

⁵⁴ Dane Warren, 'Possible Roles for the U.N. Security Council in Addressing Climate Change' (*Sabin Center For Climate Change Law*, 2015) <https://web.law.columbia.edu/sites/default/files/microsites/climate-change/warren_-_cc_and_international_peace_and_security_-_roles_for_the_un_security_council.pdf> accessed July 2015.

Table 1.2: Categories of UK NGOs (based on online search of their websites)

NGOs with no online published views on GE	Client Earth; EIA; Global Witness; Practical Action; Sense about Science; CRF; Oxfam; the Red Cross
NGOs mentioning GE among other issues	Greenpeace UK
	Oppose GE: ETC Group
	Priority on mitigation, moratorium on GE: Friends of the Earth
NGOs with official views specifically on GE	Focusing on governance issues and advocating research into GE: SRMGI; ⁵⁵ EDF; ⁵⁶ TWAS; ⁵⁷ CDKN ⁵⁸

Table 1.3: An overview of the actors involved in the research governance of geoengineering

Actors involved in GE	Top-down or bottom-up governance approach?	Potential involvement or discussion in research governance of GE	Boundaries of role
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⁵⁵ Solar Radiation Management Governance Initiative.

⁵⁶ Environmental Defence Fund.

⁵⁷ The World Academy of Sciences.

⁵⁸ Climate and Development Knowledge Network.

Treaty-based institutions	Top-down	Some existing treaty-based institutions have been discussed to be applied to GE while there is no dedicated institution on GE.	Providing potentially applicable binding or non-binding treaties regarding general or specific GE. ⁵⁹
IGOs	Top-down	Part participation.	Several IGOs have published reports on GE to draw the attention of academics and the wider public and/or to provide comprehensive information and guidelines.
National Authorities	Top-down	Wide participation in some Western countries such as the UK and the US and less participation in other less developed countries.	A few national authorities have discussed GE on a parliamentary level to discuss a national institutional framework on GE. Many other developing countries or

⁵⁹ Some treaties may be applicable to specific GE methods, e.g. the CBD and the UNCLOS could be used to deal with ocean fertilization. Other treaties may be applied to general issues on GE, such as the UNFCCC.

			regions have put GE on their agenda. ⁶⁰
NGOs	Bottom-up	Little participation.	In the UK, only a few NGOs have made their opinions known or conducted research on GE. Most of them have not discussed GE. In China, no NGOs have been involved in GE.
Educational and research establishments	Bottom-up	Actively involved in the research governance of GE.	In the UK, most research has been carried out in universities or funded by research councils. They provide literature and empirical research results on GE from both a scientific and social science perspective.

⁶⁰ Some developing countries have commenced the conduct research on geoenvironmental engineering instead of translating and disseminating research findings on GE from developed countries such as the US and the UK. For example, China has launched a national research project specifically on GE named 'The Research on the Theory and Impacts of Geoenvironmental Engineering 2015'.

Members of scientific community	Bottom-up	As part of research establishments, the scientific community in the UK is also actively involved in research governance of GE, especially climate scientists.	Members of the scientific community can generate bottom-up governance through norms, codes of conduct and peer review.
General public and private actors	Bottom-up	Little participation in general.	Public engagement has already received attention from the academic community.

Figure 1.1: Three types of NGOs involved with GE policy

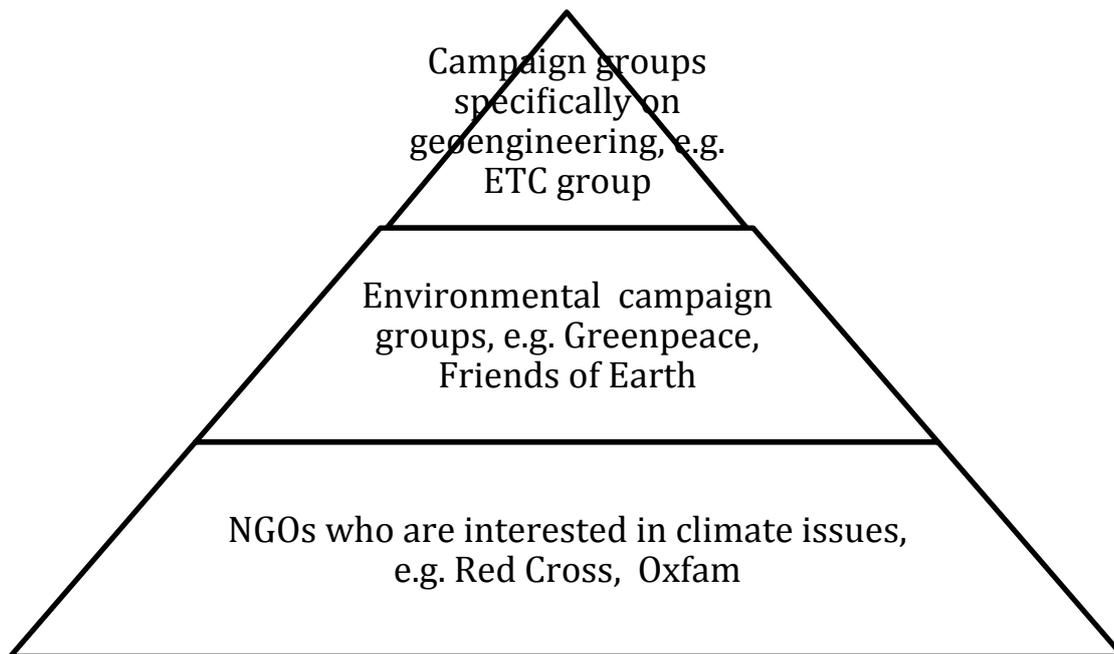


Table 1.4: The framework of the scientific community in the UK⁶¹

Short-lived Research Projects	Specific goals for each project	Individual research groups in universities
		National short-lived projects (funded projects), such as SPICE and IAGP
		International short-lived projects (goal-oriented, unfunded projects based on voluntary contributions), such as GeoMIP
Long-term Scholarly Organisations	Generally aiming at promotion of science	National organisations with broad goals (government funded), such as Royal Society
		International organisations with broad goals based on voluntary contributions (government funded), such as IPCC and WCRP

⁶¹ SPICE – Stratospheric Particle Injection for Climate Engineering; IAGP – the Integrated Assessment of Geoengineering Proposals; WCRP – World Climate Research Programme; Geo-MIP – The Geoengineering Model Inter-comparison Project.

Chapter 2 Literature Review

This chapter first focuses on a literature review on GE in order to provide a background, as well as to identify a gap in NGO participation in the GE policy area. The chapter then links through to the literature on NGOs and public participation, which is considered as the main literature on which the thesis is based. After reviewing the literature on public participation, a gap has been identified in that, although many issues are discussed around it, little attention has been paid to the question of why people or groups participate or not in GE as a policy area. This gap, namely the causes of NGO participation, is the focus of this thesis. This literature review comprises of three sections: section 2.1 concentrates on broadly reviewing the literature on GE; section 2.2 addresses the literature on the role of NGOs in the UK and China; and section 2.3 focuses on reviewing the literature surrounding public participation.

2.1 A Literature Review on GE

The literature on GE can be categorised into two parts: ethical and political issues surrounding GE, and legal issues. First, I will summarise and describe the ethical issues that have been widely discussed in much of the existing literature. Second, I will outline the key legal issues that are focussed on in the literature. These legal issues include, for example, risk compensation, governance approaches, the role of the precautionary principle, and the institutional framework of various stakeholders involved in GE.

2.1.1 The Ethics of GE

Ethical concern surrounding GE is a consistent theme in the existing literature. Generally, there are two main aspects of ethical concerns addressed and discussed amongst scholars. The first main aspect of concern refers to the situation where governments may pay less attention to mitigation and adaptation efforts due to the development of GE. This implies that deployment of GE may reduce the pressure to mitigate and offer an excuse for governments not to meet their emission targets. For example, Reynolds states that governments may prefer to conduct GE rather than mitigate as GE techniques, such as SRM, are invariably considered much cheaper and effective than mitigation.⁶² Rafael similarly indicates that there is a chance that governments will make less effort to conduct mitigation by taking advantage of GE techniques.⁶³ In fact, in an extreme situation, GE could not only reduce the pressure on governments concerning mitigation, but may even be employed as an alternative to mitigation entirely. The other main concern relates to a justificatory problem. According to Gardiner, this refers to what conditions GE can be justified in the future.⁶⁴ In terms of justification, various questions concerning GE have been raised. For example, ‘is it ethical to pollute the atmosphere on purpose, even for a good reason?’⁶⁵ And ‘in relation to scientific purposes, how large a GE-related emission would be acceptable and justifiable?’⁶⁶ This concern deals with field experimentation and

⁶² Jesse Reynolds, ‘A Critical Examination of the Climate Engineering Moral Hazard and Risk Compensation Concern’ (European Consortium for Political Research General Conference, Glasgow, September 5, 2014).

⁶³ Leal-Arcas Rafael and Andrew Filis-Yelaghotis, ‘Geoengineering a Future for Humankind: Some Technical and Ethical Considerations’ [2012] CCLR 128.

⁶⁴ Stephen Gardiner, ‘Geoengineering And Moral Schizophrenia: What Is The Question?’ in William Burns and Andrew Strauss (eds), *Climate Change Geoengineering* (New York: Cambridge University Press 2013).

⁶⁵ Alan Robock, ‘Geoengineering Research’ (2011) 27 *Science and Technology* 5.

⁶⁶ *Ibid.*

posits that only lab-based or computer-based research can be considered completely safe.⁶⁷

However, in contrast, some consider GE as a lesser evil than climate change. In this regard,

Gardiner considers the question 'whether evils ought sometimes to be chosen'.⁶⁸

These questions concerning justification typically touch on a concern that GE may have equally adverse impacts on the environment to climate change. Given this potential, can GE be justified due to its potentially lesser harmful impact or should it not be chosen at all because of potential harm?

Apart from these two main aspects of concern mentioned above, there are other considerations which are discussed in the literature. For example, a concern regarding GE technology is that even just discussing and exploring GE technology may produce a risk of 'path dependence', which means that, with influence exerted on decision-making by experts or commercial stakeholders, exploring GE may inevitably lead to deployment.⁶⁹ Some commentators have expressed the view that developing GE technology may lead to a situation of 'socio-technical lock-in' – in other words that we end up relying heavily on the technology which we can then not shut down.⁷⁰ Others have drawn attention to the fact that developing GE technology may mask or cover up the climate crisis, as well as the social and political reasons behind it, and therefore lead to a worse outcome.⁷¹ Fears have also been expressed in relation to unilateralism. Once GE is deployed by one country, it

⁶⁷ Rafael and Filis-Yelaghotis (n 63).

⁶⁸ Stephen Gardiner, 'Is "Arming the Future" with Geoenengineering Really the Lesser Evil?' in Stephen Gardiner and others (eds), *Climate Ethics* (New York: Oxford University Press 2010).

⁶⁹ Rafael and Filis-Yelaghotis (n 63).

⁷⁰ Cairns (n 14).

⁷¹ Rafael and Filis-Yelaghotis (n 63).

may have transboundary impacts that could cause international political conflicts.

2.1.2 Legal issues around GE

After briefly summarising the main ethical and political concerns around GE, this section addresses the relevant literature on legal issues. In terms of GE governance, there are two areas typically addressed in relevant literature: GE governance and human rights, and potential governance regimes and approaches on GE. The former has drawn attention recently within the scope of the relationship between human rights and climate change. The literature proposes different normative frameworks concerning climate change including, for example, a cost-benefit analysis approach such as the Stern Review,⁷² and a security perspective such as the statement on Climate Change and International Security,⁷³. Both of these frameworks do not pay sufficient attention to human rights.⁷⁴ Therefore, a strand of literature has focused on the relationship between climate change and human rights. The relevant literature has discussed several main issues, including justice claims about climate change in relation to human rights concerns,⁷⁵ and how climate change jeopardizes certain human rights.⁷⁶ These issues highlight the rights-based approach. The majority of the literature on human rights and climate change concerns this rights-based approach to mitigate,⁷⁷ and ‘the potential and problems with’ this approach.⁷⁸ Within the

⁷² Nicholas Stern, *The Economics of Climate Change: the Stern Review* (Cambridge University Press, 2007).

⁷³ This online report can be found at

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/reports/99387.pdf.

⁷⁴ Simon Caney, ‘Climate Change, Human Rights and Moral Thresholds’ in Stephen Humphreys and Mary Robinson (eds), *Human Rights and Climate Change* (Cambridge: Cambridge University Press 2009).

⁷⁵ Stephen Humphreys, ‘Competing Claims: Human Rights And Climate Harms’ in Stephen Humphreys and Mary Robinson (eds), *Human Rights and Climate Change* (Cambridge: Cambridge University Press 2009).

⁷⁶ Paul Hunt and Rajat Khosla, ‘Climate Change and the Right to the Highest Attainable Standard of Health’ in Stephen Humphreys and Mary Robinson (eds), *Human Rights and Climate Change* (Cambridge: Cambridge University Press 2009).

⁷⁷ Jon Barnett, ‘Human Rights and Vulnerability to Climate Change’ in Stephen Humphreys and Mary Robinson

scope of climate change and human rights, scholars have expanded the focus to the impacts of ‘response measures to climate change’ on human rights, namely geoengineering technology.⁷⁹ Burns discussed GE and human rights in his paper. His analysis surrounded the topics of the ‘potential threats of GE to human rights’, and ‘how to operationalize human rights protection concerning GE under the Paris Agreement’.⁸⁰ He also suggested a ‘human rights-based approach’ and provided details of implementing this approach in the context of GE.⁸¹ Adelman had similar concerns about the impacts of deploying GE on human rights, including the right to food, the right to water, the right to health, and the right to life, and then argued that GE jeopardized ‘human rights already under threat from climate change’.⁸²

Another theme that runs throughout the literature relates to potential models or types of governance regimes or approaches towards GE. At an international level, these approaches comprise of binding approaches, such as international agreements or treaties, and non-binding approaches, such as international customary law regarding the precautionary principle. In terms of potential governance regimes, most scholars emphasise the importance of international cooperation in regulating GE activities. For example, Virgoe proposes three potential models for governance: through the United Nations, by a State unilaterally, and through a consortium of states. Virgoe concludes that collaboration

(eds), *Human Rights and Climate Change* (Cambridge: Cambridge University Press 2009).

⁷⁸ Dinah Shelton, ‘Equitable Utilization Of The Atmosphere: A Rights-Based Approach To Climate Change’ in Stephen Humphreys and Mary Robinson (eds), *Human Rights and Climate Change* (Cambridge: Cambridge University Press 2009).

⁷⁹ William Burns, *The Paris Agreement and Climate Geoengineering Governance: The Need for A Human Rights-Based Component* (CIGI Papers No 111, Centre for International Governance Innovation, 2016).

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Sam Adelman, ‘Epistemologies of Mastery’ in Anna Grear and Louis Kotzé (eds), *Research Handbook on Human Rights and the Environment* (Cheltenham: Edward Elgar Publishing 2015).

amongst states is considered to be the most appropriate approach.⁸³ Similarly, Long has considered the various existing international institutional frameworks that could potentially apply to GE activities, such as UNFCCC, and found that none of the existing international institutions can make legitimate decisions on GE related activities.⁸⁴ Therefore, according to Long, governments are only capable of dealing with GE interventions, such as setting goals and evaluating outcomes of GE, through international cooperation.⁸⁵

The theme of binding governance approaches in the literature considers whether one can and should apply existing international agreements and treaties to regulate GE or whether a new and dedicated international agreement is practical and necessary. When examining whether a brand new international agreement is needed, most scholars tend to agree that creating a new agreement is not necessary. The majority of the academic community agrees that existing treaties and institutions could potentially cover governance on GE at this stage, such as the CBD and the UNFCCC.⁸⁶ For example, according to Kuokkanen and Yanmineva, creating a new and dedicated international agreements does not seem to be feasible because of difficulties in engendering agreement by states on the principles, contents and appropriate negotiating forum for a treaty.⁸⁷ Redgwell has reached the similar conclusion that a single and dedicated treaty on all GE activities is unlikely and undesirable.⁸⁸ It is unlikely because the motivation for law makers is low and it is

⁸³ John Virgoe, 'International Governance of A Possible Geoengineering Intervention to Combat Climate Change' (2009) 95 *Climatic Change* 103.

⁸⁴ Jane C. S. Long, 'A Prognosis, and Perhaps a Plan, for Geoengineering Governance' CCLR 177.

⁸⁵ *Ibid.*

⁸⁶ Shepherd and others (n 11); Daniel Bodansky, 'The Who, What, and Wherefore of Geoengineering Governance' (2013) 121 *Climate Change* 539; Anders Hansson, Steve Rayner and Victoria Wibeck, 'Climate Engineering' in Karin Bäckstrand and Eva Lövbrand (eds), *Research Handbook on Climate Governance* (Cheltenham: Edward Elgar Publishing 2015).

⁸⁷ Kuokkanen and Yanmineva (n 20).

⁸⁸ Redgwell (n 20).

undesirable because one or more of the existing legal frameworks in international law will work, which makes it unnecessary.⁸⁹ Along the same lines, Parker suggests that governance methods can be conducted without a dedicated international agreement on GE.⁹⁰ Victor also believes that establishing a new and dedicated regime focussed on GE will not have any meaningful outcomes although governance will be required.⁹¹ Since most scholars do not consider a dedicated international agreement as a feasible or desirable option, they typically prefer to apply existing governance regimes to regulate GE activities. For example, Kuokkanen and Yanmoneva suggest that the most suitable approach would be to insist on using existing governance regimes, such as the LC/LP, the CBD and UNFCCC,⁹² in a coordinated manner.⁹³ Long believes that governments ‘should plan to use collaboration on natural disasters as a vehicle for developing the institutional capacity to manage the global climate’.⁹⁴

The non-binding governance approaches discussed in the literature include regulating GE activities through international norms and international customary law. Some scholars emphasise the need for international binding norms to cover GE field trials and deployment. For example, Victor believes that field trials and deployment of GE will require norms to be put in place very soon.⁹⁵ The reason why he prefers norms over standard governance instruments, such as treaties, is that treaties are not capable of constraining GE actors effectively as it is likely that players will avoid international

⁸⁹ Ibid.

⁹⁰ Andy Parker, ‘Governing Solar Geoengineering Research As It Leaves The Laboratory’ (2014) 372 *Philosophical Transactions of the Royal Society*.

⁹¹ Victor (n 20).

⁹² See n 26.

⁹³ Kuokkanen and Yanmineva (n 20).

⁹⁴ Long (n 84).

⁹⁵ Victor (n 20).

commitments and act unilaterally.⁹⁶ Instead, norms, especially efforts to establish new binding norms from the bottom-up backed by research and assessment, will be more effective.⁹⁷ There are also dedicated principles developed for GE. Redgwell proposes an option to apply existing guiding principles on GE, such as the Oxford Principle.⁹⁸

In the context of international environmental law, customary law addressing transnational environmental problems, especially transboundary pollution, can be generally applied to the governance of GE. Therefore, it is important to look into transboundary environmental problems. In addition, customary international law is expected to provide general and basic ideas for regulating GE. As Lin puts it, given the significant gaps within the existing treaties, customary law including general principles will likely play a critical role in GE governance.⁹⁹ Among these principles, the transboundary harm principle and precautionary principle have drawn a significant amount of attention. The existing literature on transboundary harm has focused on two main issues. The first relates to the issue's elements. The majority of scholars agree that the transboundary harm principle has two elements: the harm can be attributed to a specific state and the activity must be proved to have caused the harm outside one's national boundary.¹⁰⁰ The second issue is limitations or difficulties of its implications for GE activities. One main difficulty is to

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Redgwell (n 20).

⁹⁹ Albert Lin, 'International Legal Regimes and Principles Relevant to Geoengineering' in William Burns and Andrew Strauss (eds), *Climate Change Geoengineering* (New York: Cambridge University Press 2013).

¹⁰⁰ Ralph Bodle, 'Geoengineering and International Law: The Search for Common Legal Ground' (2011) 46 *Tulsa Law Review* 305; Adam Abelkop and Jonathan Carlson, 'Reining in Phaëthon's Chariot: Principles for the Governance of Geoengineering' (2013) 21 *Transnational Law & Contemporary Problems* 763; Vishal Garg, 'Engineering A Solution To Climate Change: Suggestions For An International Treaty Regime Governing Geoengineering' (2014) 2014 *Journal of Law, Technology & Policy* 198.

prove the causation between an activity and transboundary harm in practice. It might not be straightforward enough to identify whether a GE-related activity could have adverse impacts on the environment.¹⁰¹ Another problem of its implications for GE activity is that the principle works only after activities have taken place, and is therefore ‘retrospective’.¹⁰²

Another focus in the literature is the precautionary principle within international customary law. The precautionary principle has been used in arguments for, as well as against, GE. On one hand, the principle can suggest that caution be applied in using GE, to minimize the risks to the environment; on the other hand, GE is a precautionary measure itself against the unknown adverse impacts of climate change.¹⁰³ This dual nature of GE can lead to divergent decisions on whether to support or prohibit GE. According to the existing literature, application of the precautionary principle to GE depends on the specific illustration of the principle as well as the particular GE techniques at issue.¹⁰⁴ There are many different versions of the principle and many potential GE techniques, which means that there cannot be a simple relationship between the two. In addition, the stage of GE activity also matters in that a precautionary approach to research would differ from the approach for deployment.¹⁰⁵ Furthermore, although the precautionary principle has been a predominant topic concerning governance of GE, it does not itself offer clear guidance for action. However, some scholars argue that the principle does not work as a detailed

¹⁰¹ Bodle (n 100).

¹⁰² Ibid.

¹⁰³ Elizabeth Tedsen and Gesa Homann, ‘Implementing the Precautionary Principle for Climate Engineering’ CCLR 90.

¹⁰⁴ Lauren Hartzell-Nichols, ‘Precaution and Solar Radiation Management’ (2012) 15 Ethics, Policy & Environment 159.

¹⁰⁵ Tedsen and Homann (n 103).

instruction manual, but rather provides a directional guidance for practice.¹⁰⁶

Apart from the binding and non-binding governance approaches towards GE proposed in the literature, various stakeholders involved in GE have been discussed from an institutional perspective. These stakeholders include research establishments and the scientific community. In the UK, research councils facilitate the development of research governance on GE. For example, SRMGI produced a report on how to govern SRM research.¹⁰⁷ In addition, universities, laboratory and research institutes in the UK make an effort to provide academic research findings and advice to governments in order to improve the decision-making policies surrounding GE. However, in most countries NGOs are not typically involved in GE currently. Within the literature, little attention has been paid to NGO participation in GE. Therefore, based on this gap in NGO participation, the thesis focuses on NGOs as one of the stakeholders involved in GE. This then links to the literature on NGOs and public participation in environmental law and policy. The following two sections will review this topic.

2.2 A literature review on the role of NGOs in the UK and China

A glaring gap in stakeholder participation, within practice and within the literature, is the level of NGO involvement in GE. Therefore, this thesis focuses on NGOs. It is meaningful to review the literature on the role of NGOs in both the UK and China to identify how my research fits in with the literature as well as to provide a background context. This section

¹⁰⁶ Steve Maguire and Jaye Ellis, 'Redistributing the Burden of Scientific Uncertainty: Implications of the Precautionary Principle for State and Non-State Actors' (2005) 11 *Global Governance* 525.

¹⁰⁷ Pyle and others (n 13).

comprises two parts, concentrating on the role of NGOs in the UK and China respectively.

2.2.1 Literature Review: UK NGOs

The literature on the role of NGOs in the UK has focused on two main aspects: the role of NGOs in political and legal processes, and the role of NGOs in facilitating public participation. Given the fact that NGOs have played a critical role in shaping the policy on Genetically Modified Organisms (GMOs) that possess a similar risk profile to GE,¹⁰⁸ it is interesting that NGOs are not actively involved in GE discussion and policy-making.

In the UK, ENGOs have become highly professionalized organizations.¹⁰⁹ They have varying levels of political access, financial resources, organizational size, and international connections.¹¹⁰ ENGOs have become increasingly active in political and legal processes. ENGOs work closely with the government and, therefore, have achieved success in raising relevant agendas with political actors. They have played the role of policy advisors to influence government policy.¹¹¹ However, ENGOs do not seek ongoing partnerships with the government in implementing policy.¹¹² In addition, they have served a functional role that extends the debate well beyond the confines of the mainstream political parties.¹¹³ In terms of legislative process, by acting as lobbyists and campaigners, they have had a

¹⁰⁸ Patrycja Dąbrowska, 'Civil Society Involvement in the EU Regulations on GMOs: From the Design of a Participatory Garden to Growing Trees of European Public Debate' (2007) 3 *Journal of Civil Society* 287.

¹⁰⁹ Christopher Rootes, *NGOs in Contemporary Britain: Non-state Actors in Society and Politics since 1945* (Nick Crowson, Matthew Hilton and James McKay eds, Basingstoke: Palgrave Macmillan 2009); Matthew Hilton and others, *The Politics of Expertise: How NGOs Shaped Modern Britain* (Oxford: Oxford University Press 2013).

¹¹⁰ Nina Hall and Ros Taplin, 'Solar Festivals and Climate Bills: Comparing NGO Climate Change Campaigns in the UK and Australia' (2007) 18 *International Journal of Voluntary and Nonprofit Organizations* 317.

¹¹¹ Hilton and others (n 109).

¹¹² Rootes, *NGOs in Contemporary Britain: Non-state Actors in Society and Politics since 1945* (n 109).

¹¹³ Hilton and others (n 109).

profound impact on the legislative history of the UK Parliament.¹¹⁴ They also act as witnesses in court or as scientific advisors.¹¹⁵ Moreover, NGOs have also played a role in law enforcement in the UK.¹¹⁶ They also have a role in developing soft law, which relates to GE as soft law, such as guidelines, can provide a template and a starting point for further specific legislation. In the UK, soft law is influential and comprises Green Papers, White Papers and a wide range of ‘governmental guidelines, circulars, codes of conducts and administrative rule which produce indirect legal effects’.¹¹⁷ In terms of GE, soft law would be potentially effective in regulating research activities, which may be able to fill the gap owing to the lack of dedicated governance framework for GE research. NGOs, via GMOs, have a history of contributing to the enunciation of soft law regarding the environment.¹¹⁸ The case of GMOs may serve as a potential model for discussing NGO participation in developing soft law regarding GE.

NGOs have been critical in facilitating the improvement of public participation in the UK. As the general public often trusts NGOs more than the government, NGOs have been successful in shaping public opinion and mobilizing members of the public.¹¹⁹ NGOs also contribute to public debates, generate publicity for issues and coordinate or undertake research.¹²⁰ In addition, they have been the means by which an increasingly assertive public has endorsed policy preferences within the wider political sphere. Some NGOs have

¹¹⁴ Ibid.

¹¹⁵ Angus Nurse, ‘Privatising The Green Police: The Role Of NGOs In Wildlife Law Enforcement’ (2013) 59 *Crime Law Soc Change* 305.

¹¹⁶ Ibid.

¹¹⁷ Armeni and Redgwell, ‘Geoengineering Under National Law: A Case Study of the United Kingdom’ (n 27).

¹¹⁸ Arif Ahmed and Md. Jahid Mustofa, ‘Role of Soft Law in Environmental Protection: An Overview’ (2016) 4 *Global Journal of Politics and Law Research* 1.

¹¹⁹ Hilton and others (n 109).

¹²⁰ Nurse (n 115).

leveraged the media to ensure continued coverage of their social and political causes.¹²¹

In terms of GMOs, which have a similar risk profile to GE, ENGOs have been actively involved in the policy-making process in the EU to promote deliberative democracy. NGO participation aiming to shape the EU policy on GMOs can be considered in the two institutional contexts of the Commission and European Food Safety Authority (EFSA).¹²²

In terms of the Commission, the NGO involvement strategy on GMOs is three-fold: first, the establishment of permanent advisory bodies including certain NGOs;¹²³ second, ‘written consultations resulting from statutory reporting obligations’;¹²⁴ third, ad hoc initiatives ‘taking the form of open meetings or written consultations’.¹²⁵ In terms of the EFSA, the strategy of NGO participation includes two methods: first, the EFSA has established a permanent Stakeholder Consultative Platform in which NGOs are involved for providing advice on general matters including issues related to GMOs; second, the EFSA has established ad hoc initiatives involving NGOs for consultations.¹²⁶ NGO involvement in shaping EU policy on GMOs ‘contributes to democratic legitimacy, as least, in view of participatory democratic theory’.¹²⁷ From the discussion above, one could argue that NGOs have been actively involved in shaping the policy on GMOs and their involvement has made significant contributions to improve public participation and ultimately achieve participatory democracy. Given the importance of NGO participation in GMOs, one could assume that NGOs might be expected to participate in GE, given its

¹²¹ Hilton and others (n 109).

¹²² Dąbrowska (n 108).

¹²³ For example, ‘Competitiveness in Biotechnology Advisory Group’ and ‘Advisory Group on the Food Chain and Animal and Plant Health’, see *ibid.*

¹²⁴ *Ibid.*

¹²⁵ *Ibid.*

¹²⁶ *Ibid.*

¹²⁷ *Ibid.*

similar risk profile.

However, when it comes to GE specifically, ENGOs in the UK have not been actively involved in promoting public participation. In fact, most of the relevant NGOs have not published any comments or views in relation to GE or GE research. Indeed, there are only a few NGOs, such as Greenpeace UK and Friends of the Earth UK, who have been involved in the academic discussion on research governance of GE by acting as partners with universities and research institutes. The lack of public participation, specifically NGO participation, in GE is puzzling, as NGOs in the UK have historically been involved in the governance of controversial technologies such as GM technology and xenotransplantation technology. Furthermore, participatory governance of controversial technologies has been widely discussed in relevant literature. One part of the literature focused on examining different forms of participation, while another part has discussed limitations of participation.¹²⁸ Literature that is more recent has focused on case studies to analyse public participation events involving a specific controversial technology. There have been no studies exploring explanations for under-participation. Practically, the lack of public participation in GE is the only case that has been identified thus far. Exploring the reasons why there is a lack of public participation by NGOs will add to the public participation literature on controversial technologies.

Many studies have discussed the limits of participation in the legal and political processes

¹²⁸ Edna Einsiedel, Mavis Jones and Meaghan Brierley, 'Cultures, Contexts And Commitments In The Governance Of Controversial Technologies: US, UK And Canadian Publics And Xenotransplantation Policy Development' (2011) 38 *Science and Public Policy* 619.

concerning NGOs. The causal factors can be summarised from two main perspectives. From an NGO perspective, there are barriers to tackling intractable social problems; they fail to define, articulate and explain the problem and convince the government to accept such a frame of reference. In addition, they may fail to present problems to the government because the proliferation of many hundreds of competing organisations and the focus of some of the larger ones on maintaining their own organisational growth.¹²⁹ From a government perspective, the reasons why the role of NGOs is limited may lie not in their efforts to present their case, but in the refusal of governments to listen.¹³⁰

The explanations for limited participation identified in the literature can offer some implications for GE. First, as pointed out in most literature on public participation in environmental law and policy, NGOs favoured by the authorities may edge less favoured NGOs out of the arena.¹³¹ This could potentially be similar for the GE arena. Expertise is the second limitation arising from the literature. NGOs in the UK face a dilemma as, on the one hand, they have to achieve professionalism in order to actively participate in the decision-making process. On the other hand, the more expertise they gain by employing professional people, the fewer social interests they are able to represent on behalf of the general public. Most NGOs do not have the expertise required to participate in GE. For the NGOs that do have the experience, it can be difficult to convey the sophisticated and technical aspects of GE to the public articulately. It is important to notice that NGOs have a representative role as well as a bridging role, which not just reflects, but also shapes

¹²⁹ Hilton and others (n 109).

¹³⁰ Ibid.

¹³¹ Jane Holder and Maria Lee, *Environmental Protection, Law and Policy* (Cambridge: Cambridge University Press 2007).

public opinion. Within their bridging role, representing the public is still their first and fundamental priority. Thus, the professionalism of NGOs, which may limit their participation, as well as the competition between them, is worthy of examining through empirical research. Lastly, NGOs might fear that talking about GE will validate what some regard as ‘mad science’ and thereby distract civil society, government and business communities from focusing on less risky measures, such as mitigation and adaptation. Furthermore, talking about GE might risk legitimizing GE technology. Therefore, a central obstacle of the political dilemma facing NGOs is that, on the one hand, they do not want to endorse GE technology as they have severe reservations and are reluctant to encourage the public to focus on GE technology. However, on the other hand, they ought to have a role in identifying less risky technology and ensuring the development of an effective governance framework.

In addition, there is another general practical concern that may further limit the role of NGOs in participating in the policy-making process and, by extension, GE. ‘Participation overkill’ is the fear that NGOs may be heavily ‘swamped by the workload involved in keeping pace with a number of meetings’ with policymakers as they have limited financial or human resources. The strain on their resources will not allow them to invest too much time, energy, human capital or financial capital to engage with meetings with policymakers if they ‘feel that the dice are already loaded in favour of’ more powerful actors or stakeholders.¹³² Furthermore, there is a risk that policymakers would engage with NGOs just to provide ‘green window-dressing’ to improve the image of the policy-making

¹³² Karen Morrow and Holly Cullen, ‘International Civil Society In International Law: The Growth Of NGO Participation’ (2001) 1 Non-State Actors and International Law 39.

process instead of providing NGOs with substantial influence over the outcome.

2.2.2 Literature Review: Chinese NGOs

NGOs in China have been considered in the relevant literature due to their partial involvement in the political decision-making process and public participation. Chinese NGOs are far less participatory than UK NGOs. They are deemed to have a close relationship with the Chinese government, which is a necessity in the special context of China. NGO participation in GMOs, which possess a similar risk profile to GE, can provide implications for the role of NGOs in GE.

On the political side, NGOs in China use different strategies to influence the policy-making process. For example, Chinese NGOs are proactive in informing the state, providing initiatives for the state to act upon, offering examples for the state to emulate, pressuring and mobilizing the state, and acting as watchdogs.¹³³ In addition, they receive help and resources from the government, cooperate with the government, and assist the government. In some cases, they even adopt official roles.¹³⁴ Sometimes NGOs speak for the government and increase the legitimacy of the state by adapting to the government's norms and using politically correct language.¹³⁵ Finally, they convince or lobby the state as well as linking the government to its constituencies.¹³⁶ They have played a vital

¹³³ Taru Salmenkari, 'Encounters Between Chinese NGOs and The State: Distance, Roles and Voice' (2014) 50 *Issues and Studies* 143.

¹³⁴ *Ibid.*

¹³⁵ *Ibid.*

¹³⁶ Maohong Bao, 'Environmental NGOs in Transforming China' (2009) 4 *Nature and Culture* 1.

intermediary role in bringing different actors together.¹³⁷ ENGOs in China are considered as both sites and agents of democratic social change that will ultimately shape Chinese politics in the long run.¹³⁸ In the existing literature, they are also identified as having the capacity to be alternative social service providers.¹³⁹

Promoting citizen participation, collective action and volunteerism in the public sphere are essential for a functioning of democracy to improve public participation. Generally, ENGOs in China are considered, in the existing literature, as lacking both strength and independence to pressure the state to move in a more democratic direction. In recent years, ENGOs have contributed to making China's environmental governance a more open process.¹⁴⁰ They are increasingly contributing to the emergence of a pluralistic civil society and no longer restrict their role to uncontroversial service provisions. They, therefore, tend to act as a host for pluralistic debate. With regard to GMOs, which share a similar risk profile with GE, NGOs have continued to play a role in improving public participation. They have done this in spite of the absence of sufficient countervailing forces from domestic NGOs. For example, NGOs have helped the government to identify and address major gaps in regulating GM rice field trials and have participated in shaping governmental GM food policy.¹⁴¹ One could argue that NGO participation might be significant in expanding the space for public participation in relation to GE. When it comes

¹³⁷ Michael Buesgen, 'Environmental NGO' Role in Expanding Social Spaces-Diversification With Chinese Characteristics: A Case Study of ENGO's Opposition to the Nujiang Dam in China's Yunnan Province' (2008) 1 *China Journal of Social Work* 160.

¹³⁸ Guobin Yang, 'Environmental NGOs and Institutional Dynamics In China' (2005) 181 *The China Quarterly* 46.

¹³⁹ Reza Hasmath and Jennifer Hsu, 'Isomorphic Pressures, Epistemic Communities and State-NGO Collaboration in China' [2014] *The China Quarterly* 936.

¹⁴⁰ Shui-Yan Tang and Xueyong Zhan, 'Civic Environmental NGOs, Civil Society and Democratisation in China' (2008) 44 *The Journal of Development Studies* 425.

¹⁴¹ Lorena Luo, 'Refining the GMO Debate in China' (2009) 10 *China Environment Series* 132.

to GE governance specifically, however, NOGs have not been involved in promoting public participation.

The literature has also highlighted reasons for limited NGO participation in China. Various restrictions on the development of ENGOs in China have limited their participation. These restrictions take the form of legal constraints, political constraints and resource constraints. From a legal perspective, it is difficult for ENGOs in China to register with the government.¹⁴² No established institutional framework is in place for ENGOs to participate in the policy process and they are not yet able to form stable partnerships with government authorities. NGO activities are legal but not protected by law, which highlights the absence of governmental regulation.¹⁴³ NGOs cannot gather information independently as legal restrictions have been placed on opening new branches or affiliated offices.¹⁴⁴

From a political perspective, these organisations have not played a role in directly challenging authoritarianism. Therefore, they have played a limited role in fostering a more open democratic process.¹⁴⁵ Chinese ENGOs are constrained by the nature of their dependence on government benevolence,¹⁴⁶ and there are only low levels of collaboration between the local state and NGOs in China due to the domination and the strength of the central government. Interaction with the government diminishes an NGO's potential interpretive power. Small and grassroots NGOs may be marginalised by larger,

¹⁴² Tang and Zhan (n 140).

¹⁴³ Salmenkari (n 133).

¹⁴⁴ Jonathan Schwartz, 'Environmental NGOs in China: Roles and Limits' (2004) 77 *Pacific Affairs* 28.

¹⁴⁵ Tang and Zhan (n 140).

¹⁴⁶ Bao (n 136).

government-backed NGOs. They are vulnerable to government incorporation.¹⁴⁷

In terms of resource constraints, domestic Chinese NGOs lack a strong middle-class support network and rely heavily on international funding.¹⁴⁸ They also lack capital workforce with a professional background. Additionally, they are not able to access sensitive data from the government.¹⁴⁹ The lack of collaboration among ENGOs is also a significant issue, which may cause unbalanced resource distribution and information sharing. In addition, it can also be a barrier for efficient operation when conducting campaigns.

These constraints are discussed within a general framework of the role of ENGOs in China, which can provide implications for exploring the explanations for why NGOs are not involved in GE. Some assumptions can be made based on a combination of the existing literature and the characteristics of GE technology. First, there are environmental constraints. In general, GE has not drawn much public attention in China. This is because GE is a novel topic in the country and there has been no apparent progress that could be disseminated to the public. Most information about GE that is available to the public is through translated research findings from abroad that appear in the media.

Second, there are legal constraints as NGOs rarely register with the government as civil society organisations. Third, there are collaboration and political constraints. Although the

¹⁴⁷ Hasmath and Hsu (n 139).

¹⁴⁸ Tang and Zhan (n 140). Funding from domestic sources has been limited; more funding has been available from international sources.

¹⁴⁹ Schwartz (n 144).

Chinese government launched a research project on GE in 2015,¹⁵⁰ ENGOs are not able to take part in it as there is a very low level of collaboration between ENGOs and the government. In addition, as ENGOs in China depend heavily on the government, they may not risk opportunities for development by opposing the government before the government makes its attitudes towards GE research clear. For ENGOs in China, they also face a political dilemma. On the one hand they may not want to endorse GE technology as they have severe reservations about its potential risks and harms. However, on the other hand, they may feel that they ought to play a role in identifying the least risky measures to ensure the development of an effective regulatory framework. In addition, as they do not have access to sensitive government data, ENGOs are not informed about research projects on GE that are undertaken in China. Finally, there are resource constraints. Unlike ENGOs in the UK, those in China lack expertise and human resources with a professional background. Even if NGOs are able to obtain information about GE, they are highly unlikely to form an expert view that is robust enough to influence policymaking.

To conclude, the role of NGOs in both China and the UK in the policy-making process and public participation has been discussed in the existing literature. In general, NGOs have played a critical role in the UK and have some influence on the policy making process in China. With regard to GMOs, which possess a similar risk profile to GE, NGOs in both countries have contributed to its governance. However, they are not actively involved in GE discussion or policy making in the UK or China. This gap concerning limited participation with GE requires a review of the literature on public participation.

¹⁵⁰ See n 60.
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2.3 Reviewing the Literature on Public Participation

As mentioned above, NGOs are not actively involved in GE discussions and the literature has paid little attention to their participation. Based on this, this section proceeds to review the literature on public participation in environmental law and policy in order to identify gaps and further the discussion. Public participation is a topic that has been discussed from many different perspectives within the literature.

Public participation theory has been developed and discussed over a long period of time. It has many implications for politics, science, as well as law. The most important implication for environmental law is that public participation can take many different forms or models.¹⁵¹ The three models in environmental law include the ladder model, the model distinguishing between ‘top-down’ and ‘bottom-up’ approaches, and the model distinguishing between substantive and procedural dimensions.¹⁵² There are several main consistent themes in the public participation literature. The first theme relates to who participates or whom public participation involves. The existing literature concentrates on the role of NGOs and the public, as well as the relationship between the two. The authority of NGOs derives from ‘normative forces, rooted in modern conceptions of justice, and rational planning’.¹⁵³ Their right to participate is regarded as a basic entitlement stemming from rights of freedom of expression and association.¹⁵⁴ A distinct role for NGOs is the

¹⁵¹ Fisher, Lange and Scotford (n 21).

¹⁵² Ibid.

¹⁵³ Christopher Beer, Tim Bartley and Wade Roberts, ‘NGOs: Between advocacy, service provision, and regulation’ in David Levi-Faur (ed), *The Oxford Handbook of Governance* (Oxford: Oxford University Press 2012).

¹⁵⁴ Morrow and Cullen (n 132).

most significant innovation from the Aarhus Convention.¹⁵⁵ The Convention emphasises NGO involvement, which helps legitimise NGOs' role in the decision-making process because it clearly establishes NGOs among the stakeholders in the process even though it is a weak legal document.¹⁵⁶

When discussing NGOs in public participation theory, there are three concepts to address: representative, participatory and deliberative democracy. As representative democracy has been criticized on the grounds of its many demerits, such as 'political apathy, low participation rates, predominance of party politics, elitist tendencies and under-representation of minorities', participatory democracy emphasizes the role of active citizenship.¹⁵⁷ Participatory democracy should be regarded as a supplement to representative democracy, rather than a potential replacement.¹⁵⁸ In democratic theory, deliberative democracy, which can be combined with representative and participatory democracy, emphasises the 'authenticity of democracy: the degree to which democratic control is substantive' (e.g. deliberation in decision-making) 'rather than symbolic' such as voting.¹⁵⁹ The concept of deliberation has been applied in environmental law as this concept can benefit from problem solving when dealing with environmental risks.¹⁶⁰ The majority of the literature perceives NGOs as traditional actors, together with academics,

¹⁵⁵ Lee and Abbot, 'The Usual Suspects? Public Participation under the Aarhus Convention' (n 3).

¹⁵⁶ Ibid.

¹⁵⁷ Gabriele Abels, 'Participatory Technology Assessment and the "Institutional Void": Investigating Democratic Theory and Representative Politics' in Alfons Bora and Heiko Hausendorf (eds), *Democratic Transgressions of Law: Governing Technology Public Participation*, vol 112 (Boston: Brill 2010).

¹⁵⁸ Holder and Lee (n 131).

¹⁵⁹ John Dryzek, *Deliberate Democracy and Beyond: Liberals, Critics, Contestations* (Oxford: Oxford University Press 2000).

¹⁶⁰ Jenny Steele, 'Participation and Deliberation in Environmental Law: Exploring A Problem-Solving Approach' (2001) 21 *oxford Journal of Legal Studies* 415.

experts, governments and businesses, within the domain of representative democracy.¹⁶¹ This derives from the concern that ‘the proxy role of NGOs, its character is in fact altered from a notional mechanism of participative democracy to a practical alternative form of representative democracy’.¹⁶² Academics call for the development of participatory and deliberative democracy. However, the extent to which NGOs can achieve legitimacy in the process remains problematic.

Most scholars accuse the Aarhus Convention of failing to clarify the status of the lay public, as including NGOs does not necessarily fill the entire public participation gap. In other words, NGOs are not considered as a part of the ‘lay’ public in the existing literature because many of them are professional entities. In terms of the expertise issue, the literature seems to divide various actors in the decision-making process into two main groups, namely authorities with experts and the so-called ‘lay’ public. Depending on self-selection modes, participatory procedures are criticized for being biased toward well-educated groups, thus failing to represent the public properly.¹⁶³ For example, Lee and Abbot claim that ‘even if there are powerful and legitimate incentives to empower NGOs, we must not mistake their involvement for improved democracy’.¹⁶⁴ That is to say, even though involving NGOs is significant for improving public participation, as they are definitely considered part of the general public, they cannot represent the ‘lay’ public entirely as their views may be different based on their different level of expertise. Therefore, there is a danger that NGOs will become the ‘new technocracy’ by sidelining

¹⁶¹ Eden (n 3).

¹⁶² Holder and Lee (n 131).

¹⁶³ Abels (n 157).

¹⁶⁴ Lee and Abbot, ‘The Usual Suspects? Public Participation under the Aarhus Convention’ (n 3).

less officially sanctioned forms of public participation.¹⁶⁵

There is a general understanding that public participation is generally contrasted with expert regulation by the public administration.¹⁶⁶ This is related to the challenge of moving from representative forms of democracy to more participatory and deliberative forms,¹⁶⁷ which places an emphasis on directly involving the public. Many academics have considered NGOs' involvement as a form of expert regulation, which alters participatory democracy to representative democracy in terms of membership organisations. Because of this, they have stressed that their role in fulfilling public participation is problematic. Under the broad definition of civil society, including NGOs, business interests groups, trade unions, and professional organisations, value and rights-based NGOs are tightly linked to the grassroots or public.¹⁶⁸ On the one hand, NGOs, as representatives of civil society, are involved in influencing the policymaking process and make governance more participatory.¹⁶⁹ On the other hand, in order to comply with their obligation of linking civil society to the decision-making process, NGOs should convince authorities that they have the capacity for participation by demonstrating their expertise and their robust social and financial resources.¹⁷⁰ Due to their increasing level of professionalism, NGOs are often accused of decreased democratic legitimacy and accountability.¹⁷¹ This is because staff members in NGOs are well trained, meaning there are fewer members from grassroots

¹⁶⁵ Holder and Lee (n 131).

¹⁶⁶ Fisher, Lange and Scotford (n 21).

¹⁶⁷ Steele (n 160).

¹⁶⁸ Beate Kohler-Koch and Christine Quittkat, *De-Mystification of Participatory Democracy: EU-Governance and Civil Society* (Oxford: Oxford University Press 2013).

¹⁶⁹ *Ibid.*

¹⁷⁰ Sabine Saurugger, 'The Professionalisation Of Interest Representation: A Legitimacy Problem For Civil Society In The EU?' in Stijn Smismans (ed), *Civil Society and Legitimate European Governance* (Cheltenham: Edward Elgar Publishing 2006).

¹⁷¹ *Ibid.*

levels. This has led to the perception that NGOs are elitist in most Western countries.¹⁷² This dynamic creates a tension between the members of the NGO and their professionalization. Empirical studies even prove that maximizing their professional capacity to influence the decision-making process can actually drive them further away from civil society.¹⁷³

The second focus of the literature is the benefits and as barriers to public participation.¹⁷⁴ There are several main functions or benefits: public participation as a solution to improve procedural legitimacy; participation to improve results and decisions as a substantive approach; and public participation itself as an alternative regulatory tool against a traditional command-and-control approach. According to Lee and Abbot, public participation is required to improve procedural legitimacy because of the political nature of environmental decisions.¹⁷⁵ That is to say, environmental decisions normally include very technical elements and therefore rely on professional expertise. However, governments cannot make decisions on controversial topics alone. Therefore, public discourse and opinion can bridge gaps in scientific knowledge.¹⁷⁶ Another important element in procedural legitimacy is the expression of green values.¹⁷⁷ Although public participation may not necessarily lead to 'green outcomes', it is a crucial way of ensuring expression of 'green values' by the public.¹⁷⁸ From a substantive point of view, public participation is

¹⁷² Morrow and Cullen (n 132).

¹⁷³ Kohler-Koch and Quittkat (n 168).

¹⁷⁴ Alexandra Albert and Eleanor Passmore, *Public Value and Participation: A Literature Review for the Scottish Government* (Scottish Government Social Research, 2008).

¹⁷⁵ Lee and Abbot, 'The Usual Suspects? Public Participation Under the Aarhus Convention' (n 3).

¹⁷⁶ Ibid.

¹⁷⁷ Carolyn Abbot, 'Reviewed Work(s): EU Environmental Law: Challenges, Change and Decision-Making by Maria Lee' (2006) 69 *The Modern Law Review* 858.

¹⁷⁸ Ibid.

also a way of improving results and achieving better decisions.¹⁷⁹ Participation and deliberation not only emphasise procedural legitimacy by enhancing ‘the transparency of environmental justice’, but also lead to better outcomes of decision-making.¹⁸⁰ Apart from the substantive approach and procedural legitimacy, public participation itself is also considered as an alternative regulatory tool.¹⁸¹ According to Maria Lee, the traditional command-and-control approach is not sufficient to cope with emerging environmental issues, which require public participation as an alternative regulatory mechanism and a supplement to traditional regulatory tools.¹⁸²

However, some scholars have insisted that the benefits of participation should not be overstated. They are most effective when used as a complementary instrument to representative democracy.¹⁸³ The literature also discusses various weaknesses of public participation. First, it is difficult to strike a balance between relying on expert judgment concerning technical areas and including public value judgements on controversial topics.¹⁸⁴ This leads to a weakness that people who have opportunities to express their opinions may not necessarily represent the interests of the lay public. Another limitation of involving the public relates to the delay and cost of the decision making process.¹⁸⁵ Public participation may slow down the process of making decisions and increase the cost.

When focusing on NGO participation and democracy in China, one may argue that public

¹⁷⁹ Steele (n 160).

¹⁸⁰ Ibid.

¹⁸¹ Maria Lee, *EU Environmental Law: Challenges, Change and Decision-making* (Oxford: Hart 2005).

¹⁸² Ibid.

¹⁸³ Pellegrini (n 21).

¹⁸⁴ Lee and Abbot, ‘The Usual Suspects? Public Participation Under the Aarhus Convention’ (n 3).

¹⁸⁵ James Creighton, *The Public Participation handbook: Making Better Decisions Through Citizen Involvement* (1st edn, San Francisco: Jossey-Bass 2005).

participation is less developed in China, as the development of civil society organizations is different from that in Western countries. It is reasonable to some extent as civil society organizations or NGOs in China are often criticised as being heavily reliant on the government. However, this issue ought to be analysed in a comprehensive way by categorizing Chinese NGOs. There are two paths of development for NGOs in China: the ‘top-down’ and ‘bottom-up’ paths.¹⁸⁶ Top-down is the path that is organised and instructed by the government or its branches while the bottom-up path refers to a path that is formed by people based on social needs.¹⁸⁷ Based on the two different paths of development, their central role of advocacy emphasises different factors corresponding to policy performance and policy representativeness.¹⁸⁸ Top-down NGOs focus heavily on serving the government as government administrative units, which makes them heavily involved in the policy process. Alternatively, bottom-up NGOs place great emphasis on improving their capacity to represent the civil society position by influencing the policy-making process. For example, top-down NGOs offer constructive recommendations using their expertise within the government’s overarching plans due to their reliance on the government,¹⁸⁹ whereas bottom-up NGOs advocate by lobbying or demonstrating due to their civilly rooted incentives.¹⁹⁰ There is an imbalance between involvement in the policy-making process and representing the interests of the public. This is similar to issues faced in the UK. NGOs in both the UK and China are facing the challenge of redressing this imbalance between participation and representation. However, the causes of the problem differ in that

¹⁸⁶ Xijin Jia, ‘Civil Organization-Government Relationships: Functional Cooperation and Power Dilemmas’ in Ming Wang (ed), *Emerging Civil Society in China*, vol volume 7 (Boston: Brill 2010).

¹⁸⁷ Ibid.

¹⁸⁸ Ibid.

¹⁸⁹ Ibid.

¹⁹⁰ Ibid.

professionalism mainly creates this imbalance in the UK while distance to or reliance on the government primarily causes it in China.

However, it is different and even more complex when exploring the space for public participation in GE. Therefore, this research investigates the involvement of NGOs in GE, based on the public participation literature. In addition, amongst various topics discussed surrounding public participation, there is a gap surrounding methods of public participation. Very few articles have focused on understanding the reasons why NGOs fail to participate. Although public participation has long been discussed, the literature has paid little attention to the causes of participation. This thesis contributes to the literature by considering why certain groups participate or do not participate in particular areas of environmental law and policy.

This research seeks to further how environmental lawyers think about public participation. Up until now, the literature has examined the ways in which law provides for public participation and has made a number of arguments, especially normative arguments, for such participation, such as increasing the legitimacy of decision-making. By exploring why NGOs participate or do not participate, this research does not seek to contribute to these normative arguments, nor does it add to the discussion concerning participatory, deliberate or representative governance. Rather it adds to the literature with a consideration as to why certain groups participate or do not participate in particular areas of environmental law and policy, such as GE. However, the participation referred to in this research is not necessarily participation in a formal sense enshrined within the law. Rather it is participation in civil

society and media debates and discussions, and government consultations on GE. The novelty and contribution of this research to environmental law is that environmental law and policy, although it has long studied public participation, has paid little attention to the causes of participation.

Chapter 3 Methodology

This chapter addresses the issue of methodology employed in this thesis. It seeks to provide a clear picture of the research strategy it was based upon and how the research was designed. It comprises three sections focusing on research strategy, research design, and research methods respectively. The methodology adopted in this research aims to solve the research question, namely, ‘why NGOs become involved or not in GE as a policy area.’ It aims to investigate why certain groups participate or not in particular areas of environmental law and policy. The question emphasises the causes of NGO participation, which adds to the literature on public participation in environmental law. Although public participation has long been an interest of study, the literature has paid little attention to the causes of participation. This main question can be divided into three sub-questions. Have NGOs engaged with GE in the UK and China? Why do NGOs in the UK and China become involved or not in GE as a policy area? Can NGOs be considered to make strategic choices on their involvement or non-involvement in GE as a policy area?

The main research method employed in this research is the qualitative interview. It mainly aims to answer the research question whether NGOs have engaged or not with GE in both countries and why. Through in-depth qualitative interviews, empirical data concerning respondents’ opinions of GE, whether their organisations have engaged with GE, why they participate or not in GE as a policy area were collected. Empirical data with regard to whether NGOs have engaged with GE provides evidence for exploring answers to the first

question in a descriptive manner. Detailed and in-depth results in relation to the reason why they become involved or not, which is the key part of the research provide sufficient evidence to solve the second question. Based on analysis of data, the question concerning whether NGOs can be considered to make strategic choices on their involvement or non-involvement with GE was also addressed.

3.1 Research strategy

Research strategy may be divided into two distinct types – quantitative and qualitative research. This division is ‘commonly drawn among writers on and practitioners of social research’ with regard to a range of considerations including the nature of the relation between theory and research, epistemological consideration, and ontological issues.¹⁹¹ It can be considered as a theoretical basis for research design. Before discussing which research strategy the thesis employs, it is necessary to address a variety of considerations mentioned above. According to Carey, a research project includes elements of ontology, epistemology, methodology and method.¹⁹² A set of these sections helps researchers to understand what is expected and how this can be conducted. The relationship between these considerations can be illustrated by definition. Ontological considerations stand for ‘the nature of social entities’ while epistemological considerations deal with the nature of knowledge including ‘what a researcher counts as knowledge’.¹⁹³ Methodology refers to the ‘theoretical and philosophical assumptions’¹⁹⁴ of a topic while methods entail the

¹⁹¹ Bryman (n 47).

¹⁹² Malcolm Carey, *Qualitative Research Skills for Social Work: Theory and Practice* (Burlington: Ashgate 2012).

¹⁹³ Ibid.

¹⁹⁴ Ibid.

process of collecting data concerning the topic.¹⁹⁵ Therefore, in order to address the methodology issue of this research, this chapter is organised in an order linked to the four considerations mentioned above: ontology, epistemology, methodology, and methods. In this section, ontology, epistemology and methodology are discussed. Methods of this research, as well as the detailed design of this research project, will be introduced in sections 3.2 and 3.3.

This section comprises four parts: the first part deals with the relationship between theory and research, notably whether theory guides research or theory is generated from research; the second issue concerns ontological considerations, notably a distinction between objectivism and constructionism; the third part addresses epistemological elements and indicates a distinction between positivism and interpretivism; the last part discusses whether a quantitative or qualitative strategy is adopted in this research based on the considerations and discussions in the preceding parts.

3.1.1 Theory and research

The discussion on the relationship between theory and research deals with the question whether theory guides research or theory is the outcome of research. According to Bryman, theory is able to provide guidance for data collection and analysis or occurs after collection and analysis of data; therefore, two types of link between theory and research can be identified – deductive and inductive approaches.¹⁹⁶ A deductive approach refers to situations in which researchers deduce hypotheses based on what is already known as well

¹⁹⁵ Ibid.

¹⁹⁶ Bryman (n 47).

as theoretical considerations before testing hypotheses through research.¹⁹⁷ In other words, the process of deduction can be illustrated as: theory – hypothesis – data collection – findings – hypothesis confirmed – revision of theory.¹⁹⁸ In contrast, inductive approach refers to theory generated from data collection and analysis.¹⁹⁹ It involves a process of making ‘inductive inferences from initial data collected to guide further data collection’ until saturation is achieved.²⁰⁰ Normally, an inductive approach or reasoning is related to qualitative research while deductive reasoning is involved in quantitative research.²⁰¹ However, there is no ‘hard and fast distinction’.²⁰² Instead, these two strategies are considered as tendencies of linking theory and research. In the process of inductive reasoning, patterns or trends are identified from data collected by, for example, conducting interviews, and based on this, a summary of findings is then concluded to develop a theory.²⁰³ In contrast, in the process of deductive reasoning, a hypothesis is formed at the outset of research and data is employed for testing the hypothesis.²⁰⁴ In this approach, the conclusion will either confirm or reject this hypothesis.

My research aims to identify the reason why NGOs in the UK and China participate in the GE as a policy area or not by conducting interviews in order to collect empirical data. Based on the data collected in the two countries, analysis was involved to identify a pattern or trend of the reasons for their involvement or non-involvement with GE. The data

¹⁹⁷ Terry Boswell and Cliff Brown, ‘The Scope of General Theory: Methods for Linking Deductive and Inductive Comparative History’ (1999) 28 *Sociological Methods and Research*.

¹⁹⁸ Bryman (n 47).

¹⁹⁹ Boswell and Brown (n197).

²⁰⁰ Monique Hennink, Inge Hutter and Ajay Bailey, *Qualitative Research Methods* (London: Sage Publications 2011).

²⁰¹ Carey (n 192).

²⁰² Bryman (n 47).

²⁰³ Carey (n 192).

²⁰⁴ Ibid.

analysis employed different strands of literature to generate overall findings and then formed a theory. Therefore, this thesis adopts an inductive approach to link theory and research, which entails that the theory is generated from data collection and analysis of the empirical study rather than using empirical data to test the theory.

3.1.2 Ontological considerations

Ontology emphasises ‘the nature of being or social entities’ and people’s perceptions on ‘what the reality is made of’.²⁰⁵ It entails questions about ‘the nature of social entities, which refers to the question of whether social entities can and should be considered objective entities that have a reality external to social actors, or whether they can and should be considered social constructions built up from the perceptions and actions of social actors’.²⁰⁶ It holds two opposite positions, namely objectivism and constructionism. Objectivism emphasises independence of social phenomenon from social actors while constructionism implies that social phenomenon are produced and revised constantly through interactions with social actors.²⁰⁷ According to Bryman, they ‘feed into the ways in which research questions are formulated and research is carried out’.²⁰⁸

In terms of my research questions, they aim to address the involvement or non-involvement of NGOs in GE as a policy area and explore the motives of their objectives and behaviour. The research questions emphasise the active involvement of

²⁰⁵ Hennink, Hutter and Bailey (n 200).

²⁰⁶ Bryman (n 47).

²⁰⁷ Ibid.

²⁰⁸ Ibid.

NGOs in GE, which admits the active involvement of people in the construction of reality. The facts of public participation and governance on GE can be influenced and reached by the engagement or non-engagement of NGOs.

3.1.3 Epistemological considerations

An epistemological consideration stands for ‘the question of what is regarded as acceptable knowledge in a discipline’.²⁰⁹ The epistemological position in natural science is positivism that ‘advocates the application of the methods of the natural sciences to the study of social reality and beyond’.²¹⁰ It entails several principles, including the idea that phenomena confirmed by senses are the only way of warranting knowledge, the purpose of theory is to test hypotheses and assess explanations of law, and the concept that research must be conducted in an objective way.²¹¹ Positivism includes a process whereby a hypothesis is formulated at the outset and then tested with empirical data.²¹² Interpretivism is the opposite epistemological position to positivism. It can be illustrated as ‘a strategy that respects the differences between people and the objects of the natural sciences and therefore requires the social scientists to grasp the subjective meaning of social action’.²¹³ It therefore emphasises ‘the importance of interpretation and observation in understanding the social world’.²¹⁴ One of its focuses is related to the social contexts on people’s lives,

²⁰⁹ Ibid.

²¹⁰ Ibid.

²¹¹ Hasan Nazmul, ‘Positivism: To What Extent Does It Aid Our Understanding Of The Contemporary Social World?’ (2016) 50 *Quality and Quantity* 317.

²¹² Hennink, Hutter and Bailey (n 200).

²¹³ Bryman (n 47).

²¹⁴ Hennink, Hutter and Bailey (n 200).

which suggests the importance of studying people in social contexts in which they live.²¹⁵ Another focus is the importance of understanding people's lives from their own perspectives.²¹⁶ For example, if one seeks to explain and understand why a phenomenon occurs, the answers cannot be identified through survey data. Instead, it requires interpretation of the data.²¹⁷

Typically, the epistemological position of positivism is associated with a deductive approach of linking theory and research, while the epistemological position of interpretivism is associated with an inductive approach.²¹⁸ However, this link is just a tendency and not a hard correspondence. For example, according to Hennink, Hutter, and Bailey, some interpretive approaches have positivism influences, such as 'grounded theory or content analysis'.²¹⁹ As far as my research is concerned, it adopts interpretivism rather than positivism. My research aims to explain and understand why NGOs in the UK and China become involved or not in GE as a policy area. It emphasises subjective elements, notably the perspective of NGOs on their involvement or non-involvement. In other words, it seeks to understand how NGOs perceive their involvement or non-involvement with GE. In addition, it does not focus on objective facts, which is emphasised in positivism; rather, it addresses NGOs' subjective opinions on why they participate in GE or not. Furthermore, interpretivism emphasises the context in which a causal relationship occurs, which goes beyond looking just for the 'presence or absence' of this relationship.²²⁰ This research

²¹⁵ Ibid.

²¹⁶ Ibid.

²¹⁷ Ibid.

²¹⁸ Bryman (n 47).

²¹⁹ Hennink, Hutter and Bailey (n 200).

²²⁰ Ann Chih Lin, 'Bridging Positivist and Interpretivist Approaches to Qualitative Methods' (1998) 26 Policy studies journal 162.

admits the importance of contexts in that it studies NGOs in the context of the UK and China and regards contextual issues as a significant influence on their engagement or non-engagement with GE. This, again, can be considered as adopting interpretivism. With regard to the relationship between theory and research, as discussed in the previous part, this research does not follow the process of formulating a hypothesis and then testing it. Instead, it interprets empirical data to generate theory. In addition, according to Carey, by adopting interpretivism, researchers should ‘explain the role that participants’ themselves have in creating the micro-worlds around them’.²²¹ This research involves investigating how NGOs perceive their role in public participation concerning GE, which also entails an element of interpretivism.

Although it entails some elements of positivism, for instance exploring the causation of NGOs’ behaviour, the emphasis is on understanding the behaviour of NGOs more broadly. That is to say, although there are some elements of causation in explaining NGOs’ behaviour, this research is more about how NGOs perceive or understand their participation in GE. As mentioned above, the difference between positivism and interpretivism is not ‘always as distinct as it may appear’.²²² Although this research may involve an element of causation, which may lead to positivism, it does not focus on the objective facts of what causes NGOs’ involvement or non-involvement with GE. It emphasises interpretation and understanding of NGOs’ perceptions on why they become involved or not. The answers to the research question why NGOs participate in GE or not and whether they are making strategic choices are in fact subjective in nature. In terms of

²²¹ Carey (n 192).

²²² Hennink, Hutter and Bailey (n 200).

the question whether NGOs are making strategic choices on their involvement or non-involvement with GE, it requires interpreting the responses of interviewees in certain contexts.

3.1.4 Research strategy: quantitative or qualitative?

There are two main research strategies that are contrasted with each other: quantitative and qualitative research. Both of them include three elements mentioned in preceding sections – the orientation of theory and research, the epistemological position and the ontological position – which can be employed to distinguish the two strategies. To examine this in more detail, quantitative research is usually associated with the deductive approach of linking theory and research, while qualitative strategy is related to the inductive approach; in terms of the epistemological consideration, quantitative and qualitative strategies usually include the positivism and the interpretivism standpoints respectively; with regard to the ontological orientation, quantitative research is normally associated with objectivism while qualitative research is typically related to the constructionism.²²³ That is to say, quantitative research seeks to ‘quantify a research problem, to measure and count issues and then to generalize findings’ while qualitative research aims to ‘understand or explain behavior and beliefs’.²²⁴

This research adopts a qualitative research strategy in general. This is because it aims to

²²³ Bryman (n 47).

²²⁴ Hennink, Hutter and Bailey (n 200).

understand why NGOs in the UK and China become involved or not in GE, which implies the nature of understanding and explanation. It is not concerned with measurement of issues which is the nature of quantitative research.

3.2 Research design: a comparative design

The previous section introduced the choice of a qualitative research strategy adopted in this research, which provides a theoretical framework for my methodology. However, according to Bryman, the decision on research strategy does not ‘get you far along the road of’ conducting research.²²⁵ Another two choices on research design and research method need to be considered. Although sometimes confused, the two terms – research design and research method – differ in that research design provides ‘a structure guiding data collection and analysis’ while research method represents a way of gathering data which can be ‘associated with different kinds of research design’.²²⁶ Therefore, before discussing the research method employed in this thesis, it is useful to address the research design first.

This research adopts a comparative design that embodies the logic of comparison.²²⁷ It is a comparative design because through the identical method of investigating the reasons for NGOs’ involvement or non-involvement with GE in the UK and China, it seeks to compare the two contrasting cases to explore explanations for differences and identify

²²⁵ Bryman (n 47).

²²⁶ Ibid.

²²⁷ David De Vaus, *Research Design in Social Research* (London: Sage Publications 2006); Bob Hancké, *Intelligent Research Design: A Guide For Beginning Researchers In The Social Sciences* (Oxford: Oxford University Press 2009).

similarities applicable in both countries. Moreover, this will enable us to gain a deeper understanding of NGO participation within different national contexts. It aims to distinguish the characteristics of the role of NGOs in the UK and China and to act as a springboard for theoretical reflections about contrasting findings. More specifically, this research adopts a form of cross-national or cross-cultural research to examine the particular issue of NGO engagement with GE in the UK and China within their different socio-cultural settings by conducting similar interviews, in order to seek explanations for similarities and differences. It carries more weight, than comparing among Western countries, when comparing a socialist country (China) with a capitalist country (the UK) in comparative politics, which will be addressed in detail in chapter 8. As a qualitative research study, it adopts the form of qualitative interviews for two cases of the UK and China to bring the research strategy and research design together.

The reason why this research includes an empirical component, namely the qualitative interview, rather than adopting a desktop approach, can be explained according to two aspects. One is that there is no empirical work that has been done in this specific area. In order to seek the reasons why NGOs have or have not been involved in GE, analysis of secondary resources will not be adequate to generate valid findings. Instead, obtaining first hand materials by conducting qualitative interviews will provide data and evidence capable of answering the main research question why NGOs have or have not been involved in GE. The answers to this question are expected to be generated through analyzing the collected data. Another aspect is that qualitative interviews have been employed in similar studies when investigating how NGOs perceive certain issues or how they may potentially have a

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role in these issues. This can potentially have implications for my research method as the thesis aims to investigate how NGOs perceive or understand their involvement and non-involvement in GE as a policy area. For example, in the research involving NGO in international governance and policy, researchers have examined how NGOs perceive the issue of legitimacy.²²⁸ As traditional theories of legitimacy were unsuited to certain NGO cases, and there was a lack of empirical research, researchers employed qualitative interviewing as the research method with semi-structured questions. A study by Boström and Hallström investigates the role of social and environmental NGOs in standard-settings.²²⁹ They employed a semi-structured interviewing technique as a principal research method to collect data. Furthermore, research seeking to compare climate change campaigns by NGOs in the UK and Australia has also employed this interviewing method.²³⁰ The details of research method – qualitative interviewing – is discussed in the following section.

3.3 Research methods

In this section, the research methods employed in the thesis are introduced. First, the choice of sampling strategy – purposive sampling – is discussed as well as the detailed arrangement of sampling in the UK and China. The question of how many samples are

²²⁸ Anton Vedder and others, *NGO Involvement in International Governance and Policy* (Anton Vedder ed, Boston: Brill 2007).

²²⁹ Magnus Boström and Kristina Hallström, 'NGO Power in Global Social and Environmental Standard-setting' (2010) 10 *Global Environmental Politics* 36.

²³⁰ Hall and Taplin (n 110).

included in this research, notably sample size, is then introduced and justified including a list of respondents. The procedure of qualitative interviews, which is adopted as the principal research method, is discussed in the third part of the section. The following parts focus on introducing methods of data analysis and storage. The last part includes difficulties encountered during the process of conducting qualitative interviews and acknowledges limitations of adopting this research method.

3.3.1 Sampling strategy

First, purposive sampling, which refers to a ‘non-probability form of sampling’, has been employed as the sampling strategy.²³¹ That is to say, based on the research questions, samples are selected in a strategic way rather than on a random basis. Based on the nature of a comparative study, sampling must be achieved through two levels: first, two countries of the UK and China have been selected; second, units within the case study have been sampled. In other words, sampling areas and then participants are both elements of the sampling strategy.

A typical form of purposive sampling, namely theoretical sampling, has been employed. This contrasts with generic sampling in that the latter belongs to a fixed sampling strategy or non-sequential sampling, which entails that the sample is established at the outset of the research with no adding to the sample during the process itself, while the former emphasises iteration which entails an ongoing process rather than a fixed plan at the

²³¹ Bryman (n 47).

outset.²³² In contrast to generic purposive sampling, theoretical sampling is defined as ‘the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges’.²³³ It entails iterations with an ongoing process rather than a one-off process. Therefore it is typically involved in grounded theory that will be discussed in the section on data analysis later on.

In relation to this research, certain eligible NGOs were selected at the outset. After analysing data and generating categories, more samples were then selected according to the requirement to develop categories. With regard to eligible NGOs, these were environmental NGOs (ENGOS). An ENGO is a non-governmental organisation in the field of environmentalism. In the UK, ENGOS have experienced different phases of development ranging from nature conservation to environmentalism and more radical ecologism.²³⁴ The definition of an ENGO has not been considered as a controversial issue in the existing literature. In China however, the definition of an ENGO or even an NGO has received significant attention in the literature due to governmental interventions into these organizations. Thus, there are different ways of defining ENGOS in China according to the existing literature. This research employs the definition by Schwartz that ‘environmental NGOs [are] organizations registered with the government Ministry of Civil Affairs, that receive no state funding, and have no official ties to government beyond the

²³² Ibid.

²³³ Ibid.

²³⁴ Rootes, *NGOs in Contemporary Britain: Non-state Actors in Society and Politics since 1945* (n 109). Nature conservation refers to a movement aiming to conserve natural resources, which is considered by some as a part of the broader environmental movement or environmentalism. See Mark Wilson, ‘The British Environmental Movement: The Development of An Environmental Consciousness and Environmental Activism, 1945-1975’ (Doctoral thesis, University of Northumbria 2014).

necessity of a sponsoring unit'.²³⁵ The reason why this research focuses mainly on ENGOs is that geoengineering aiming to tackle climate change is closely related to environment issues, and as a public good, geoengineering is supposed to work in the public interest. In order to ensure the quality of in-depth interviews and obtain effective results from them, staff members with high positions, such as directors, from ENGOs as respondents were sought out where available as they could be expected to know more about geoengineering than other non-environmental NGO employees. This was even more so for interviewing NGOs in China as geoengineering research is considered to be at its initial stages and thus few NGOs have noticed or know about it.

This research seeks to identify two types of ENGO in each country, namely ENGOs that have shown interest in GE and ENGOs that have not shown interest in it. Based on the categorisation of two different ENGOs, this research seeks to identify and compare distinctive reasons why they become involved in GE or not. The sampling method has also been chosen to avoid selection bias²³⁶ and to try to include all relevant types of ENGOs. Within the two categories, a certain number of participants were invited for the interviews. Moreover, I added to the sample during the process of interviewing in order to gather enough data for developing variables.

The sample selection was based on two categories among environmental NGOs: environmental NGOs who have shown an interest in GE, and environmental NGOs who

²³⁵ Schwartz (n 144).

²³⁶ Avoiding selection bias means, in this research, not selecting on the dependent variable, which is NGO participation in GE, but also including participants from NGOs that had not been involved.

have not been engaged or shown an interest in GE. Therefore, the criteria for this study can be classified as follows: 1) the sample selection will be conducted among ENGOS; 2) the regions of samples will be restricted to the UK and China; 3) the samples will cover both involved and non-involved ENGOS. The sample selection criteria aim to examine why some ENGOS have been engaged in geoengineering while others have not. This is expected to answer the research question why NGOs participate or not in relation to GE. Details of samples will be introduced in the following section.

3.3.2 Sample size

According to Bryman, the sample size should neither be too small to achieve data saturation or theoretical saturation nor too large to conduct a deep analysis.²³⁷ This research includes two types of ENGOS, which were approached in each country according to the criteria. Based on this, in the UK, two ENGOS were considered as respondents for each type at the outset: Greenpeace UK and Friends of the Earth UK (FoE) were interviewed as respondents who had become involved in GE, while TearFund and Practical Action were selected as participants who have not engaged with GE. TearFund was chosen because, although it is not an ENGO, it is a group with climate interests.²³⁸ After analysing the data and generating basic categories, more samples were approached in order to achieve a theoretical saturation. Finally, six NGOs including Greenpeace UK, FoE, World Wildlife Fund (WWF), Action Group on Erosion, Technology and Concentration (ETC

²³⁷ Bryman (n 47).

²³⁸ I have approached other non-ENGOS which also include climate change as one of their focus areas. However, due to access issues, they turned down my requests for interviews. This is why TearFund is the only non-ENGO included in my research.

Group), Biofuel Watch, and Blue & Green Tomorrow were selected as respondents who have become involved in GE while three NGOs, namely TearFund, Practical Action, and ClientEarth, were invited as respondents who do not engage with GE. A brief introduction to the scope of selected groups in the UK is shown in Table 1.2 in the appendix. The reason why these six NGOs were considered as appropriate respondents is that they are the main players that actively participate in GE policy discussion and campaigns in the UK. This is based on the responses from participants as well as results from online searching. In terms of the three non-involved groups, they were selected because, although these groups have not engaged in GE, their focus lies in climate change, which includes the area of GE. It is meaningful to explore why they are not involved in GE since they do focus on a broader area of climate change. In China, due to the fact that none of ENGOs have been involved in GE, all respondents were selected within the type of non-involved groups. In detail, CBCGDF, HDIEO, TBEAS, IPE, Lvxing Taihang and Greenpeace China were chosen as participants for interview. These groups were interviewed because, in order to avoid selection bias when sampling, they cover a wide range of types of ENGOs concerning climate change in China, namely: government-supported NGOs, business-supported NGOs, large grassroots NGOs, small grassroots NGOs, and international NGOs. A brief introduction to these Chinese groups is provided in Table 1.1 in the appendix.

In terms of sample size, this research involves a relatively small number of NGOs as respondents. One may argue that the small number could produce problems in generating reliable findings. However, a small number of in-depth qualitative interviews, although it

may still have disadvantages, can be justified in the literature. According to Wilmot, the small number of cases is a feature of qualitative sampling, as ‘a phenomenon only need appear once to be of value’.²³⁹ It contrasts with quantitative sampling in that it does not emphasise statistical significance.²⁴⁰ From a practical perspective, including a large quantity of in-depth interviews may go way beyond one’s ability to deal with data. In terms of how many qualitative interviews is enough, almost every scholar in methodology gives the same answer ‘it depends’.²⁴¹ A consensus has been made that this includes research objectives, validity and practical concerns like time and resources.²⁴² These factors, which have impacts on determining the number of interviews, can be summarised as inside and outside factors. Inside factors refer to methodological and epistemological considerations while outside factors include time and resources.²⁴³ Although it is inside factors that should determine the number of interviews in theory, normally it is outside factors that play a predominant role, especially for early career researchers.²⁴⁴ A concept of saturation is often employed to justify the number of interviews. It refers to a point ‘of diminishing return[s] to a qualitative sample because as the study goes on more data does not necessarily lead to more information’.²⁴⁵ However, achieving a stage of saturation is challenging as ‘it forces the research to combine sampling, data collection, and analysis’.²⁴⁶

In addition, saturation is an ideal condition for data collection while in practice, it is

²³⁹ Amanda Wilmot, *Designing Sampling Strategies for Qualitative Social Research: With Particular Reference to the Office for National Statistics' Qualitative Respondent Register* (Survey Methodology Bulletin-Office For National Statistics, 2005).

²⁴⁰ Ibid.

²⁴¹ Sarah Baker and Rosalind Edwards, *How Many Qualitative Interviews Is Enough? Expert Voices and Early Career Reflections on Sampling and Cases in Qualitative Research* (National Centre for Research Methods Review Paper, 2012).

²⁴² Ibid.

²⁴³ Uwe Flick, *Designing Qualitative Research Book 1 of The SAGE Qualitative Research Kit* (London: Sage Publications 2008).

²⁴⁴ Ibid.

²⁴⁵ Mark Mason, ‘Sample Size and Saturation in PhD Studies Using Qualitative Interviews’ (2010) 11 *Qualitative Social Research* Art. 8.

²⁴⁶ Bryman (n 47).

difficult to achieve this stage or researchers often claim to achieve it but are unable to prove it.²⁴⁷ This is because the idea of saturation offers little practical guidance.²⁴⁸ In terms of my research, it achieves saturation to some extent as no more new valid information was identified after data collection. The respondents were basically holding similar views on the explanations for their involvement or non-involvement. What's more, the special situation concerning GE in the UK and China also plays a vital role in determining the number of samples. In relation to the involved UK NGOs, although I cannot approach all involved groups due to constraints on time, at least all the main players regarding GE discussion in the UK were covered. With regard to non-involved ones, which is an even a larger quantity, although it is not feasible to include all of them due to limited time and resources, at least well-known groups involved in climate change were selected in order to explore why they do not engage with GE. This made the selection manageable and non-random from a potentially huge sample group. In the context of China, due to the fact that no NGOs have engaged with GE, the samples were only selected under the categorisation of non-involved groups. With limited time and resource, although it is unpractical to interview every well-known environmental group in China, a good variety of well-known environmental groups, with different types and sizes, were included which can avoid selection bias to some extent.

3.3.3 Qualitative interviews

Qualitative interviewing, and more specifically semi-structured in-depth interviewing, is

²⁴⁷ Mason (n 245).

²⁴⁸ Michelle O'Reilly and Nicola Parker, 'Unsatisfactory Saturation': A Critical Exploration of The Notion of Saturated Sample Sizes in Qualitative Research' (2012) 13 Qualitative Research 190.

employed as the research method. This emphasises detailed and rich answers. The in-depth nature of this research method aims to ‘gain a detailed insight into’ research questions from the perspective of respondents.²⁴⁹ According to the literature, in-depth interviews can be employed to explore, for example, ‘how people make decisions’ and ‘the motivation for certain behaviour’.²⁵⁰ This research seeks to explain and understand why NGOs become involved or not in GE as a policy area, which involves an idea of identifying how NGOs make decisions on their involvement or non-involvement and why they are motivated to become engaged in or stay clear of GE. Therefore, an in-depth interview is the appropriate method for this research. In addition, in-depth interviews, rather than other methods such as questionnaires, are more effective in gathering ‘privileged information’ if key players can be approached.²⁵¹ In terms of this research, the purpose is to investigate the deep reasons for NGO participation in GE. The most effective way of acquiring a rich amount of privileged information is to approach directors or those in senior leadership positions in NGOs. Therefore, by conducting in-depth interviews with directors or their equivalents in targeted groups in the UK and China, insights into NGO participation can be collected.

The in-depth interview takes a form of semi-structured interview in this research. It is different from structured and unstructured interview methods as structured interviewing entails ‘the administration of an interview schedule by an interviewer’.²⁵² This means that respondents are given the same context of questioning in order to ensure that their answers can be coded and processed quickly. Structured interviews are normally associated with

²⁴⁹ Hennink, Hutter and Bailey (n 200).

²⁵⁰ Ibid.

²⁵¹ Carey (n 192).

²⁵² Bryman (n 47).

quantitative research methods. Unstructured interviews are another typical form of qualitative interview. During an unstructured interview, there may be just a single question to which the interviewee can respond freely, which is considered very similar to a normal conversation.²⁵³ This research employs semi-structured interviewing, which not only allows room for respondents but also expects them to follow a script to a certain extent; it demands rich and detailed answers for analysing rather than simple answers that are easily aggregated. In addition, a semi-structured interview is more effective in obtaining what is expected from respondents compared to an unstructured method: it involves the advantage of sticking to the research purpose and research questions. For the purposes of the current project, an interview guide containing a list of questions was prepared before the formal interviews were conducted.

The project included two phases: an initial pilot interview and a then series of formal interviews. Before the interviews started, a research ethical approval from University of Reading was attained in January 2016 for my research. The pilot study is not only designed to ‘test how well the interview flows but in order to gain some experience’, which helps refine the interview questions.²⁵⁴ The pilot interview aims not only to refine the interview design for the formal study but also helps answer several aspects of the research question. It provided experience that can be used to feed back into re-design of the formal interviews, which not only helped refine questions but also offered an outsider angle that generated valuable insights. Although there were various stakeholders involved in GE who could provide an indirect angle on ENGOs, the pilot study singled out meteorologists. This is

²⁵³ Ibid.

²⁵⁴ Ibid.

because, according to the existing public participation literature, scientists are a key part of traditional expert regulation of new technologies. Among various actors, they invariably play a central part in regulating novel technology, providing professional advice to regulators or governments. Depending on past collaborative experience with NGOs in governance, scientists can be expected to form views on NGO participation in regulating novel technology. Therefore, it was appropriate to invite meteorologists as respondents for the pilot study, as they are not only GE professionals but also tend to be experienced in collaborating with NGOs in regulating new technologies.

The formal interviews aimed to explore answers for two research questions: the first question of whether NGOs have engaged with GE or not in the UK and China, and the main research question of why NGOs become involved in GE as a policy area or not in both countries. As a part of the public, the participation of NGOs, which is considered as the dependent variable in this research, has been discussed in the existing relevant literature. As mentioned in chapter 2, the majority of the literature on public participation in environmental law focuses mainly on several aspects, the first of which is the rationale of public participation. There are several main themes regarding the rationale of public participation: public participation as solutions to improve procedural legitimacy; participation to improve results and decisions as a substantive approach; public participation itself as an alternative regulatory tool against traditional command-and-control approach. The second involves methods of public participation. The third focus of the literature is on the benefits of as well as barriers to public participation.²⁵⁵

²⁵⁵ Albert and Passmore (n 174).

However, among the various topics discussed surrounding public participation, little attention has been made to the causes of NGO participation and what leads NGO, as an actor in public participation, to engage with certain policy areas, such as GE.

Pilot study

Time scale: from 20 May to 20 June 2016

Location: Reading

Participants: the pilot interview was conducted in the UK with an academic meteorologist in the Department of Meteorology, University of Reading who has not only expertise in GE but also collaboration experience with NGOs. In China, the pilot interview was conducted with two scholars involved in the 'National 973 Project' specifically on GE research.²⁵⁶ The two scientists were selected as respondents for the pilot interview because they are the only ones who have expertise on GE and possess a clear understanding of the situation concerning it in China.

Procedure: first, invitations were sent by email attached with a question outline and an information sheet included as attachments; a time and location were then arranged according to the convenience of participants. Each pilot interview lasted for 45-60 minutes and the whole process was recorded. The languages used in the interviews in the UK and China were English and Mandarin respectively.

²⁵⁶ Wenqi Zhang and Weijing Hao, 'The Launch of National '973 Project' on Geoengineering' *CSSN* (16 June, 2015) <http://www.cssn.cn/jjx/jjx_dt/201506/t20150616_2036676.shtml>.

The question outline for the pilot interviews is listed in the appendix. The first part of question outline seeks to rate the knowledge of participants about GE and form a general picture of their perceptions of GE. The second part aims to investigate their views on GE governance and make revisions for the formal study according to the results of the pilot interview. The last section aims to investigate the involvement or non-involvement of NGOs from a scientific community perspective.

Formal interviews

Time scale: from 25 June to 25 Sep 2016

Location: China and the UK

Participants: Two categories of respondents in the UK were selected: NGOs involved in GE include Greenpeace UK, FoE, WWF, Blue & Green Tomorrow, Biofuel Watch and ETC Group; non-involved NGOs include Practical Action, ClientEarth, and TearFund. As none of Chinese NGOs have engaged with GE, only non-involved NGOs were selected as respondents including Greenpeace China, China Biodiversity Conservation and Green Development Foundation (CBCGDF), Hande Institute of Environment Observation (HDIEO), The Institute of the Public and Environment Affairs (IPE), and Lvxing Taihang, which range from international NGOs to grassroots NGOs.

Procedure: invitations for the interviews were sent by email with a question outline and information sheet included as attachments; following this, the time and location were then arranged according to the convenience of participants. Each formal interview lasted for

45-60 minutes and the whole process was recorded. The language used in the interviews was either English or Mandarin.

The question outline for the formal interviews is listed in the appendix. The first part of the question outline seeks to form a general picture of staff members' knowledge about GE, while the second part tries to explore their different attitudes towards it and how they make decisions on their involvement or non-involvement.

3.3.4 Data analysis: grounded theory

The general strategy of qualitative data analysis employed in this research is seen as grounded theory. This is defined as 'theory that [i]s derived from data, systematically gathered and analyzed through the research process', which emphasises theory generated from data collection and analysis.²⁵⁷ Although it is discussed as a method of data analysis in this section, it can also be considered as a strategy of data collection as it involves a complete process from gathering data to analysing data.²⁵⁸ That is to say, grounded theory is an approach guiding data collection and analysis, which involves a process for generating theory from empirical data in social sciences.²⁵⁹

Concepts and categories are the key elements of grounded theory and it has several tools,

²⁵⁷ Bryman (n 47).

²⁵⁸ Ibid.

²⁵⁹ Hennink, Hutter and Bailey (n 200).

such as theoretical sampling and theoretical saturation, which have been mentioned in the preceding paragraphs, to guide the generation of concepts and categories. There are some characteristics of this approach that need to be emphasised. The first point worthy of note is that it involves an element of iteration. As is identified in the literature, grounded theory refers to a ‘circular process rather than a linear sequence of steps’.²⁶⁰ That is to say, the process of data collection and analysis needs to be repeated. In practices, this means that data is gathered from some participants at the outset, and analysis of this data is then conducted in order to refine and revise the questions as well as approach more eligible participants. Another round of data collection and analysis starts afterwards. In terms of this research, it adopts a grounded theory approach to collect and analyse data. At the outset of the research, roughly two participants were approached in the UK and China respectively to explore why they became involved with GE or not. Transcripts and analysis of the two interviews were then completed in order to revise the interview questions and identify who else was required as respondents to finally generate concepts and categories on the causes of their participation. That is to say, data analysis started after some data were collected and then shaped the next step of data collection based on the implications of the previous data. After this process, roughly two more ENGOs were approached as respondents and they were asked revised questions to see whether themes could be identified in terms of the reasons for their involvement or non-involvement with GE. This circular process was similarly carried out in the UK and China until reaching a point where concepts and categories could be generated. This raises another important point of grounded theory: saturation. It refers to a point where no more themes or elements are

²⁶⁰ Ibid.

identified to fit in with the concepts or categories in terms of the coding of data, and a point where no new data is needed to formulate theory with regard to data collection. Therefore it emphasises the stage where a repetition of outcomes emerges.²⁶¹ The issue of saturation has been discussed earlier in sampling strategy and sample size.

There is the issue of constant comparison in grounded theory, which is regarded as the core element by Glaser and Strauss.²⁶² It suggests that researchers compare bits of data so that categories can be identified, and then compare categories, notably paying attention to contrasts and connections between categories, in different settings.²⁶³ In terms of my research, it involves the core element of comparison, as it is a comparative research design to compare NGO participation in GE between the UK and China, which is not only cross-national but also cross-organisational. In terms of data and categories, raw data was analysed and compared to form different categories, notably gathering data to form important variables concerning why they become involved with GE or not. Different variables or categories were then compared within each country to identify which elements or categories play an important role in determining their involvement or non-involvement with GE. Finally, categories regarding the causes of involvement or non-involvement, which were generated from data in each country, were compared to achieve a cross-national comparison between the UK and China.

Comparison includes a key process of coding, especially axial coding (explained further

²⁶¹ Carey (n 192).

²⁶² Barney Glaser and Anselm Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (London: Aldine Transaction 1967).

²⁶³ Bryman (n 47).

below). Within this strategy of data analysis, coding has been employed as the key process to explore the potential theoretical significance when reviewing the transcripts.²⁶⁴ It is regarded as the first step of generating theory and can be distinguished in three phases in grounded theory: open coding requiring researchers to be open-minded to break down, compare, categorise data and generate as many new ideas as necessary; axial coding aims to make connections between categories by putting data together in new ways; and selective coding emphasising the most common codes.²⁶⁵ In terms of my research, the process of data analysis follows these three stages: first, according to the transcripts, I examined the responses of each respondent carefully in order to find useful information as much as possible, and then identified repetitive themes, regarding why they became involved in GE or not, as codes which were grouped into categories later on. Second, based on already formed categories, I considered whether some categories could be linked together into a new category. For example, I found that many respondents in the UK mentioned an important element of resources in different ways. Some stated in effect that as they lack resources, such as money and time, they prefer to engage with areas where they can be more effective or more competitive rather than the area of GE. Others simply mentioned ‘resources’ by just stating that ‘they don’t have enough money’. Therefore, after reconsidering the code of ‘resource’, I grouped the latter response into a code of ‘material resource’ and categorised the former response into a code of ‘strategy’. The last step was identifying the most common codes, which were discussed as the most important variables in chapter 8.

²⁶⁴ Ibid.

²⁶⁵ Ibid.

Another important issue requiring clarification concerns the point that grounded theory, after decades of development, involves many different approaches. According to Dey, 'there is no such thing as grounded theory if we mean by that a single, unified methodology as we have different interpretations of grounded theory'.²⁶⁶ In the literature, a distinction between 'a full grounded theory' and 'grounded theory-lite' has been identified with the former requiring a full and complete process ranging from theoretical sampling to develop a theory while the latter includes employing the techniques of grounded theory to develop concepts and categories as well as connections between categories, but not a theory.²⁶⁷ The latter is the most frequently adopted strategy nowadays. My research, as with most research employing grounded theory, aims to develop categories and identify connections between categories by using the techniques of grounded theory. This interpretation of grounded theory is very similar to the analysis approach of thematic analysis. It aims to 'construct an index of central themes and subthemes, which are then represented in a matrix for ordering and synthesising data'.²⁶⁸ From the definition, it can be seen that thematic analysis also involves coding and generating patterns and categories.²⁶⁹ Themes are sometimes considered as codes or categories in the literature.²⁷⁰ However, the difference between grounded theory and thematic analysis is that grounded theory is a methodology including a set of procedures, not just a method as with thematic analysis.²⁷¹ Therefore, although they have many

²⁶⁶ Ian Dey, 'Grounded Theory' in Clive Seale and others (eds), *Qualitative Research Practice* (London: Sage Publications 2007).

²⁶⁷ Nick Pidgeon and Karen Henwood, 'Using Grounded Theory In Psychological Research' in Nicky Hayes (ed), *Doing Qualitative Analysis In Psychology* (viii edn, Hove, England: Psychology Press/Erlbaum (UK) Taylor & Francis 1997).

²⁶⁸ Bryman (n 47).

²⁶⁹ Carey (n 192).

²⁷⁰ Bryman (n 47).

²⁷¹ Kathy Charmaz, *Constructing Grounded Theory: A Practice Guide Through Qualitative Analysis* (David Silverman ed, CA: Sage 2006).

similarities, grounded theory-lite is employed in this thesis to indicate a set of procedures including theoretical frameworks (ontological and epistemological positions), data collection and analysis.

3.3.5 Data storage and confidentiality

I have gone through the ethical approval in University of Reading and been permitted to carry out interviews for my research. Consent forms including data confidentiality issues were sent to participants and signed by them before interviews started. The information given by participants will remain confidential and can only be accessed by the researcher and her supervisors. Respondents are not identified in the thesis although some of their responses will be used for discussion in an anonymised form in the later chapters. Any data collected has been held in strict confidence (i.e. on the N drive in the University of Reading Law School) and no real names were used in this study. The records and transcripts of this study have been and will be kept private. No identifiers linking respondents to the study will be included in any publications. The data will be destroyed securely and safely after five years.

3.3.6 Difficulties and Limitations

This research adopts a small number of in-depth interviews to explore the reason why NGOs in the UK and China participate in GE or not. An advantage of small number

approaches is that they have better internal validity and measurement validity,²⁷² which means the approaches allow more in-depth study into what we want to explore.²⁷³ However, it has problems with generalising, which means the findings cannot be over generalised among all groups in the UK and China. Second, this research can be considered as a ‘most-different design’, which refers to a method examining cases as different as possible to identify similar factors influencing these different cases.²⁷⁴ This research includes two different cases of the UK and China in order to identify variables that work in both countries through comparison. Meanwhile, it is a cross-organisational comparative design between involved and non-involved NGOs. However, this method has a limitation in that ‘it is more useful for ruling out necessary causes than determining causality’.²⁷⁵

There are also difficulties in conducting in-depth interviews in practice. The first aspect of difficulty lies in accessing participants. As the respondents need to speak for the organisations they represent, it is better to invite directors or staff members with high positions in these groups. Although most of the interviewed respondents were directors in their organisations, there was a difficulty in accessing chief directors in some large NGOs, such as Greenpeace. Another obstacle in approaching potential participants is that,

²⁷² Internal validity, as opposed to external validity was introduced by Campbell in 1957. Internal validity aims to deal with the question of whether ‘a treatment had an effect in a given study’ while external validity addresses the issue of whether this effect could be generalised. (See Donald Campbell, ‘Factors Relevant to the Validity of Experiments in Social Settings’ (1957) 54 *Psychological Bulletin* 297; Charles Reichardt, ‘Internal Validity’ (2015) 12 *International Encyclopedia of the Social & Behavioral Sciences* 450) Measurement validity relates to the concern whether operationalization ‘adequately reflect the concept the research seeks to measure’. (See Robert Adcock and David Collier, ‘Measurement Validity: A Shared Standard for Qualitative and Quantitative Research’ (2001) 95 *American Political Science Review* 529.)

²⁷³ Baker and Edwards (n 241).

²⁷⁴ Arend Lijphart, ‘Comparative Politics and the Comparative Method’ (1971) 65 *The American Political Science Review* 682.

²⁷⁵ *Ibid.*

especially in China, people turned down my request for an interview in the first place when they heard about the topic of GE, as they were reluctant to make comments if they had little knowledge on it. It takes time to persuade people to participate to talk about why they do not engage with GE and some still refused to be interviewed in the end. The second aspect of difficulty was conducting interviews in different national contexts. As mentioned earlier, this research involves a comparison between the UK and China. Due to the different situation concerning GE in the two countries, as well as the different languages required, it was difficult to arrange all the interviews in both countries in a relative short period of time to situate responses in different social contexts. In addition, translating the transcripts of interviews in China required considerable time, and also the accuracy of translation matters when understanding their responses.

Appendix of Chapter 3

Appendix 3.1: Question outline for the pilot

The purpose of this interview is to find out a little more about the perceptions and experiences of respondent relating to geoengineering and views on the NGO participation in it.

To start off, what do you know about geoengineering?

1. How did you find out about geoengineering for the first time?
2. Have you ever done research on geoengineering? What kind of research have you done?
3. As a climate scientist, is your work now specifically focused on GE research?
4. So far, how would you rate your own knowledge of geoengineering?
5. What are the main uncertainties in our understanding of the feasibility and impacts of geoengineering? Do you think geoengineering will be implemented in the future? Why?

What are your perceptions of geoengineering research and its governance?

6. How would you classify different stages of research on geoengineering? What are the criteria for these stages?
7. To the best of your knowledge, what stage of research on geoengineering are we at now?
8. What do you think are the most serious concerns involved in conducting geoengineering research?
9. Do you think self-governance is sufficient for the current research stage of governance? If so, why is that? If not, what further measures might be needed?
10. What kind of research governance do you think is needed at other stages of research?

How do you perceive NGO participation in geoengineering?

11. Do you know any NGOs who have shown interest in geoengineering? If you do, could you name a few? (Which NGOs? What's the nature of these NGOs? How did they show interest in geoengineering?)

12. Have you ever been in collaboration with NGOs during the course of your working life? If so, could you describe the circumstances of the collaboration?
13. What are the benefits and obstacles of collaborating with NGOs?
14. Is there any difference of involvement in geoengineering between the scientific community and NGOs?
15. What do you think are the most serious concerns about the involvement of NGO in GE?

Appendix 3.2: Question outline for formal interviews

The purpose of this interview aims to find out the perceptions and experiences of respondents relating geoengineering and the reasons why NGOs become involved or not in GE.

To start off, what do you know about geoengineering?

1. How did you find out about geoengineering for the first time?
2. Have you ever obtained some knowledge about geoengineering?
3. As a staff member of an NGO, is your work now related to GE research?
4. So far, how would you rate your own knowledge of geoengineering?
5. What do you think are the main uncertainties in our understanding of the feasibility and impacts of geoengineering?

How do you perceive the role of NGOs in geoengineering?

6. Do you generally oppose or support GE research? Could you outline the main reason?
7. Has your institution (namely the ENGO you work for) expressed or published any comments or opinions in any method on GE? Could you tell me about it in detail?
8. If your institution has been engaged in GE, could you tell me the reason why you have paid attention to this area? If not, could you explain your potential reasons for staying clear of GE?
9. Have NGO tried to get involved in establishing a governance framework for GE research? (This could be a specific effort by your institution or other NGOs you know of.)

10. If so, what are the methods or opportunities for NGOs to be involved? What are the challenges and obstacles during the course?

11. How do you evaluate the effects of the involvement? What contributions do you think NGOs can make to governance of geoengineering?

12. How would you situate NGOs in the debate of geoengineering? Which NGOs have been the biggest players so far around the world?

13. Chinese NGOs: What is your opinion of the national geoengineering project 'the Research on the Theory and Impacts of Geoengineering' in China? Has any NGO tried to exerted influence on the project?

Table 3.1: Scope of Chinese NGOs

	Typology	Aims and scope
Greenpeace China	INGO	Various topics in environment areas.
CBCGDF	Government-supported NGO	Green development and environmental litigation.
HDIEO	Business-supported NGO	Investigation on local and regional environmental problems; research on national and worldwide hot topics in environmental area.
TBEAS	Large grassroots NGO	Local environmental pollution problems, such as air pollution and water pollution in the north China.
IPE	Large grassroots NGO	Environmental information disclosure and public participation.
Lvxing Taihang	Small grassroots NGO	Local pollution problems in Hebei Province.

Table 3.2: Aims of UK NGOs

NGO	Aims and scope
FoE	Campaign group on various topics in environment area, such as climate change, environmental justice.
WWF	Aiming at ensuring the harmony between human beings and nature.
Greenpeace	Campaign group with various focuses, such as climate change, oceans and peace.
Blue & Green Tomorrow	Focusing on sustainable living.
ETC Group	Aiming at monitoring power, tracking technology, and strengthening diversity.
Biofuelwatch	Providing information, advocacy and campaigning with regard to the climate, environment, human rights, and public health.
Practical Action	Aiming at using sustainable technology to challenge poverty.
TearFund	A Christian charity dealing with reducing poverty.
ClientEarth	Lawyers using environmental law to protect oceans, forests, other habitats and people.

Chapter 4 Interview Results

As mentioned in chapter 3, the main research method employed in this research is the qualitative in-depth interview method. It aims to answer the question of why NGOs participate or do not participate in GE in the UK and China. Based on this research question, samples of interviews were selected under the strategy of purposive sampling.²⁷⁶ Respondents were selected in a strategic way through two criteria: first, two countries – the UK and China – were chosen as case studies;²⁷⁷ second, a certain number of NGOs within each country were selected. Most of the NGO respondents are environmental NGOs (ENGOS), making them eligible and relevant to this study. As mentioned in chapter 3, an ENGO is a non-governmental organisation in the environmental field. This research seeks to identify two types of ENGOS in each country, NGOs involved in GE and those not involved in it. In the UK, six ENGOS that are involved in GE were selected as respondents: FoE, WWF, ETC Group, Biofuel Watch, Blue & Green Tomorrow, and Greenpeace. These six NGOs are the most active NGO players in GE discussion. As for the non-involved NGOs, TearFund, Practical Action, and ClientEarth were selected. This is because, although these groups have not engaged in GE, their focus includes climate change, which is covered within the scope of GE. It is meaningful to explore why they are not involved in GE since they do focus on the broader sector of climate change and might, potentially, be expected to have some interest in GE. In China, due to the fact that none of the ENGOS have been involved in GE, all the respondents were selected from

²⁷⁶ For literature on ‘purposive sampling’, see for example, Bryman (n 47).

²⁷⁷ The reason why I select the UK and China as case studies has been discussed in section 1.2.4.

non-involved groups. CBCGDF, HDIEO, TBEAS, IPE, Lvxing Taihang, and Greenpeace China were chosen as respondents for the interview. The reason why these groups were decided on as the respondents is that they cover a wide range of types of ENGO in China, namely government-supported NGOs, business-supported NGOs, large grassroots NGOs, small grassroots NGOs, and international NGOs respectively. This wide range of choice aims to reduce selection bias when sampling.

In this chapter, the results of qualitative interviews to the ENGOs mentioned above are presented. These results will be employed to analyse the research question of why NGOs are or are not involved in GE in the UK and China. This analysis will be developed more fully in chapters 6 and 7. This chapter comprises three sections: section 4.1 presents the empirical results of interviews in China; section 4.2 provides the data collected among UK NGOs; the final section addresses concluding remarks of results in the two countries and points out interesting responses to be discussed in chapters 6 and 7.

4.1 Interview Results in China

Based on the interviews in China, it was identified that none of the ENGOs had worked on GE as a policy area. The fact was first identified by searching online with keywords like ‘Geoengineering and NGO’, before conducting formal interviews in China, as no relevant search results revealed any Chinese NGO involvement. This assertion was validated by conducting interviews with respondents from Chinese NGOs where all respondents

indicated that they had realised that no groups, including their own organisation, were yet involved in GE. According to the methods outlined in chapter 3, nine interviews were conducted in China to investigate opinions on GE and reasons for non-involvement. Before conducting formal interviews, I carried out a pilot interview with a social scientist and a climate scientist on GE, both of whom are involved in the Chinese National 973 Project on GE. This national research project is the only research project specifically focused on GE in China. The two scientists were selected as respondents for the pilot interview because they are the only Chinese respondents that have expertise on GE and possess a clear understanding of circumstances surrounding GE in China. The aim of conducting a pilot interview is to examine the interview questions for the formal interviews and perhaps find likely initial answers to these questions. In relation to formal interviews, as mentioned above, none of the interviewed NGOs had engaged with GE.

4.1.1 Academics, Social Science Association (SSA), and Beijing Normal

University: Pilot Interview

I interviewed two academics from the National 973 project on GE in China: a professor from the social science group at the Social Science Association (SSA) and an expert from Beijing Normal University focusing on the technical part of GE. They commented on GE research, Chinese NGOs' involvement in GE and public participation in GE. Generally, they held similar views on GE research that computer experiments should be carried out. These opinions were held based on several factors. First, GE is likely to have a great impact on a global scale, including in China, which requires us to consider it carefully

before deployment. It is also important for China to participate in GE research as a technical preparation for the nation. Second, computer modeling has no adverse climatic impact, and hence will not cause any health and environmental issues. However, there is a limitation for GE research in China as scientific research is based primarily on climate models without consideration of engineering factors. This makes it unrealistic or unpractical to some extent. For example, according to the respondent from SSA, 'scientific research is mainly based on climate models in China. Scientists can change an index of a climate model on the computer easily just by clicking on the screen; however, they cannot do this in reality. This is a problem for research that scientists have not considered how to achieve the change of index in the real world'.

In terms of GE NGO participation in China, they both agree that there are virtually no Chinese NGOs currently focused on or involved in GE except for a very few International NGOs in China, such as Greenpeace China. According to scientists, the reasons why NGOs in China do not talk about GE can be summarised in five points:

- First, Chinese NGOs do not have enough expertise on GE. Besides the several scientists involved in the national GE project, the general public, including NGOs, does not have any foundational knowledge related to GE. Without enough information or expertise on GE, NGOs are not able to generate opinions or comments on it.
- Second, NGOs in China do not have channels for accessing information on GE. GE is a specialised area in climate change and scientists in China have not made it clear to

the public, as it is still at its initial stage of research. In addition, Chinese NGOs have no collaborations, or even connections, with the scientific and academic community on GE.

- Third, Chinese NGOs focus more on traditional environmental issues, such as pollution, energy saving and animal protection. They seldom choose topics on emerging technology or innovative environmental areas.
- Fourth, most Chinese NGOs concentrate specifically on local environmental problems. In general, when the NGOs are initially founded, they are generally based on local issues, which tie in with their institutional aims. They may then go on to expand their focus to different areas during their organisational development.
- Fifth, a low level of public consciousness of GE in China has led to the public caring more about environmental issues closely related to their daily life, especially environmental problems causing health issues. GE is neither salient to them, nor is it related to daily life. Therefore, without public concern, NGOs have little motivation to discuss GE. This point raises an interesting idea concerning public salience in political science aimed at exploring the various levels of importance of issues attached by the public, which will be discussed in further detail in chapter 6. Furthermore, as in its early stage of research, the scientists or experts involved in the national GE project do not regard it as an urgent issue. There are much more imminent concerns, such as air pollution, and therefore it may not be cost effective in

terms of time investment to spend time on GE. This relates to the sense of urgency in terms of the nature of the threat, which is discussed as an important variable to explain the non-involvement of Chinese NGOs in chapter 6.

Greenpeace is an international NGO in China that has had some knowledge on GE. This is first because, in general, INGOs have more expertise than Chinese NGOs in climate science, which means their staff is better trained and more qualified. The INGO may also have received support, such as technology support and funding support, from their headquarters abroad. Additionally, INGOs may become involved in GE due to their global organizational aims. For example, Greenpeace China can access information on GE from its headquarters and can be involved in it according to the requirements from headquarters. INGOs in China also generally have sufficient professionalism to produce reports on environmental issues. These reports are well received by the scientific and academic communities in China. For example, the interviewed climate scientist sometimes quotes their newsletters or reports and then translates them into scientific language when conducting scientific research. This reveals that the expertise of INGOs in China is acknowledged by the academic community, and therefore provides more opportunities for them to engage in conversations with academics.

4.1.2 Results of Formal Interviews

Formal interviews were conducted amongst six ENGOs in China, none of which have engaged in GE. The government supported NGO – China Biodiversity Conservation and Green Development Foundation (CBCGDF) – considers biodiversity as their foremost

mission. HD Institute of Environment Observation (HDIEO) is a business-supported NGO focusing mainly on an environmental history project to record important environmental incidents in China. Tianjin Binhai Environment Advisory Service (TBEAS) is a large grassroots NGO focusing mainly on water pollution in Tianjin, due to the interest of the NGO's leader in its early years, and has since expanded its mission to other environmental issues, including national climate change, based on public concerns and government policy. The other interviewed large grassroots NGO – the Institute of the Public and Environment Affairs (IPE) - focuses specifically on the disclosure of environmental information and public participation. As for small grassroots NGOs, Lvxing Taihang was selected as the respondent. It is a newly established NGO focusing specifically on pollution in Hebei province. In relation to INGOs in China, Greenpeace China was selected as the eligible participant.²⁷⁸

The results of the interviews are presented according to the interview questions. The interview questions can be categorised in three parts: their knowledge on GE, the reason why they do not engage with GE, and their perceptions of NGO participation generally in China. These questions aim to explore the possible answers to the research question of why NGOs participate or do not participate in GE. At the beginning of the interviews, respondents' knowledge on GE was explored to identify whether they have a basic understanding of it by asking questions like 'how did you find out about GE for the first time? And what do you know about it?' It is not surprising that domestic Chinese NGOs

²⁷⁸ This is because, according to the results of online searching on NGOs involved with GE as a policy area in China, only staff members from Greenpeace China, who became the respondents for my research later on, have some knowledge on GE. Before conducting interviews with them, I was expecting them to talk about why they engaged with GE; however, it turned out that, although the staff members knew about the topic, they were not involved in GE as an organisation.

did not have any knowledge on GE. For example, the respondent from CBCGDF stated that the staff members have no knowledge or expertise on GE because there is not any publicity of GE in China. The same response was identified during the interviews with the other domestic NGOs. They all stated that they had never heard about the topic of GE in China. Greenpeace China, the interviewed INGO, indicated that the organisation had some information on GE. Firstly, this was due to a mandate from the headquarters that they have some knowledge of GE as part of the overall international mission of their organization. There was no direct mandate to engage with GE. Secondly, one of them had carried out research on GE for a PhD project but it was not related to current work. They also had communications with experts from the national GE project in China but these were personal and not on behalf of Greenpeace as an organisation. However, the respondent stated that Greenpeace China had not engaged with GE as a policy area. Therefore, it was evident that domestic Chinese NGOs did not have any basic understanding, much less expertise, of GE. The interviewed INGO did have some knowledge of it.

After exploring their knowledge level on GE, I went on to investigate the core issue of the interviews, notably the reasons why they do not engage with GE. In response to a number of semi-structured questions, the respondents from domestic Chinese NGOs all provided very similar answers, while the INGO, Greenpeace China, provided different reasons. The first important and frequently mentioned reason for non-involvement by domestic Chinese NGOs was a deficit in information and expertise on GE. For example, the respondent from CBCGDF stated that they did not engage with GE because ‘the staff members have no knowledge or expertise on it and this is due to the lack of publicity on GE in China’. As for

HDIEO, the interviewee confirmed that the staff members in the organisation lack expertise on GE. He continued to explain that ‘we have no channel to get information on GE as we generally update information using social media and government reports which have not mentioned GE so far’. Respondents from TBEAS and IPE respectively also mentioned this information acquisition problem. They explained that ‘external exchange of information on topics such as GE has relied heavily on staff members including leaders. If we have not established contacts with NGOs abroad especially organisations in the UK and US, we can hardly find appropriate channels to retrieve information on GE. In addition, domestic NGOs in China generally seldom cooperate with academics or research institutes, which leads to the situation that they are not updated with scientific information related to the environment’. The participant from Lvxing Taihang stated that ‘small NGOs generally have no information on GE’. According to his explanation, it can be concluded that they have very limited means of retrieving information on GE. In theory, small NGOs are able to access information from the official websites of the Environmental Protection Administrations, news reports and communication with other NGOs. However in practice, they seldom keep up to date with the latest information. Additionally, small NGOs devote their time to solving local environmental problems, mainly by lobbying local governments directly or conducting field investigations on environmental issues. Therefore they barely take in updated, wider scientific information. In terms of expertise, the respondent in effect stated that small NGOs share the same lack of expertise. Most staff members are not well trained or do not possess a relevant scientific background and, thus, they may not be able to comment on specialised areas such as GE.

The idea of a deficit in knowledge and information can be analysed under the variable of resource, which will be discussed in further detail in chapter 6. The problem of expertise amongst domestic Chinese NGOs, considered as a form of labour resource, will also be discussed in chapter 6. However, the respondents from Greenpeace China did not mention any problems with a deficit in information or expertise. The difference in expertise and information between Greenpeace China and domestic Chinese NGOs will be analysed in chapter 6.

Another important point made by the respondents is the focus area of a NGO. All respondents, including the interviewees from Greenpeace China, mentioned the idea of NGO's focus and topic. For CBCGDF, the respondent stated that 'many government-supported NGOs mainly focus on the macro-level of environmental policy, such as publicizing ideas according to government policy'. Therefore, the respondent indicated effectively that, as the government has not placed it on the agenda in the political area, government supported NGOs might not focus on GE unless and until government has made its policy position clear. This raises the idea of the political preferences of governments, as discussed in the literature on political opportunity, which will be examined in detail in chapter 6. The HDIEO interviewee stated that 'the reason why HDIEO has not talked about or focused on GE is that it mainly works for the sponsor company that provides funding for HDIEO and focuses on areas according to the director's interest'. The TBEAS respondent attributed non-involvement partly to the NGO's focus area. He explained that 'the initial focus depends on the interest of the director and then

expands to other areas according to results of field investigations,²⁷⁹ public consciousness and government policy during the process of development. Normally, NGOs focus on local environmental problems first and then pay attention to national and international environmental issues after they have established a broader network through social media'. Respondents' views indicate that, at the early stages of NGO establishment it is not typical for NGOs to examine GE as an issue as GE is not considered a local problem. When NGOs have broader working areas, they may still be unwilling to consider GE because neither public consciousness nor government policy surrounding GE has been formed in China. As for Lvxing Taihang, a grassroots NGO, the interviewee stated that their working areas are based principally on the interests of the director and are, therefore, typically restricted to local environmental issues. The Greenpeace China respondent also included the focus of the group as one of the reasons why they did not engage with GE. According to the respondents, they choose their topics depending on whether they can effectively make contributions, which requires people with expertise, institutional capability, and enough funds to be spent on GE. This response raises the issue of effectiveness and material resource, which will be analysed under the variables of strategy and resource respectively in chapter 6.

Greenpeace China mentioned several interesting points that were not identified in the responses by domestic Chinese NGOs. First, it is still very early for NGOs to be focusing on GE. According to the respondents, Greenpeace focuses more on mainstream environmental areas such as energy and pollution, which are more urgent than GE. This

²⁷⁹ This refers to field investigations into local environmental problems.

decision relates to the sense of urgency and will be discussed in further detail in chapter 6.

Second, the respondents stated that ‘GE is a novel topic in all kinds of disciplines such as politics, science and economics, without a clear impact on the environment’. This suggests that there is a concern surrounding the uncertainties and ethical issues (such as moral hazard in terms of the impact) of GE.

Third, they made it clear that GE is still a topic located primarily within the scientific community and it takes time to make it known to the wider public, including NGOs, and for the government to adopt policy making in the area. According to the respondents, it may be more reasonable to say that ‘the scientific community has not publicized GE to the public rather than saying that NGOs have not focused on it’. Another important point made by the respondents is that ‘it is important to know about the overall political environment in China, which means that understanding what the big theme is for government currently is crucial. In particular, if you have conducted good research, you must wait for the right time to put that information across, which may involve having to wait for the right moments in the political cycle where the government can actually take it in’. This point can be seen within the political opportunity variable, which will be an important focus of the discussion in chapter 6.

The third portion of the interviews dealt with NGO participation in government policy in China. According to the respondent from CBCGDF, NGOs can play several roles in improving public participation in China. Firstly, they can publicize both policy and

environmental information. Secondly, NGOs can act as a bridge for communication between the public and the government when public anxiety is heightened over a specific issue. NGOs in China take on the role of a mediator, which will be further discussed in the literature on participation in chapter 5. However, according to the CBCGDF respondent, the difficulty with participation lies within the communication with the government. Most government supported NGOs do not participate until the government needs them to, as sometimes the government will not let them engage even if they would like to become involved. It is also important for NGOs to know how to communicate with the government. This means it may be hard for NGOs to participate when their views do not align with government views. This point relates to political opportunity and will be analysed further in chapter 6.

HDIEO's respondent also talked about NGO participation within government policy. He stated that the common method of participation for large NGOs is to apply for government projects on policymaking²⁸⁰. These programs allow the NGOs to make recommendations in reports and, thereby, have an influence. He added that 'another method is to make plans on ecology development for government in the context of environmental impact assessment'. In addition, the respondent indicated that large NGOs hold regular meetings with the government and other NGO partners to discuss environmental issues, which is an effective way to influence policymaking. Based on this response, the relationship between NGOs and the government can be summarised as two types of relationship. On the one hand, there is a distance between NGOs and the government, as the government does not

²⁸⁰ In this process, according to the respondent, NGOs can bid for policy projects and receive funding or grant for this.

completely trust NGOs, especially INGOs. On the other hand, NGOs are very much reliant on the government as the government strictly restricts their activities.

Out of the large NGOs in China, the respondents from TBEAS and IPE both believed that NGOs could act as a bridge between the government and the public. They believe this because the public finds it difficult to communicate with the government directly and may end up turning to mass protest in order to exert pressure on the government. NGOs can provide information before a protest is organised. This can help the government to identify and deal with relevant issues. However, the respondents added that the government faces a dilemma in that, although they may disclose high-quality information effectively, the public still may not be satisfied. Nevertheless, if the government fails to disclose information, conflicts will be more likely to crop up. With regard to the small, grassroots NGO, Lvxing Taihang, the interviewee indicated that small NGOs are potentially able act as a bridge between the government and the public. This is first because small NGOs have closer connections with the public. For example, the public provides information and reports environmental issues to the NGO via social media. However, smaller NGOs seldom publicize or campaign as they have no expertise and cannot ensure quality communication. Smaller NGOs generally seek out local environmental issues and then lobby local governments to provide solutions or attention to these issues. Meanwhile, small NGOs are able to influence the policymaking process by providing suggestions via an online government portal which revises laws and acts. However, in practice, due to the lack of expertise, most small NGOs are not able to make effective comments on it.

When it comes to Greenpeace China, both respondents also thought NGOs could act as a bridge between the government and the public. According to the respondents, INGOs can play a significant role in the publicity of scientific research. For example, Greenpeace conducts activities related to air pollution research at Beijing University. This cooperation with academics in universities helps bring their scientific recommendations to light in a way that the public will understand. Apart from air pollution, INGOs have frequently made use of research information from academics. Secondly, INGOs may apply pressure on the government by publicizing environmental issues and improving public consciousness so that the government is forced to deal with their issues. Thirdly, INGOs have various ways to influence policymaking. INGOs were able to use social media and their connections with deputies in the People's Congress when the government solicits opinions.²⁸¹ In addition, they are considered as experts on environmental issues to bring expertise or technology from overseas to improve their own institutional capability.

4.1.3 Conclusion on the results in China

This section provides a brief summary on the results of the interviews in China. For impact and brevity, the data will not be presented in full detail. Rather, this paper will explore key themes and arguments and delve deeper into relevant issues. This approach may result in omitting some interesting points made by the respondents. However, all interesting points made, including those not presented in this section, will be addressed in detail in the

²⁸¹ Since January 2017, new Chinese laws were launched to tighten security controls over foreign NGOs, which aimed to crackdown against 'foreign forces' and protect national interests; see Zheping Huang, 'NGOs Are Under Threat In China's Latest Crackdown Against Foreign Forces' (2017) <<https://qz.com/873489/ngos-are-trying-to-stay-alive-in-chinas-latest-crackdown-against-foreign-forces/>> accessed 4 January 2017.

discussion in chapter 6.

Based on the results presented above, several themes emerge surrounding why NGOs have not been involved in GE.

- First, the deficit in knowledge and lack of expertise on GE is identified as an important point concerning domestic Chinese NGOs.
- Second, the focus of the relevant groups significantly affects non-involvement of both INGOs and domestic Chinese NGOs.
- Third, low public consciousness on GE in China is an important political opportunity that will be discussed in chapter 6.
- Fourth, the sense of urgency and effectiveness is only identified in the response from Greenpeace China.
- Fifth, resources, including money and time, were frequently mentioned by all respondents, which will also be analysed in chapter 6. The role of NGOs in public participation in general can be identified as a bridge for communication between the government and the public. This raises the mediating role of NGOs in the literature on public participation, which will also be discussed in further detail later on.

4.2 Interview Results in the UK

This section presents the results of the interviews conducted in the UK. Generally, the results indicate that some ENGOs have engaged with GE while others have not. The pilot interview with a climate scientist was conducted at the Department of Meteorology at the University of Reading. The aim of the pilot interview was to examine the questions for the subsequent formal interviews as well as find likely answers to some of these questions. The reason for inviting a climate scientist as the respondent for the pilot interview is that the scientist possesses a good understanding of GE and the stakeholders involved in the discussion on it. The formal interviews with ENGOs in the UK were carried out among eight respondents from nine different organisations (one respondent works for both Biofuel Watch and ETC Group and hence speaks for the two organisations). Among them, six of the involved ENGOs are main players that actively participate in GE policy discussion and campaigns in the UK: Greenpeace, ETC Group, Biofuel Watch, WWF, Friends of the Earth, and Blue & Green Tomorrow. The three NGOs that are not involved in GE are TearFund, Practical Action and ClientEarth. The results of the interviews will be presented in two parts: NGOs that are involved in GE and those that are not. Within each part, the responses will be summarised in different categories according to the structure of the interview questions. However, the responses will not be constrained strictly within each question, as the questions were semi-structured. Finally, a conclusion will be made that will point out any interesting or surprising answers or responses.

4.2.1 Climate Scientist: Pilot Interview

The respondent has a basic understanding of climate models and an interest in scientific and policy issues surrounding GE. A group of semi-structured questions concerning the respondent's opinions on GE and research, perceptions of NGO participation and expertise were asked. The respondent considered GE as a last resort. However, he regarded research on GE as beneficial and sensible as it contributes to a better understanding of climate change, although he understood the concern that research may lead people towards deployment. He mentioned that amongst NGOs involved in GE in the UK, some organisations are hostile, such as Greenpeace and Friends of the Earth, as they fear that GE would distract people from reducing GHG emissions (i.e. mitigation). This view was confirmed by other respondents, which will be discussed later in this section. It is interesting to note that viewing GE as a distraction has been identified as one of the key reasons why NGOs in the UK are reluctant to become involved. This will be analysed in further detail in chapter 7.

He continued to explain that 'I would imagine many of the ENGOs are against it because they fear it would be sending the wrong message that we can engineer our way out of the problem rather than solving the problem, which is emissions, in the first place'. In terms of NGOs' hostile position to GE, the respondent agreed with the general view held by many NGOs that we should concentrate on reducing emissions at the current stage. However, he highlighted a concern about NGOs that are resistant to scientific facts. According to his response, 'some NGOs have a prescribed policy and are hard to move

from that policy’, meaning they are slow to adapt to scientific facts if the facts contradict a policy. Finally, the respondent raised a crucial point regarding NGOs’ involvement in GE. He stated, ‘it is a case of proportion, which means it seems to be fine if there is a relatively a small proportion of NGOs working on GE rather than a huge institution dedicated to it’. This point highlights the importance of the proportion of resources, such as labour and money allocated into the area of GE. A similar view on the proportion of resources is also identified in other respondents’ answers. This relates to resource mobilization and will be analysed in further detail in chapter 7.

4.2.2 Interviews with Involved NGOs

Interviews were carried out with Greenpeace, Biofuel Watch, ETC Group, Friends of the Earth, WWF, and Blue & Green Tomorrow.²⁸² These NGOs are the most actively involved groups in the UK.

First, I explored the knowledge level of respondents on GE in order to have a basic understanding of their background. In general, all of the respondents believed that they had a relatively good knowledge on GE. For example, the respondent from Greenpeace had expertise in ocean fertilisation and was well informed on other technologies and proposals concerning biodiversity. He pointed out that Greenpeace put a marker down concerning GE when there was not really an active debate on it. Due to this early attempt to explore this area, as well as their general expertise as a NGO, they were invited to many discussions on GE and involved in crucial reports, such as the 2009 Royal Society

²⁸² All the interviewed UK NGOs have been introduced briefly in Table 3.2.

Report.²⁸³ In addition, he indicated that, with a good grasp of the uncertainties and the areas of unknown, he possessed more expertise on GE than many others within the NGO community. The respondent from both the ETC Group and Biofuel Watch also amassed a sound knowledge of GE during the course of his working experience. He explained that the current focus of his work is the implications of GE under the Paris Agreement. This raises an interesting point in that respondents have frequently mentioned the Paris Agreement when talking about GE. In chapter 7, this will be discussed under the variable of political opportunity concerning contingent factors. The respondent from Friends of the Earth stated that they had carried out some smaller projects and research on both SRM and CDR, and the NGO had a policy position on GE. The respondent from WWF held a similar view. He understood GE well in the context of mitigation and WWF has a position statement on GE within this context. The Blue & Green Tomorrow respondent stated that, as a nonprofessional rather than as a scientist, he personally had a good knowledge on GE.

After exploring the respondents' knowledge on GE, I went on to investigate their perceptions of GE research activities. It is interesting to identify that all respondents indicated that they do not oppose all forms of GE research. Some research, such as computer modelling, has brought many insights which are useful for the wider public to understand what options we have in the future. They believed that the decision whether to oppose or support GE research should depend on a case-by-case basis. However, they all expressed concern over the moral issues, in particular that too much effort and resource devoted to GE research will be a distraction from investing resources in other approaches

²⁸³ Shepherd and others (n 11).

to combating global warming. This is consistent with the view held by the Reading climate scientist, that the proportion of resources is a concern, in that we should not devote too much to GE. Instead, we need to invest the majority of resources elsewhere, notably in mitigation and adaptation. This is a key point related to the variable of resources, which will be discussed further in detail in chapter 7. The responses indicate that the NGO respondents generally do not oppose GE research activities, which can bring some useful insights and understanding to climate change, as long as there is not a large proportion of resource allocated to it. Aside from a general agreement amongst the respondents on this issue, the respondent from ETC Group and Biofuel Watch questioned the motivation behind various research activities on GE. He argued that 'there is a particular reason behind carrying the research out. Lots of experiments are led by the funding and the body behind them, and expecting the outcome they are hoping for'. He suggests that we should pay attention to the sources of funding for research to ensure that the research is beyond reproach.

These six NGOs are actively involved in the GE discussion and have published official opinions on the topic. In general, these organisations have significant concerns about GE. The respondent from Greenpeace indicated that they generally oppose the deployment of GE, as it is a risky strategy with no guarantee that the benefits would outweigh the risks. Greenpeace also highlighted that the research may have significant adverse impacts on the environment. Their view on the benefits and risks is consistent with the costs and benefits model in the resource mobilisation literature and with the idea of technological fear within the variable of emotions, which will be analysed in chapter 7. The respondent then added

that ‘we do not actively support research into GE but we do support having a governance system in place’. The respondent from ETC Group and Biofuel Watch indicated that they have commented on GE and tried to analyse research possibilities but, in general, the NGO has sought to be oppositional on it. As for FoE, the interviewee mentioned their policy position regarding their concern about SRM specifically. The respondent from WWF suggested that GE is not something necessarily to be considered as a first choice. The respondent from Blue & Green Tomorrow stated that their official view is that ‘GE is part of the continuum of sustainability: mitigation prevents the change; adaptation adapts to the change; and GE reverses the change’. From their involvement in and views on GE, it can be seen that these NGOs, which are actively involved in GE, are in varying degrees generally opposing it, expressing their concerns about GE activities, and contributing to governance control over it.

The respondents provided a range of reasons for their involvement in GE. The respondent from Greenpeace outlined two main reasons for becoming involved:

- First, Greenpeace is committed to dealing with the problems of climate change and, within this context, became involved in order to point out that GE is a distraction from the urgent actions needed to reduce emissions. In addition, he indicated that the 1.5-degree target in the Paris Agreement means we still have to deal with emissions by any methods necessary, which may increase the potential and possible scope for GE methods. This response is interesting in that the Paris Agreement has encouraged Greenpeace to become involved in GE as a policy area rather than focusing purely on mitigation.

- The second reason for their involvement is due to the potential for GE to have its own impact on biodiversity. Biodiversity is one of the most important focuses for Greenpeace and they are involved in order to explore the potential impacts of GE on biodiversity. As for Biofuel Watch, the respondent stated that the main area of concern for them is biological techniques, which include GE techniques such as ocean fertilisation.

The respondent from the ETC Group stated that it tended to focus on emerging and new technologies associated with the environment, which means that GE is within its remit. From the responses, we can conclude that being ‘within the remit’, which is considered related to the variable of goals, is the main reason why ETC Group and Biofuel Watch have become involved in GE. These points concerning the variable of goals will be discussed in further detail in chapter 7. In addition, according to the respondent, the main focus of the two groups is trying to disseminate the message of the Paris Agreement to the public, which again emphasises the Paris Agreement as a context variable. In relation to Friends of the Earth, the respondent provided two reasons for their involvement. Firstly, ‘it is clear to us that our chances of meeting the 1.5 degrees target in the Paris Agreement are incredibly limited, so we need to be looking to see what efforts CDR could have’, which will be discussed under the variable of political opportunity as Paris can be seen as representing this.²⁸⁴ The second reason is that they are trying to stop the political and scientific community from disseminating the message that there is no longer a need to

²⁸⁴ This point will be analysed in section 7.1.1.

bother with mitigation. In relation to WWF, the respondent provided reasons from a different angle that GE is one of the things that they need to give some attention to in order to keep on top of it as an organisation. This is discussed under the sub-variable of competition in chapter 7.²⁸⁵ He also stated that the involvement is attributed to the fact that WWF is an ENGO with a working area including climate change, which suggests that GE falls under their goal remit. From the responses concerning the reasons for their involvement, it is interesting that all of the relevant NGOs mentioned the Paris Agreement and the goals of their organisations.

Some respondents expressed their concerns on the perceptions of the involvement of other NGOs. The respondent from Greenpeace had a concern about the involvement of a volume of NGOs in the discussions on GE. This is because it is a distraction for NGOs, which are considered as having limited resources, to take up all their time and energy on a particular topic when they could have allocated resources more productively elsewhere. This falls under the variable of resources within the literature on resource mobilization and will be discussed further in chapter 7. He then added that GE is not limited to a narrow focus issue, but rather a broad concept. The broadness makes it difficult to thoroughly cover the vast spectrum of issues under the GE umbrella and, therefore, could distract NGOs. The respondent from Friends of the Earth held a similar concern, remarking that ‘there is too much talk around GE, and the more we talk about it the more it raises the idea that there is a magic solution. We need to avoid conversation about things of the future and concentrate on what we need to do now, such as mitigation’. In making this point, the respondent

²⁸⁵ Because of high competition among NGOs in the UK, WWF needs to keep its organisational competitiveness to know about emerging topic concerning climate change, such as GE.

mentioned the relationship between the present and the future, which concerns a sense of urgency.²⁸⁶ Similarly, the interviewee from WWF provided an explanation surrounding the concern that NGOs, with their limited amount of resources, need to focus on areas where they can effectively contribute. The respondents mentioned above have expressed their opinions from the resource or urgency perspective. However, the respondent from Blue & Green Tomorrow explicitly mentioned ethical issues with more emphasis than other respondents. He stated that GE is not addressing the problem of climate change and thus, it makes sense that many NGOs avoid it.

The respondents also expressed their perceptions surrounding how NGOs participate in the debate around GE as well as the challenges and obstacles during the course of participation. According to the respondents from ETC Group, Biofuel Watch and Blue & Green Tomorrow, most NGOs in the debate are generally opposed to GE. However, very large NGOs, such as FoE, favour CCS. In addition, according to the interviewee from Greenpeace, 'there was an intense, broad-based discussion on GE in the early 2000s up until a few years ago, but there has not been much discussion in recent years'. The Greenpeace interviewee observed that they have become involved in establishing a governance framework on ocean fertilisation and marine GE.²⁸⁷ Although it is not their responsibility to design the governance framework, they are willing to engage in some of the discussions on those aspects whenever there is an opportunity. According to the interviewee from FoE, they have not been involved in establishing any governance

²⁸⁶ This point will be discussed under the variable of urgency in section 7.2.1.

²⁸⁷ For example, Greenpeace was involved in the COP to the Convention of Biodiversity, see IMO, 'Ocean Fertilization Under the LC/LP' (2017) <<http://www.imo.org/en/OurWork/Environment/LCLP/EmergingIssues/geoengineering/OceanFertilizationDocumentRepository/OceanFertilization/Pages/default.aspx>> .

framework on GE. He argued that research institutes, research councils and governments ought to be leading the role in the debate on GE rather than NGOs. All NGOs can do is to input into the conversation opposed to leading the conversation. NGOs should, instead, be focusing on mitigation. However, the respondent from WWF considered that NGOs have a role in keeping governments and businesses honest about the issues surrounding GE and ‘ensuring proper consideration is given to the subject where people can have a voice’. Aside from this, the interviewee added that NGOs are also able to influence the direction of scientific and policy research on GE.

Some interviewees discussed the challenges and obstacles they encounter when participating in GE. According to the respondent from Greenpeace, the first challenge the organisation faced was related to resources. As there are many different discussions that have taken place on GE, it is difficult to identify the critical one to exert the most influence. The second obstacle lies in a misunderstanding between the scientific community and NGOs. He explained that ‘the assumption from the scientific community is that Greenpeace is anti research; this is a strange accusation when we played one of the most active roles within the ocean fertilization framework. And there is also an assumption that people think we are going to cause trouble’. The third challenge concerns the need to rely on a broad network when dealing with GE as it is a broad concept and no one can have expertise in all areas of GE. The interviewee identified two challenges for FoE concerning GE. The first challenge is resources. According to the interviewee, ‘we do not have the resources or even the base to concentrate on the debate on GE, as most NGOs are still working on getting off fossil fuels quickly’. This point will also be analysed within the

resources variable in chapter 7. The second obstacle is that the scientific community involved in GE should try to reach out to NGOs to have conversations, but that is not regular practice in the UK.

As can be seen from the responses above, these involved NGOs are generally trying to oppose GE or to contribute to the governance of it. They have considerable understanding of why other NGOs are or are not actively involved. In addition, they placed an emphasis on their limited resources and the potential distractions when they talked about GE. In general, these NGOs have similar positions on GE but have slightly different reasons for their involvement.

4.2.3 Interviews with Non-involved NGOs

Respondents from TearFund, Practical Action and ClientEarth were interviewed as to why they have not been involved in GE. The results of the interviews will be presented based on the questions asked.

The beginning of the interviews started with a question to explore their knowledge on GE. The respondent from TearFund claimed to have limited but reasonable knowledge on GE, meaning that he was generally aware of it but not an expert. The ClientEarth respondent stated that their group had followed the discussion in the early years but did not consider it as a significant focus, nor had the NGO become involved in the area in a serious way. Practical Action's respondent stated that the organisation did not have direct experience in

GE, but from an individual perspective, he was generally aware of GE in the context of climate change. The reason why the respondent was aware of GE is that it is a topic within climate change and he considered it important to stay up to speed with the discussion surrounding it. This will be analysed under the variable of competition in chapter 7.

When it comes to their attitudes towards GE research, the respondents tend to hold similar views in that they do not oppose every form of research on it, meaning they support GE computer modeling research, but they still have general concerns about it. The respondent from ClientEarth indicated that, in terms of GE research, ‘it is the question of priority of resources that we have; if you have to choose between research on different subjects including GE, then it depends on the possible costs, risks and disadvantages of solutions’. ClientEarth had a concern about GE research from a resource perspective, which will be analysed in detail within the resources variable in chapter 7. In addition, the respondent continued to explain that it is proper to consider solutions to global warming that would not necessarily have negative impacts. This concern can be illustrated within the variable of threat that people usually have a fear of negative changes in daily life, which will also be discussed in chapter 7. As for Practical Action, the respondent again placed great emphasis on the concern that GE will divert attention away from more critical issues, such as mitigation. This point can again be illustrated as NGOs strategically using their mediating role to stop the public from focusing on GE. The respondent from TearFund had concerns about SRM in particular because of its unpredictable side effects.

The respondents provided a wide range of reasons as to why they are not involved in GE.

The respondent from Practical Action emphasised that GE, as an attempt to modify a large-scale planetary system, will divert the general population away from more pressing concerns such as mitigation. This point, which is identified in the data as a critical reason, will be illustrated within the variable of resources, urgency, and mediating in chapter 7. He then added that ‘reporting around GE might make it look like a good idea that we should invest our time and energy in and hence, the public would think that we do not have to worry about climate change’. This view will be analysed with the variable of ceasing to mediate in later discussion. Additionally, he expressed concern about the public as they might misunderstand what GE can really deliver and expect it to be a solution without fully understanding the complexity of GE techniques. This point will be analysed with public consciousness in the discussion.

The respondent from ClientEarth explained that there are several reasons why they are not involved in GE. Firstly, they have great concerns surrounding how GE techniques are used and their knock-on impacts. Secondly, they are concerned that GE might be an excuse not to focus on mitigation, which is similar to the concern expressed by Practical Action that GE will divert the attention away. Thirdly, the current main focus of the government remains mitigation, ‘there is not a promotion of GE by the government as a solution to climate change; when there is such a promotion, we might start to consider more about GE’, which suggests the government’s political preference. This will be analysed in detail in chapter 7. In addition, the respondent provided assumptions as to why other NGOs are also not involved in GE. These assumptions include the following. First, GE is not high on their agenda and it is not the major question which needs to concern us at the moment.

Most NGOs focus on mitigation and meeting the target on temperature in the Paris Agreement. Second, most NGOs focus on using technologies that we already have, which will be analysed with the efficiency variable in the discussion.

The respondent from TearFund respondent provided a range of answers. Firstly, NGOs have their own specific mandate and focuses and, therefore, GE sits outside of the remit of some groups. Although they are involved in climate change to help the poor who suffer from its side effects, they are not focusing on specific areas of climate change such as GE. This notion of remit will be analysed under the variable of goals in chapter 7. Secondly, the respondent mentioned that too much emphasis on GE could divert attention away from reducing emissions. Thirdly, as they have limited resources, they have to concentrate on the topics within their existing remit and scope. Finally, they prefer to focus on measures with less risk of dangerous impact on both the environment and human beings, such as mitigation.

There has been extensive debate surrounding the role of NGOs in GE. The respondent from TearFund stated that the role NGOs can play in the debate is to make the public aware of the potentially significant harmful impacts of GE and get these messages across in a digestible manner. However, the respondent from Practical Action pointed out that, as mentioned earlier, although NGOs could inform the public about the impacts of GE, the public had difficulty understanding the complexity of GE techniques. In addition, he argued that the debate amongst the public should not continue, as it is a distraction. However, he agreed with the need to continue the debate in the scientific and academic

communities.

In conclusion, the respondents from ClientEarth, TearFund and Practical Action have concerns surrounding GE as it can divert attention away from more pressing environmental matters. In addition, they emphasised the scarcity of resources, the remits of their organisations and the risks of GE techniques. These key points will be discussed in detail in chapter 7.

4.2.4 UK Conclusion

From the results presented above, there are several interesting opinions that are worth highlighting. First, although some NGOs are involved in GE and some are not, they typically hold similar views towards GE. Generally, they have great concerns about GE and hence, are opposed to it. This is an interesting point to help understand why they have made different choices on their engagement, which will be discussed in detail in chapter 7. Second, all of the respondents, regardless if they are involved in GE or not, have a reasonable knowledge about GE. Third, all respondents, including both involved and non-involved sectors, agreed that GE is a distraction from pressing concerns for the government. Fourth, respondents from both involved and non-involved NGOs placed great emphasis on resources, the Paris Agreement and the remits of their respective organisations. These interesting points will be addressed in chapter 7. The fact that all of the groups, including both those engaged with GE and those not, provided similar answers in various aspects suggests that further analysis should be conducted to examine whether

the responses appear to explain the engagement or non-engagement.

4.3 Overall summary remarks

This chapter has presented the results of interviews conducted in the UK and in China and identified significant themes from the responses. As for the results of interviews in China, a deficit in knowledge and lack of expertise were identified as important elements in the responses from domestic Chinese NGOs. The sense of urgency (as a reason for causing threat) and effectiveness (in terms of where NGOs can make effective contributions) were important to understand the non-involvement of INGOs. The focus of the relevant group and resources were significant in explaining non-involvement of both INGOs and domestic Chinese NGOs. These points will be analysed in detail in chapter 6. In relation to the results in the UK, several elements were considered as important in contributing to the involvement or non-involvement of the relevant NGOs: resources, the Paris Agreement, the remits of organisations, and GE being considered a distraction from focusing on mitigation. Furthermore, as similar answers were found in both involved and non-involved NGOs, it implies that further analysis is needed to illustrate this result in chapter 7. As the current chapter focuses on presenting the empirical data of the research, it comprises only a summary of interview results in order to report the data objectively to the reader. Discussion and analysis on the data will take place in chapters 6 and 7. These chapters employ different strands of the academic literature to generate variables based on the results in this chapter.

Chapter 5 Variables

This chapter comprises a general discussion of results presented in chapter 4 within the context of theories in the relevant literature. It aims to provide a general analytic framework including potential variables, as a theoretical basis for further discussing empirical data and results in China and the UK. The aim is to address the research question of why NGOs have limited participation in GE as a policy issue. In doing so, the academic literatures on social movements, interest groups and governance are used to generate potential variables. This chapter comprises five sections: the first section deals with definitions of NGOs, social movement organisations (SMOs) and interest groups; the second section reviews the social movement literature and applies it to GE; the third part aims to use interest group literature to understand NGO participation in GE; the fourth section situates the issue within the context of governance as an analytical framework; and the last section seeks to draw a synthetic analytic framework combining the theories discussed and generates variables for further discussion on cases of China and UK.

5.1 NGOs, SMOs and interest groups

As the theoretical basis for discussion consists of three differentiated but, to some extent, related literatures, it is important to distinguish these terms or labels mentioned in them. The terms – NGO, SMO and interest group – are interrelated and thus, we can to some extent usefully combine the literature and theories related to them. As can be seen from the

relevant literature, the terminology has been long debated among scholars and different labels and terms have been used to describe similar organisations.²⁸⁸ Some scholars prefer to regard NGOs and SMOs as “normative re-labeling” of interest groups and that the terms NGO and SMO are just interest groups by another name.²⁸⁹ By indicating ‘normative’, scholars claim that, especially in politics, how to label groups implicates normative messages. For example, groups labeled as pressure groups carry with them disapproving or negative perceptions while groups labeled as NGOs carry with approving messages.²⁹⁰ That is to say, labeling groups reflects normative perceptions of approving or disapproving by the public. Of course there are criticisms of mixed usage of terminology, and one explanation is that, according to Halpin, those terms are applied based on the purposes of conducting research rather than “organizational attributes” which we ought to depend on.²⁹¹

In terms of my discussion, the main aim is not to discuss the issue of terms itself; rather, it is to explore whether social movement and interest group theories can be applied to discussing NGOs. My focus lies in their identities and interactions and whether they can be integrated. Based on existing literature, there are three main types of perspective adopted by scholars: one is that the term NGO has an equivalency with SMO and interest group, and, as adverted to above, scholars prefer to label them differently according to the purposes of their studies; another entails that SMO is a special type of interest group,²⁹² and NGOs are ‘essential components of social movements’.²⁹³ The last type preferred by

²⁸⁸ Halpin (n 50).

²⁸⁹ Ibid.

²⁹⁰ Ibid.

²⁹¹ Ibid.

²⁹² Frank Baumgartner and Beth Leech, ‘Interest Niches and Policy Bandwagons: Patterns of Interest Group Involvement in National Politics’ (2001) 63 the Journal of Politics 1191.

²⁹³ Halpin (n 50).

social movement scholars entails that SMOs incorporate both non-institutional social movement actors and interest groups.²⁹⁴ From the three perceptions, it is apparent to see that the first perspective regards them as synonyms; the other two perceptions implicate a divergence lying in the relation between SMOs and interest groups but both regard the term NGO as the narrowest concept. It can be concluded that theories of SMOs and interest groups can be applied and generalised to NGOs. Whether they are considered as synonyms or the concept of NGO entails the narrowest intension compared to SMO and interest group, it enables me to apply and integrate theories on social movements and interest groups in the following analysis.

5.2 Social movement literature

Social movement theory has often been aimed at answering the question of why social movements occur, which comprises several strands of theories. These include, inter alia, collective behaviour, relative deprivation, resource mobilization, political opportunity, new social movement theory, and cultural perspectives. Generally speaking, strategic choices of NGOs are dominated by their tactics within strategy, resource and identity to a large extent.²⁹⁵ In order to understand why NGOs choose to participate in or stay clear of GE, social movement theory can be employed to seek answers for the question from a strategic perspective. Before using certain theories to discuss the issues in detail, a general review of the main strands of the literature is important for mapping the picture of social movement

²⁹⁴ McCarthy and Zald (n 52).

²⁹⁵ Clare Saunders, *Environmental Networks and Social Movement Theory* (London: Bloomsbury Academic 2013).

theory.

Collective behaviour theory, which emerged early in the 20th Century and argued that social movements are the result of irrational action, has been frequently criticised by present scholars. In contrast, resource mobilization theory assumes people are rational and emphasizes organisations, and will be discussed in more detail in the following paragraphs. Political opportunity structure emphasizes the political context within which social movements are mobilized. This will, again, be discussed further below. More recently, research on strategic participation in a cultural way has emerged combining culture, emotion and agency. This cultural perspective will be applied to my discussion to understand strategic choices of NGOs in GE. In this discussion, I will employ theories of resource mobilization, political opportunity and cultural perspectives to explore the applications to NGOs within the context of GE.

5.2.1 Resource mobilization

Resource mobilization theory was originally proposed by John McCarthy and Mayer Zald in the 1970s. They assume that aggregation of resources is the critical factor for explaining why a social movement occurs – in other words social movements depend on various resources for survival, maintenance and to be effective.²⁹⁶ In addition, they believe that individuals make rational choices by weighing costs and benefits to achieving goals and they also place great emphasis on organisational infrastructure as a resource in itself.²⁹⁷

²⁹⁶ McCarthy and Zald (n 52).

²⁹⁷ Ibid.

They focus heavily on organisations with formal structures, which makes their work particularly applicable in discussing NGOs.

According to resource mobilization theory, target goals as well as characteristics of organisations link them to particular policy areas.²⁹⁸ This can explain why some NGOs have not chosen to focus on GE in the first place. Although there are many NGOs interested in environmental issues in a broad sense, they have differentiated emphases and aims based on their target goals when founded. For example, organisations acting actively in nature conservation and animal protection would not be expected to pay much attention to GE. Even some NGOs interested in climate change are not necessarily involved in GE as they may have more specific goals within the area. This suggests that as organisations have their target goals which separate them into different specialist policy areas, some NGOs not involved in climate related mobilizing areas are unlikely to participate in GE. But within the climate-specialising ENGOs, why do some organisations have broad goals for climate change while some pursue a narrow and specific goal in relation to GE? According to the theory under consideration, the cause lies in resources. As NGOs require resources to be effective, organisations within similar fields compete with each other for access to finite resources. Currently there are plenty of NGOs focusing on the area of climate change and hence NGOs have to respond to competition by specializing in their identities by moving into more specialist fields than climate change, such as GE. As pointed out by McCarthy and Zald, the more competitive a social movement area is, the

²⁹⁸ Ibid.
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more likely it is for organisations to pursue narrow or specialised goals.²⁹⁹ GE is a specialised area within the issue of climate change, and thus NGOs targeting GE can be seen as a strategic response to competition for resources.

Resource mobilization theory considers elites with conscience as the key factor in triggering social movements rather than individuals with self-interests. According to McCarthy and Zald, 'the larger the amount of resources available to conscience adherents the more likely is the development of SMOs that respond to preferences for change'.³⁰⁰ In other words, they regard resources and conscience elites as responsible for the emergence of social movements.³⁰¹ It makes sense that if organisations do not possess the resources needed, whether financial resource or labour resource, they are unlikely to become involved in action in a particular policy area. In terms of GE, even though NGOs might be concerned about the risks of GE, they may not take action or participate in relevant campaigns if they do not possess enough funding or labour to devote to the area. Since NGOs have finite resources for their development and survival, as implicated in the costs and benefits model, involvement in GE may not be appealing to some NGOs as they cannot work efficiently to make contributions. This is because large amount of uncertainties on GE techniques and an information deficit in the scientific community lead to a failure in providing sufficient scientific information on GE to NGOs for them to work effectively on it. This is connected with a tactical dilemma that due to competition and cooperation in similar areas, organisations make tactical choices to target specific goals

²⁹⁹ Ibid.

³⁰⁰ Ibid.

³⁰¹ Ibid.

with finite resources. Sometimes aiming for one goal may cause conflicts with another goal, and thus NGOs will make key decisions determining which goal they are seeking to achieve.

Under the model of costs and benefits as well as competing for finite resources, a free rider dilemma arises from resource mobilization theory. That is to say, it would be more rational and cost-effective for individuals and organisations not to become involved in certain policy areas if these areas are aiming at public goods, as they can still benefit even if they do not participate.³⁰² Does this free rider dilemma contribute to the reason why some NGOs are not involved in GE? I assume that the free rider dilemma helps to explain both large and small NGOs within the context of GE, which will be discussed in the next paragraph. This dilemma poses a significant question in that, if individuals and organisations consider tactics on a cost-effective basis, why do organisations participate at all in the context of public goods? The free rider issue was first proposed by Mancur Olson in his group theory and entails an insight into a divergence between large groups and small groups in the face of the free rider dilemma.³⁰³ In the theory Olson argues that the free rider issue lies merely in relation to large groups of people. This is because a small number of individuals who are self-interested and rational will not aim for public interests or public goods.³⁰⁴ Therefore, the solution proposed by McCarthy and Zald in the resource mobilization theory is well able to address the issue. They claim that resource mobilization theory emphasizes elites with conscience who are responsible for triggering social

³⁰² Jay Weismuller, 'Social Movements and Free Riders: Examining Resource Mobilization Theory Through the Bolivian Water War' *The Macalester Review* accessed August 05, 2012.

³⁰³ Mancur Olson, *The Logic of Collective Action: Public Goods and The Theory of Groups* (Cambridge: Harvard University Press 1971).

³⁰⁴ Weismuller (n 302).

movements rather than individuals with self-interests.³⁰⁵ That is to say, elites with available resources are considered preconditions of the emergence of mobilization, and with conscience, they will not free ride. However, some scholars have criticized resource mobilization theory, arguing that it fails to provide a solution for the free rider issue for small groups without elite support.³⁰⁶ Nonetheless, as the free rider problem identified by Olson only exists in large groups of people, the solution proposed in the resource mobilization theory is applicable to large groups with conscience elites and hence, it does not need to be examined in all contexts. However, in the context of GE, the argument that the free rider problem does not exist in small groups of people cannot be well illustrated in Olson's theory.

The dilemma lies in large NGOs with elite support in that, while some NGOs have participated in GE because of elites with conscience, other large NGOs may stay clear of it by weighing costs and benefits and deciding that they benefit no matter whether they become involved or not. In terms of small social groups, according to the theory by Olson, they will make efforts to purchase public goods without sanctions or inducements.³⁰⁷ He clarifies that this is because, in small groups, the personal gain that individuals can have through purchasing public goods exceeds the overall costs of purchasing public goods.³⁰⁸ That is to say, although other members in the group will not purchase public goods as they can still benefit from them, an individual will still provide himself with public goods as how much he can gain exceeds how much he has to pay for it. This is why Olson argues

³⁰⁵ Ibid.

³⁰⁶ Ibid.

³⁰⁷ Olson (n 303).

³⁰⁸ Ibid.

that free riders are not a concern in small groups. However, in the context of GE, costs and benefits are not directly interrelated and additional elements of risks and uncertainties need to be taken into account. According to Olson, an individual will spend the total cost on purchasing a public good because he can gain more from it. This can be illustrated as benefits exceed total costs when purchasing public goods. However, in the context of GE, costs do not necessarily lead to benefits. One explanation to the situation is that, unlike the other public goods, because of the complexity in the climate system and uncertainties over the outcomes of GE, anyone who spends costs on it will not necessarily benefit from it. For example, injecting sulphate aerosols into the stratosphere within the boundary of the UK might reduce temperature in other countries nearby without any impacts in the UK at all. If one cannot ensure that he can benefit from GE projects, why would he have the incentive to engage with it? Therefore the free rider problem exists in small groups as well in the context of GE.

A critical variable that can be generated from the discussion is that of resources. Whether NGOs have access to finite resources, such as money and labour, and whether they are able to control and make effective use of it, are crucial to their involvement in GE. Resources can be divided up into several sub-themes: *Material resource* – NGOs require money and labour to work effectively and become involved in GE, which means that NGOs lacking material resources are unlikely to participate. *Competition* – this refers to competition for finite resources. The more competitive the policy area is, the more specialised and narrow the goals pursued by NGOs will be, such as engaging in GE, to create their specialised identities. *Elites* - they are the critical factor for generating social movements according to

the McCarthy and Zald theory. NGOs participating in GE may be attributed to conscience elites. *Efficiency* – based on costs-benefits analysis, NGOs not becoming involved in GE can potentially be attributed to the free rider dilemma in that they will be benefiting even if they do not participate. This dilemma can be identified in both large and small NGOs because GE as a public good has its own characteristics according to the preceding discussion. In general, however, resource mobilization theory is criticized for failing to consider contextual factors and placing too much emphasis on organisations and not paying proper attention to emotion, culture and other issues.³⁰⁹ I propose a solution of integrating resource mobilization with other strands of social movement theory – political opportunity and cultural perspectives – to form variables, which will be discussed in later paragraphs.

5.2.2 Political opportunity

By accepting the criticism of resource mobilization theory, political opportunity theory provides a context variable for discussing why social movements mobilize. It states that whether social movements occur, as well as whether they succeed, is largely affected by political opportunities.³¹⁰ Within the literature on new social movements, scholars make a distinction between ‘political opportunity’ and ‘political opportunity structure’. Rootes has proposed that the central problem of political opportunity structure is confounding

³⁰⁹ For example, Diana Kendall, *Sociology In Our Times* (Erin Mitchell and others eds, 8th edn, Wadsworth: Cengage Learning 2011).

³¹⁰ Ryan Cragun, Deborah Cragun and Piotrus Konieczny, *Introduction to Sociology* (Seven Treasures Publications 2012).

structure and contingency.³¹¹ Many variables considered in political opportunity structure are in fact contingent rather than structurally determined.³¹² Political opportunity structure refers to the structural aspect, such as the nature of government institutions, which is related to the openness of a polity.³¹³ Differentiated from opportunity structure, political opportunity considers the receptivity of a political system which includes contingent, non-structural factors.³¹⁴ These contingent factors include, *inter alia*, preferences of government officials and divisions among political elites.³¹⁵ It is therefore preferable to use the term 'political opportunity' to include both structural and contingent factors within a polity. In terms of application of the theory, one of the respondents in China placed great emphasis on understanding the dynamic themes or core issues of the Chinese government when influencing the policy making process; they also stated that it is important to find the right time in order to have an impact. That is to say, although the structure of institutions is fixed and relatively stable, the preferences of government can change from time to time, which will influence how effectively NGOs can influence relevant political decisions. These factors, defined as contingent factors, are important in understanding social movements within the same polity.

Even the structural question of whether a polity is open or closed does not merely include simple openness of structures, but also relates to a matter of actors' agency that whether it

³¹¹ Rootes, 'Political Opportunity Structures, Promise, Problems and Prospects' (n 52).

³¹² *Ibid.*

³¹³ Sebastiaan Princen and Bart Kerremans, 'Opportunity Structures in the EU Multi-Level System' (2009) 31 *West European politics* 1129.

³¹⁴ Chris Hilson, 'New Social Movements: the Role of Legal Opportunity' (2002) 9 *Journal of European Public Policy* 238.

³¹⁵ Princen and Kerremans (n 313).

is perceived as open or closed.³¹⁶ Collective actors, constrained to their own values and beliefs, may have different perceptions of openness and hence this may affect whether they can seize those opportunities.³¹⁷ In addition, they may adjust their strategies to create new opportunities for themselves rather than merely accept constraints.³¹⁸ Therefore, political opportunity comprises three aspects: the objective structure of a polity; whether and how actors perceive the openness, and seize and create new opportunities; and the receptivity of the political system. Only the first aspect can be defined as purely structural, while the other two aspects are more non-structural or contingent. Therefore, a question arises: in terms of structural and contingent factors, which is more important in understanding the variable of political opportunity? Or to what extent should contingent or structural factors be considered when applying the variable of political opportunity in our discussion? Of course structural factors are fundamental within a polity, but they fail to explain the different social movements within the same polity.³¹⁹ And the variety of social movements within the same country can be attributed to their strategies and status rather than the structure of the polity.³²⁰ Therefore, I agree that, when comparing organisations within one country, it is more reasonable to discuss political opportunities based on non-structural or contingent factors.³²¹ While comparing organisations from a cross-national perspective, such as organisations in the UK and China, both contingent and structural factors should be considered.

³¹⁶ Rootes, 'Political Opportunity Structures, Promise, Problems and Prospects' (n 52).

³¹⁷ Ibid.

³¹⁸ Clare Saunders, 'It's Not Just Structural: Social Movements Are Not Homogenous Responses To Structural Features, But Networks Shaped By Organisational Strategies And Status' Sociological Research Online <<http://www.socresonline.org.uk/14/1/4.html>> accessed 16 Jan 2009.

³¹⁹ Ibid.

³²⁰ Rootes, 'Political Opportunity Structures, Promise, Problems and Prospects' (n 52).

³²¹ Saunders, 'It's Not Just Structural: Social Movements Are Not Homogenous Responses To Structural Features, But Networks Shaped By Organisational Strategies And Status' (n 318).

In terms of resource mobilization and political opportunity, there could be an overlap between them in that they both admit the necessity of obtaining sufficient resources. Some scholars have demonstrated that political opportunity is closely related to resource mobilization theory as it also emphasizes resource mobilization, but from an external perspective concerning political opportunities.³²² That is to say, making use of political opportunities requires mobilizing resources. It can be seen as a supplement to some aspects of the deficit in resource mobilization theory and useful to generate a context variable for my discussion. Understanding merely internal factors of organisations and resources themselves fails to draw attention to dynamic problems which refers to the changing social and political environment in which organisations mobilise. Therefore an insight into political opportunity theory may help to explain why NGOs do not get involved in GE at a given time.

Many empirical studies have been conducted to examine political opportunity theory, and a well-known study by Goodwin involved four elements including ‘increasing access to the political system, divisions within the elite, availability of elite allies, and diminishing state repression’.³²³ Other studies have generated different variables even including for example, grievances and resources which is criticised by other critics, such as David Meyer, because these are variables belonging to the separate theories of deprivation and resource mobilization. Most of the empirical studies on political opportunity are accused by Meyer of simply adding different variables to the theory of political opportunity rather than

³²² David Meyer, ‘Protest and Political Opportunities’ (2004) 30 Annual Review of Sociology 125.

³²³ Ibid.

refining variables by Meyer. Because there are so many empirical studies within this area with diverse variables generated, it is important to decide which variables to include within political opportunity for the purposes of the current discussion. The choice of variables appears to depend on the case-by-case situation rather than being generalizable. But how does one choose the most suitable variables for the case of GE in the UK and China?

Political opportunity theory has been applied to different dependent variables in research, such as social protest mobilization and impact on public policy.³²⁴ The dependent variable of my research is NGOs' involvement in GE, which can be defined as mobilization of NGOs in GE based on social movement theory. Therefore political opportunity theory should be employed to generate separate independent variables on social protest mobilization rather than dependent variables. I consider one core element of political opportunity theory – the degree to which the institutional system is open – as an important variable. Openness has been largely discussed concerning whether organisations have access to the state's institutional system to make their voices heard. It relates to the question of how organisations can participate in policies, which can be applied to a comparable cross-national discussion in the UK and China. In terms of engagement of NGOs as more professionalised organisations in the environment movement, scholars have argued that relatively open states are likely to have moderate movements while relatively closed states tend to exert pressure on movements and thus, produce radical but small movements.³²⁵ However, in the case of the UK and China, if China is considered as a relatively closed state compared to the UK, one would expect to find more radical

³²⁴ Ibid.

³²⁵ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

movements than moderate mobilizations. However, according to my awareness, NGOs in China normally employ moderate strategies in many environmental areas, as they require better collaborations with the state to attain goals rather than remaining hostile. Moderate mobilizations in China may be attributed to state repression rather than the openness or closure of the polity. Meanwhile in the UK as a relatively open state in terms of political opportunity structure, there are radical protests, such as the anti-fracking protest in the UK. Therefore, whether the state is open or closed does not necessarily lead to moderate or radical action by organisations. It may be the case with regard to GE that political opportunity structure, namely whether a polity is open or closed, cannot help to explain the nature of mobilizations (radical or moderate). This hypothesis will be discussed more in chapters 6 and 7.

In terms of discussing openness, it should be attached to specific cases during a certain period of time. This is because ‘a polity that provides openness to one kind of participation may be closed to others’.³²⁶ It is difficult to say in general that one state is open or closed as they may be open in some political area and closed in others, or open to certain organisations while closed to others. As Saunders has pointed out, in terms of environmental policy area in the UK, political opportunity has been quite open to moderate organisations rather than radical ones.³²⁷ It raises a problem that organisations, specifically NGOs, are difficult to define as moderate or radical, as they may be moderate on some issues but become radical on other topics, or they may behave moderately during a certain period of time while becoming radical later on. Therefore discussion on openness should

³²⁶ Meyer (n 322).

³²⁷ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

also be based on different NGOs from a dynamic perspective.

In the specific context of GE, a critical element needs to be pointed out before discussing the openness of institutional systems – that is to what degree policies have been developed by governments. Contrasted with most traditional environmental problems, which are already governed by policies, GE is a relatively novel policy issue, meaning that policies on GE may not exist at all. NGOs can become involved in environment movements against traditional environmental issues by targeting policy reform or change; however, they may not be able to participate in GE when there is a deficit in government policy in the first place. In terms of this issue, the UK and China are largely likely facing different situations of policy development on GE, which requires comparison between them in chapter 8.

In conclusion, openness and the degree of policy development are considered as variables based on the political opportunity theory. It brings useful context-dependent insight into developing potential variables for discussion, which more or less bridge the gap in resource mobilization theory of failing to address exogenous issues. However, political opportunity has limitations that have been raised by scholars including its lack of emphasis on cultural factors, which will be addressed in the following section on cultural perspectives.

5.2.3 Cultural perspectives

In order to address the deficit in resource mobilization theory and political opportunity theory, an emphasis on emotions provides a cultural perspective as a supplement to these theories. Significant work has been done by Jasper to develop cultural perspective more systematically.³²⁸ I will employ his cultural approach to generate independent variables for discussing the engagement of NGOs in GE. On a general basis, he admits the core arguments of resources and opportunities in resource mobilization theory and political opportunity theory. For example, according to Jasper, social roles and positions play a crucial role in starting strategic actions, which means individuals and organisations have their own missions to make strategies.³²⁹ This is compatible with the argument in resource mobilization that target goals as well as characteristics of organisations link them to specific policy areas. In addition, in Jasper's approach, skills and resources are considered essential to both trigger a strategic action as well as continue with the action.³³⁰ This evidently overlaps with the theory of resource mobilization which, as we have seen, holds that resources – both money and labour – are preconditions of social movements. In terms of political opportunity theory, the cultural approach has made connections to it by demonstrating that goals, which are changing all the time, are crucial for strategies, and the dynamic nature of goals results from opportunities. In addition, timing is important for making strategic choices.³³¹ This is consistent with the argument in political opportunity theory that the context factor of opportunities provides explanations for social movement

³²⁸ Jasper (n 52).

³²⁹ Ibid.

³³⁰ Ibid.

³³¹ James Jasper, *The Art of Moral Protest: Culture, Biography and Creativity in Social Movements* (Chicago: University of Chicago Press 1997).

behavior at a given time. However, besides integrating important variables in the two theories, Jasper has added a cultural factor to explain the initiation of social movements. As he puts it, calculations of costs and benefits, which are suggested by resource mobilization theory, are not enough for triggering a social movement; instead, ‘an emotional spur’ is required to generate strategic actions.³³²

Emotions, as pointed out by Jasper, are considered to provide ‘ideas, ideologies, identities and interests to motivate’.³³³ Emotion is the core element of the cultural approach. In general, the cultural approach emphasizes two combining aspects of starting a protest: threat and blame.³³⁴ I will discuss these two aspects in the following and apply them to NGOs’ involvement in GE respectively. Threat is a type of emotion in a negative way that entails various aspects. I will use resignation, sense of urgency, and technological fear in the theory of threat to discuss the issue of GE.

According to Jasper, resignation contributes much to reluctance in participation.³³⁵ It is true that people sometimes are pessimistic about the status quo and tend to accept it rather than act for changes. With this emotion, when people are dissatisfied with bureaucracies, they may simply assume that it makes no difference whether they participate or not as outcomes would not change anyway. In this sense, resignation can be illustrated as a lack of confidence both in themselves and the relevant authorities. In the context of GE, NGOs may have concerns about the uncertainties and risks of GE and propose a ban on GE

³³² Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (n 52).

³³³ Jasper, *The Art of Moral Protest: Culture, Biography and Creativity in Social Movements* (n 331).

³³⁴ Ibid.

³³⁵ Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (n 52).

activities – something recommended by several NGOs such as GE Watch in the UK. They might be reluctant to continue their participation if there is no response from bureaucracies. In terms of a sense of urgency, this suggests that situations may become worse if we do not respond or get involved now.³³⁶ This can be a potential explanation as to why NGOs are not involved in GE which is not considered as an important issue in the near future. Lack of urgency means NGOs prefer to focus on more pressing concerns at the moment rather than worry about what is yet to come. Technological fear entails that people tend to oppose new technologies and generate bias by misusing proper information, which is regarded as irrational and a matter of ignorance by risk experts, because people are concerned about destroying the status quo even though there is little chance of this happening.³³⁷ A principal tenet of NGOs, which is deeply rooted in the culture, is that pollution can only be dealt with through reducing emissions; as a result, a technology like GE, which allows emissions by neutralizing them, is antipathetic to this idea. In terms of GE, some NGOs in the UK oppose risky GE experiments or research due to fear over the uncertainties associated with the technology. The concern and fear of damaging the existing environment leads them to become engaged and express their opinions negatively on GE. In China in contrast, a fear of GE has not formed in NGOs due to an information deficit and thus, they are not concerned about the risks of this technology. This may similarly help to explain their actions in terms of non-engagement with GE. Apart from existing types of threat in the theory, in the case of GE, one might add that there is a threat related to strategic choices themselves. This is a fear in terms of a potential dilemma facing NGOs, which means that they are likely to be criticized or even risk their brand images when they

³³⁶ Ibid.

³³⁷ Jasper, *The Art of Moral Protest: Culture, Biography and Creativity in Social Movements* (n 331).

get involved in such a controversial topic as GE.

If a threat is in place, taking strategic action requires someone to blame.³³⁸ Blame can be classified into causal blame and remedial blame.³³⁹ In the context of GE, side effects may possibly be caused by scientists involved in GE activities. Therefore, scientists could be the targets of NGOs in the form of causal blame. There is a crucial question arising from causal blame that it is also important for NGOs or whoever is taking strategic action to know whom to blame. In China, there are scientists involved in GE projects in universities; however, NGOs in China are more or less ignorant of the research on it. In terms of the remedial form of blame, it is likely that people consider government as responsible. In the case of causal blame, actions can only be triggered towards government. This is because people always turn to government and regard it as the one who is responsible for remedying problems. To conclude, threat built from emotions and people who can be blamed are crucial elements of starting social movements according to the cultural approach. They are considered here as two variables in discussing NGO participation in GE. According to Jasper, there is a gap in understanding what factors contribute to a certain choice rather than the other. My research is expected to answer the question in the context of GE.

³³⁸ Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (n 52).

³³⁹ Jasper, *The Art of Moral Protest: Culture, Biography and Creativity in Social Movements* (n 331).

5.3 Interest group literature

Interest groups are groups employing various forms of advocacy to exert influence on policy.³⁴⁰ The literature on interest groups is a small field in political science and has been accused of being isolated within the broader politics literature.³⁴¹ In this section, I will aim to integrate it with social movement literature. Interest group literature and social movement literature are two strands in political science. Some scholars argue that social movement theory emphasizes conflicts and non-institutionalized approaches of claim making while interest group theory emphasizes semi-institutionalized approaches of lobbying.³⁴² It is true that they focus on different perspectives within the political area; however, the two strands overlap in various aspects such that they can be considered closely related. It is more useful for the purposes of my research to emphasize their relationship and overlaps rather than distinctions, so as to form integrated insights for discussing NGOs in GE.

The general theory of interest groups is that individuals join them based on various benefits which the group will offer them.³⁴³ Before continuing the discussion on various benefits, it is useful to define 'joining interest groups' first in the discussion. According to the existing literature regarding membership of interest groups, public interest groups, which seek for broader interest with a general benefit rather than benefits for their

³⁴⁰ John Wright, *Interest Groups and Congress, Lobbying, Contributions, and Influence* (1st edn, Longman 1995).

³⁴¹ Jan Beyers, Rainer Eising and William Maloney, 'Researching Interest Group Politics in Europe and Elsewhere: Much We Study, Little We Know?' (2008) 31 *West European politics* 1103.

³⁴² *Ibid.*

³⁴³ Wright (n 340).

membership, have their own pattern of recruiting members.³⁴⁴ Because of no simple ways of targeting potential members, they usually adopt a tactic of direct mail to reach out potential members.³⁴⁵ Although with a relatively large membership, few members in public interest groups are considered to have actively participated in group decisions.³⁴⁶ This problem has been proved to exist among environmental groups, such as Friends of the Earth, that most members, named as ‘checkbook members’, seldom participate other than paying annual fees for subscription.³⁴⁷ A number of ‘checkbook members’ have not even recognised their membership or considered themselves as members of groups.³⁴⁸ Therefore, I favour the argument by Christopher Bosso that it is necessary to make a distinction between members and donors or supporters.³⁴⁹ Checkbook members as defined in the literature are supporters or donors as they have little participation in influencing group decisions other than paying a low amount of annual fees. Although they are important for the survival of groups, they are not real members when discussing the concepts in the relevant literature. Therefore, in my discussion, when referring to members, I mean staff members specifically. However, although the distinction between supporters and members are discussed in the literature, little literature has paid attention to volunteers in groups. I argue that this is a gap that requires further research and discussion because volunteers are an important component of groups besides staff and supporters. Existing literature has tried to distinguish staff members from the rest who only make money contributions while

³⁴⁴ Anne Binderkrantz, ‘Membership Recruitment and Internal Democracy in Interest Groups: Do Group-Membership Relations Vary Between Group Types?’ (2009) 32 *West European politics* 657.

³⁴⁵ Grant Jordan and William Maloney, ‘Manipulating Membership: Supply-Side Influences on Group Size’ (1998) 28 *British Journal of Political Science* 389.

³⁴⁶ Binderkrantz, ‘Membership Recruitment and Internal Democracy in Interest Groups: Do Group-Membership Relations Vary Between Group Types?’ (n 344).

³⁴⁷ Jordan and Maloney (n 345).

³⁴⁸ Christopher Bosso, ‘Rethinking the Concept of Membership in Nature Advocacy Organizations’ (2003) 31 *The Policy Studies Journal* 397.

³⁴⁹ *Ibid.*

lacking face-to-face contacts with staff members.³⁵⁰ However, there is a third categorization of members in groups – volunteers – that needs to be considered separately from staff members and donors. This is because, volunteers are not staff in groups, and they cannot simply be defined as donors either, as their contributions is not or not only related to money. That is to say, they are included in ‘checkbook members’ who are only paying dues to groups; instead, they assist campaigns or become involved in office or advertising work, which means they contribute more than just donating. However, volunteers are not employed staff in environmental groups, which excludes them in the discussion on staff members. Therefore, attention needs to be paid among volunteering members in interest groups as a supplement to the existing literature.

Another concern in the literature on membership is the issue surrounding a collective bad and a collective good. This is to say, one is more likely to be a member of interest groups because of public bads than collective goods.³⁵¹ People are more motivated to join a group to prevent a bad consequence than achieving a good outcome. This is consistent with the theory of threat in the social movements literature that the negative emotion of threat is more useful in triggering social movements as people care more about what they take for granted than what they will acquire in the future.³⁵² This indicates that people are more concerned about losing what they already have than receiving the same amount of benefits in the future. Therefore, threat is a useful motivation to social movements as it stands for loss. Based on this theory, it is more reasonable to understand why a collective bad is more

³⁵⁰ Jordan and Maloney (n 345).

³⁵¹ Ibid.

³⁵² Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (n 52).

useful in recruiting members than a collective good, as from an emotional perspective, preventing a threat from happening matters more than providing benefits.

Within the literature on membership of interest groups, scholars have also focused on the instability of large public interest groups concerning membership. As identified in the literature, membership turnover rate is high because of large-scale entry and exits.³⁵³ That is to say, as they have large-scale membership and it is easy to join it as well as exit, public interest groups often face a dilemma that a large number of existing members do not renew their membership, which means they have to recruit new members instead. Therefore, high turnover rate is a common issue among large public interest groups. The existing literature has identified this issue and considered it as a negative result of instability. However, in my opinion, turnover is not completely bad for interest groups. With a high rate of turnover, it is more likely for those groups to have a broader coverage of potential members. That is to say, turnover forces groups to target new potential members rather than relying on existing members, which has unintentionally expanded the impacts of groups among the public. Although they will face a loss in the number of existing members and the total number of members will perhaps decrease finally, those previous members who choose to exit have already been influenced by those groups. This will benefit groups from the advertising perspective in that different people will know about groups and their goals. Therefore, high turnover rate is negative when concerning stability of membership, but it can also benefit in expanding their influence among potential members.

³⁵³ Jordan and Maloney (n 345).

Returning to the question of why people join interest groups, this raises an overlap with the free rider dilemma within resource mobilization theory that individuals may not become involved as benefits can be obtained without participation. However, in the interest group literature, different forms of benefits are defined such as material benefit, solidary benefit and expressive benefit. In terms of expressive benefit, as defined by John Wright, this entails people joining interest groups to express their moral values or ideologies, which indicates that people do not care much about whether goals can be achieved as long as their voices are heard during the process.³⁵⁴ Thus, environmental groups and other public interest groups are considered to rely on expressive benefit.³⁵⁵ This raises a problem: as environmental groups are based on expressive benefits, does the free rider problem still apply to them? The free rider problem of interest groups refers to the difficulty of attracting members to join the group when the benefits can be obtained without membership. Since expressive benefit concentrates on the process of participating and expression of their values rather than just obtaining the outcomes, people cannot receive expressive benefits if they do not join environmental groups. That is to say, in public interest groups such as ENGOs, expressive benefits emphasize participation itself and thus it cannot be obtained, or people cannot have a feeling of satisfaction to express moral values, without membership. This expressive incentive can be a potential solution to the free rider problem proposed by Olson. As mentioned in the earlier paragraphs, Olson has raised the issue in group theory that people can free ride when they can still obtain benefits without joining in groups. Based on calculation of costs and benefits, Olson has continued to argue that this problem only applies to large groups of people. A solution proposed by

³⁵⁴ Wright (n 340).

³⁵⁵ Ibid.

McCarthy and Zald in social movement theory is that it is the elites with conscience who are responsible for triggering social movements rather than individuals with self-interests. However, as discussed in the earlier paragraphs, the free rider issue applies to both large and small NGOs in the context of GE,³⁵⁶ which draws attention back to the problem that the solution proposed by McCarthy and Zald fails to provide explanations for those small groups which are without elites. Therefore by integrating it with interest group theory, expressive benefits can be a potential solution to the free rider issue in both large and small environmental groups. This is because, as mentioned earlier in this paragraph, expressive incentives in environmental groups emphasize the process of participation itself, which gives participation a more legitimate meaning in that people can express their values and make their voices heard by joining groups, rather than considering participation as an instrument to achieve common benefits only. With this incentive, people will not free ride in environmental groups.

The interest group literature comprises various strands of theories which consider different questions. These strands or sub-theories investigate questions of, for example, why interest groups specialise, the variation in strategic choices, and why interest groups lobby. Although emphasizing distinct perspectives, I will discuss them by integrating them with social movement theory to generate applicable variables for GE. In terms of the variation in strategies, the existing literature has distinguished interest groups by their strategies in two ways: distinctions are drawn between insider and outsider strategies; and distinctions have also been made between administrative strategy, parliamentary strategy, media

³⁵⁶ Large or small NGOs are different from large or small groups. The latter refers to a large or small group of individuals.

strategy and mobilization strategy. An insider strategy entails a privileged access to the political and administrative process and employs direct actions of close consultation with political actors while an outsider strategy involves mobilizations by grassroots networks with indirect actions through media and mobilization of citizens.³⁵⁷ However, scholars have pointed out that groups often employ a mixture of insider and outsider strategies and, as a result, it is difficult to categorize them as wholly insiders or outsiders.³⁵⁸ Therefore, scholars have proposed a more suitable categorization of four different types of strategies. The four strategies are still based on the basic classification of direct and indirect strategies, but with more specific perspectives. This is useful for categorizing groups more precisely. In terms of strategy, existing interest group literature focuses on the variations of strategies as well as explanations as to why interest groups adopt certain strategies. I propose a question combined with the social movement literature which is whether an insider or outsider strategy affects choices on whether to become involved in certain policy areas by NGOs? In the context of GE, will NGOs employing different strategies – an insider strategy or outsider strategy for example – lead to different choices on involvement in certain policy areas? If NGOs employ an insider strategy, are they more likely to engage in GE? If NGOs adopt an outsider strategy, are they more reluctant or unlikely to engage in GE? Although the categorization of insider and outsider strategy to some extent fails to define groups properly, it is still useful to draw a basic line between their preferences in strategies. Therefore, this question will be examined in chapters 6 and 7 to discuss within the cases of China and the UK in detail, based on the categorization of insiders and

³⁵⁷ Binderkrantz, 'Different Groups, Different Strategies: How Interest Groups Pursue Their Political Ambitions' (n 52).

³⁵⁸ Anne Binderkrantz, 'Interest Group Strategies: Navigating Between Privileged Access and Strategies of Pressure' (2005) 53 *Political studies* 694.

outsiders.

There are two important questions in discussing insider and outsider strategies: how to distinguish between an insider or outsider strategy and insider or outsider status; and whether groups have agency to make realistic choices on strategy. In terms of the first question, it is important to distinguish strategy from status when discussing the typology of groups. Wyn Grant first proposed the typology of insider and outsider groups in 1989 but has been criticized for failing to distinguish between strategy and status by scholars such as Maloney, Jordan and McLaughlin.³⁵⁹ According to Grant's typology, there are three sub-types of groups within each of insider and outsider groups. Insider groups comprise prisoner groups, low profile groups, and high profile groups; while outsider groups include potential insiders, outsiders by necessity and ideological outsiders.³⁶⁰ He argues that it is analytically meaningless to distinguish strategy from status as they are interrelated.³⁶¹ This typology has problems, as pointed out by Maloney, Jordan and McLaughlin, because an insider strategy adopted by groups cannot guarantee an insider status which is something ascribed by government.³⁶² By preferring to separate strategy from status, they have proposed a different typology: groups with insider status include core insider groups, specialist insider groups and peripheral insider groups; and groups with outsider status comprise outsider groups by goal and outsiders by choice.³⁶³ From the two typologies we can see that there is a difference in categorizing failed insiders which refer to groups

³⁵⁹ William Maloney, Grant Jordan and Andrew McLaughlin, 'Interest Groups and Public Policy: The Insider/ Outsider Model Revisited' (1994) 14 *Journal of Public Policy* 17.

³⁶⁰ Wyn Grant, *Pressure Groups Politics and Democracy in Britain* (Hemel Hempstead: Harvester Wheatsheaf 1995).

³⁶¹ *Ibid.*

³⁶² Maloney, Jordan and McLaughlin (n 359).

³⁶³ *Ibid.*

practising insider strategies but with little influence. Grant's typology defines failed insiders as potential insiders, which are classified under outsider groups. In contrast, in the typology proposed by Maloney, failed insiders are included in peripheral insider groups. There is a problem in defining, as Grant does, failed insiders as potential insiders and classifying them as outsiders in that there is no consistency between strategy and status. That is to say, according to Grant's typology, practising insider strategies may lead to an outsider status (which is what failed insiders become). It is true that, by separating strategy from status, the typology by Maloney maintains a consistency between strategy and status when categorizing groups. That is to say, groups practising insider strategies are classified as having an insider status while groups with outsider strategies have an outsider status. In terms of failed insiders, they can still have the insider status of a peripheral type but not a core insider status. In terms of my discussion on GE, by employing Maloney's typology, the question whether and how strategy adopted by NGOs can affect their involvement in GE can also be illustrated as how status affects involvement. However, whether it is a core insider status or a peripheral insider status still matters when discussing certain NGOs in the following sections.

In terms of the second question whether groups have agency to make decisions on their strategies, scholars have different views on it. Some, such as Grant, claim that groups have choices over strategies;³⁶⁴ some, such as Dunleavy, also suggest that groups have choices but with a preference to adopt insider strategies;³⁶⁵ others, such as Maloney, argue that

³⁶⁴ Grant (n 360).

³⁶⁵ Patrick Dunleavy, *Democracy, Bureaucracy and Public Choice: Economic Explanations in Political Science* (London: Harvester 1991).

groups do not have real choices over strategies at all.³⁶⁶ In my opinion, groups still have choices on strategies, but not all groups have it. This view is not compatible with Maloney's argument concerning groups' agency. According to Maloney, strategies are mainly determined by the nature of groups' policy demand and to some extent by the history of groups' formation.³⁶⁷ In terms of outsiders by choice, such as Greenpeace pointed out by Maloney, they are forced to adopt an outsider strategy because of organisation maintenance, which is also a goal of survival by groups.³⁶⁸ Therefore, it can be concluded from Maloney's view that groups do not have real choices or agency on strategies no matter which type of group they belong to. However, with regard to insider groups, although as noted by Binderkrantz and Krøyer, it is true that their policy demands and goals can determine their strategies,³⁶⁹ goals are selected by groups themselves and hence considered as a choice in the first place. However, this kind of choice may not be defined in the same way as the choice discussed by Maloney, as choices on goals are generally made before groups are established while choices on strategy are more likely to be made after establishment of groups.

With respect to outsiders by choice, such as Greenpeace, Maloney assumes that Greenpeace places more emphasis more on attracting members to ensure organizational maintenance than achieving political success, and this forces it to adopt an outsider strategy.³⁷⁰ But this could surely be considered to be a choice by Greenpeace to prioritise

³⁶⁶ Maloney, Jordan and McLaughlin (n 359).

³⁶⁷ Ibid.

³⁶⁸ Ibid.

³⁶⁹ Anne Binderkrantz and Simon Krøyer, 'Customizing Strategy: Policy Goals and Interest Group Strategies' (2012) 1 *Interest Groups & Advocacy* 115.

³⁷⁰ Maloney, Jordan and McLaughlin (n 359).

organizational maintenance? If this is not a free choice, which means Greenpeace has to focus on organizational maintenance first to survive, how can it explain that Greenpeace has, according to Saunders, shifted its outsider strategy to a mix of both insider and outsider strategies?³⁷¹ Therefore, it is not precise enough to conclude that all groups have no real choices on their strategies. Instead, insider groups and outsider groups by goals do not have agency on their strategies which are determined by their goals in the first place, while outsider groups by choice, which normally adopt thresholders' strategies,³⁷² have agency on their choices.

The insider and outsider strategy specifically overlaps with political opportunity theory in addressing the issue of political context. As in political opportunity theory, the openness of a polity is a crucial variable. It is closely related to the insider and outsider strategy in that a polity will be relatively open to insiders and relatively closed to outsiders in general.³⁷³ However, in terms of outsiders by choice, as discussed above, they have agency on choices of strategies and hence, although the polity may be open, they may still practise outsider strategies due to organizational maintenance. In terms of environmental NGOs in the EU, many of them prefer to practise outsider strategies and thus, are considered as outsiders or thresholders.³⁷⁴ Saunders argues that insiders concentrate on issues already on the political agenda; thresholders seek to add new, uncontroversial issues onto the agenda; and outsiders seek the support of new and controversial issues.³⁷⁵ However, this argument does

³⁷¹ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

³⁷² A thresholder strategy refers to a mix of both insider and outsider strategies.

³⁷³ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

³⁷⁴ Jan Beyers, 'Policy Issues, Organisational Format and the Political Strategies of Interest Organisations' (2008) 31 *West European politics* 1188.

³⁷⁵ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

not easily apply in the context of GE. For example, thresholders targeting uncontroversial issues new to the political agenda, such as Greenpeace and FoE as defined by Saunders, have in fact engaged with GE which is considered controversial. Most small NGOs in China, which can be classified as outsiders targeting controversial issues according to Saunders's categorization, have not been involved in GE, despite this being perhaps more expected of them due to the new, controversial nature of GE and their outsider status.

In answering the question why interest groups lobby, the resource dependence theory has been discussed as a potential answer to the question. It indicates that groups controlling key external resources have the potential to influence and control other groups.³⁷⁶ It overlaps with resource mobilization theory in that they both admit resources as a crucial element of mobilization. In the context of GE, it can be applied to explain why small NGOs in China make choices over which specific policy areas they are involved depending on large NGOs which can provide resources to them.

In conclusion, insider or outsider strategy as a variable can be generated from interest group literature. Integrated with social movement theory, the question of whether strategy – in terms of insider or outsider strategy – can affect NGOs involvement in GE has been discussed under the variable. This is to bridge the gap in answering the question why interest groups specialise in certain policy areas rather than others, which is also a deficit in social movement literature.

³⁷⁶ David Lowery, 'Why Do Organized Interests Lobby? A Multi-Goal, Multi-Context Theory of Lobbying' (2007) 39 Palgrave Macmillan Journals 29.

5.4 Legal literature

After discussing variables within social movements and interest groups literature, legally related literature will be employed and discussed in this section. In addition, integration between legal scholarship and the other two strands of literature will be investigated during the discussion. Within the broad legal scholarship, governance literature and law and social movements literature are employed in this thesis to generate or examine variables concerning NGO involvement in GE.

5.4.1 Governance literature

Governance literature concerning public participation has talked about a variety of issues from different perspectives. There are several main themes receiving much discussion: public participation as solutions to improve procedural legitimacy; participation to improve results and decisions as a substantive approach; public participation itself as an alternative regulatory tool against traditional command-and-control approach; limitations of public participation; information disclosure as a precondition of public participation; and loss of public trust in government concerning scientific advice. There is a gap in the literature that why NGOs choose to participate in some political areas, where my research can to some extent fill in it.

In terms of procedural legitimacy, according to Lee and Abbot, public participation is

required to improve procedural legitimacy because of the political nature of environmental decisions.³⁷⁷ That is to say, environmental decisions normally include very technical elements and thus rely on expertise to a large extent. However, decisions on controversial topics cannot be made merely by experts; instead, a value judgment from the public can bridge gaps in scientific knowledge.³⁷⁸ It is true that involving the public is a way of enhancing procedural legitimacy, especially with regard to controversial topics. However, in terms of substantially improving results and achieving better decisions, scholars have more suspicions of including the ordinary public, which will be discussed later. Another important element in procedural legitimacy is related to expression of green values.³⁷⁹ Although public participation may not necessarily lead to ‘green outcomes’, it is a crucial way of ensuring expression of ‘green values’ by the public.³⁸⁰ Expression of environmental values by the public can be incorporated along with expressive benefits in the interest group literature. As discussed in the section on interest groups, expressive benefits are the main factor in attracting people to join in environmental groups. People aiming at expressive benefits care more about their values being expressed and heard, which in turn confirms the importance of expressing environmental values as an element of procedural legitimacy.

Public participation is also considered by scholars as a way of improving substantive results and achieving better decisions. However, it is controversial, as noted in the preceding paragraph, concerning the tension between experts and the ordinary public.

³⁷⁷ Lee and Abbot, ‘The Usual Suspects? Public Participation Under the Aarhus Convention’ (n 3).

³⁷⁸ Ibid.

³⁷⁹ Abbot (n 177).

³⁸⁰ Ibid.

According to Lee and Abbot, there is a dilemma between relying on expert judgment concerning technical areas and including the public to provide value judgements on controversial topics.³⁸¹ In addition, as they have summarised in their work, opposite views are held by other scholars that an emphasis on experts should be placed even at the expense of involving the public in terms of technical intensive decisions.³⁸² This is due to both the difficulty in including the public and there being no room for including values in a technical perspective.³⁸³ Opponents have questioned the expertise of the public as well as the feasibility of involving them. But a decision on a technical topic cannot solely be interpreted as including purely technical issues. Although a topic may include significant technical elements, as long as it is related to environmental decisions, political and ethical concerns will go hand in hand with technical decisions. Therefore, arguing that an issue is too technical to involve the public may not be realistic within environmental decisions. In addition, another question arising from the expertise of the public is whether the public needs high technical expertise to participate in such debates. It seems that high technical expertise does not matter too much as long as the public has common sense. According to a report by the House of Lords, common sense is a solid base for participation.³⁸⁴ In addition, understanding scientific data is not a requirement for the public as this is the responsibility of experts. What the public has to cope with is information provided by experts who are interpreting from raw scientific data. This raises an issue between raw data and information, which will be discussed later in this section.

³⁸¹ Lee and Abbot, 'The Usual Suspects? Public Participation Under the Aarhus Convention' (n 3).

³⁸² Ibid.

³⁸³ Ibid.

³⁸⁴ Roger Brownsword and Morag Goodwin, *Law and The Technologies of The Twenty-First Century* (William Twining ed, Cambridge: Cambridge University Press 2012).

Apart from improving substantive results and procedural legitimacy, public participation itself is also considered as an alternative regulatory tool.³⁸⁵ According to Maria Lee, the traditional command-and-control approach is not sufficiently able to cope with emerging environmental issues including ozone depletion.³⁸⁶ Alternative tools such as economic mechanisms have been critically analysed by Lee in terms of their challenges and environmental effectiveness.³⁸⁷ Lee has considered public participation among these alternative regulatory mechanisms which can act as a supplement to traditional regulatory tools. In terms of the limitations of public participation, scholars have raised a concern that NGOs cannot represent the public.³⁸⁸ And because of this, whether to involve the ordinary public draws attention. However, involving the ordinary public is considered difficult and not cost effective and additionally has a risk that it may not improve outcomes in the end.³⁸⁹ This is due to the fact that the public is considered by some as irrational and ignorant concerning technical issues.³⁹⁰ This perspective is closely related to the technological fear by the public in the cultural perspective of social movement theories. Technological fear in the variable of emotions means people tend to oppose new technologies and generate bias by misusing scientific information, which is regarded as irrational and a matter of ignorance. Because of this, it has been suggested by some that the public should perhaps be excluded from decision-making. While it is normal for the public to hold this technological fear, excluding them from decisions is, nevertheless, not a proper solution to reduce their fear. Instead, involving them in decisions can make the public

³⁸⁵ Lee (n 181).

³⁸⁶ Ibid.

³⁸⁷ Abbot (n 177).

³⁸⁸ Lee and Abbot, 'The Usual Suspects? Public Participation Under the Aarhus Convention' (n 3).

³⁸⁹ Ibid.

³⁹⁰ Ibid.

more or less well informed of the issues and through this, their fear of technology may be reduced.

Access to information is another theme under discussion concerning public participation, and is a precondition of public involvement. Access to information requires information disclosure by government. There is a concern that raw data can only be understood by experts and it is difficult for the ordinary public to identify relevant material from massive and overwhelming data. While explaining data is easier to understand, there remains a risk of manipulation by authorities such as developers in EIA.³⁹¹ The issue is related to the difference between data and information. Usually data is raw while information is more a matter of interpretation of data. Based on this distinction, data is usually provided by scientists to decision makers and information is provided by decision makers to the public. Therefore, access to information refers to interpreted information by decision makers and this is why there is an opportunity for decision makers to manipulate the data. But it seems that there is no way out of this dilemma as the interpreted data cannot always be neutral and stick to facts; and raw data cannot easily be understood by the public.

The last issue discussed in the literature is the loss of trust in government concerning scientific advice. Scholars have proposed a solution by enhancing openness and gaining participation.³⁹² However, how effective this solution can be is also related to the public themselves. As mentioned above, the public, with technological fear, can be irrational and ignorant and hence, generate bias against issues. Merely enhancing openness and

³⁹¹ Ibid.

³⁹² Ibid.

participation may not be enough to increase trust if bias is already in place. Therefore, technological fear among the public also needs attention when dealing with the loss of trust in government.

Within the governance literature, there are two strands of literature or theory which need to be noted concerning NGOs. One important strand of the literature is focused on regulatory legitimacy; another looks at effective participation. NGO participation is considered not only closely related to governance but is also seen as a form of ‘new governance’.³⁹³ This governance literature can be seen as an important bridge between the political science literature on social movements and interest groups considered above and literature in law, which has tended to focus more on governance.

In terms of regulatory legitimacy, public participation including NGOs is an important element of procedural legitimacy.³⁹⁴ Some scholars argue that legitimacy consists of the act of participation itself; some argue that participation is more an instrumental means; and others combine the two arguments to indicate that participation is not only good in itself but also instrumental.³⁹⁵ In order to foster openness of participation, it is seen as important to let various voices including NGOs be heard at different stages of the decision-making process.³⁹⁶ There are two ways of having public voices heard: through individuals directly and via representative NGOs indirectly. According to the report released by the UK House of Lords Science and Technology Committee, there is a difficulty in engaging the public

³⁹³ Lee (n 181); Gráinne DE Búrca and Joanne Scott (eds), *Law and New Governance In The EU and The US* (Oxford: Hart 2006).

³⁹⁴ Brownsword and Goodwin (n 384).

³⁹⁵ Ibid.

³⁹⁶ Ibid.

with complicated issues which require sufficient information, as the general level of scientific education in the general public is low.³⁹⁷ It seems that NGOs can mediate public voices effectively. However, this role of NGOs has been criticised by scholars as controversial because it is possible for NGOs to stop mediating and to define public interests by themselves.³⁹⁸ In the context of GE, the controversy exists and yet is perhaps more complicated. NGOs being reluctant to talk about GE is a way of them ceasing to mediate by pausing the communication between government and the public. This is perhaps because NGOs do not want to draw much attention from the public. Intentionally avoiding talking about GE can be regarded as affecting the public interest by stopping their mediating role, which is different from the danger defined in the literature that NGOs stop mediating and decide terms or evidence to shape public debates. That is to say, differentiated from the danger defined in the literature, in the case of GE, NGOs cease to mediate by staying clear of it rather than shaping the debates. A question arising from the discussion of NGOs' reluctance to participate in GE is whether there is a conscious, strategic decision in not making use of their role of mediating to affect public interests. This will be examined in detail in chapters 6 and 7.

In terms of effective participation, this entails freedom of expression which is essential to the principle of transparency.³⁹⁹ Freedom of expression requires both the freedom of having opinions expressed but also the freedom of receiving information. Therefore an information deficit between government and the public challenges the principle of

³⁹⁷ Ibi House of Lords Science and Technology Committee, *Science and Society* (2000); Brownsword and Goodwin (n 384).

³⁹⁸ Brownsword and Goodwin (n 384).

³⁹⁹ Ibid.

transparency to some extent. NGOs are assumed to play an information-exchange role to address a deficit of information.⁴⁰⁰ In terms of GE, there is a deficit of information among the public, but why do some NGOs to some extent fail to exchange information and not get involved in GE? It perhaps leads to the answer of the new information deficit model that it is the deficit of scientists who need to gain more information.⁴⁰¹ This is especially related to emerging technologies such as GE (and e.g. nanotechnology). As there are many risks and uncertainties in GE, scientists are unable to define all of the uncertain risks and side effects that would do harm to the environment and health at the current stage of research. This deficit is likely to influence NGOs when they aim to exchange information on GE and, as a result, NGOs may not become involved as they lack information from scientists. According to the report by the House of Lords, common sense possessed by the public is able to provide a solid basis for participation.⁴⁰² To achieve effective participation, education is less a condition than the willingness to gain information.⁴⁰³ In terms of GE, this may help to explain why some NGOs in China have not gained any information of GE: it may simply be a matter of their unwillingness to do so. However, willingness to gain information does not guarantee willingness to participate, as in the UK some NGOs do not participate although they have knowledge on GE. Despite this, lack of willingness to gain information, which is regarded as a precondition of participation, can be a potential explanation for why NGOs have not engaged in GE.

As can be seen from the discussion above, intentionally ceasing to mediate and willingness

⁴⁰⁰ Michael Mason, *The New Accountability: Environmental Responsibility Across Borders* (London: Earthscan 2005).

⁴⁰¹ Simon Brown, 'The New Deficit Model' (2009) 4 *Nature nanotechnology* 609.

⁴⁰² Brownsword and Goodwin (n 384).

⁴⁰³ *Ibid.*

to access information can be considered as potential variables for examining NGO participation in GE. These two variables generated from the governance literature are not completely independent from those discussed in social movement and interest group literatures. They are integrated to form a synthetic framework for my discussion in the next section.

5.4.2 Law and social movements literature

This part discusses the literature on law and social movements with law and society scholarship. By incorporating litigation strategy and social movements theory, it focuses on the question of why NGOs choose to adopt litigation as a social movement strategy, which has been examined by socio-legal scholars. I will continue discussing this core question in law and social movements literature, but with an opposite perspective of why NGOs in the UK or China do not choose to employ litigation as a strategy, in the context of GE.

The existing literature concerning why social movements adopt litigation as a strategy includes several key variables: legal opportunity and political opportunity, resources, rights consciousness, and grievances. Political opportunity, resources and rights consciousness have been developed under legal mobilization theory by Michael McCann and others.⁴⁰⁴ Rights consciousness, as argued by scholars, cannot solely trigger legal mobilization; instead, it must be combined with resources as well as political opportunity to feasibly

⁴⁰⁴ Lisa Vanhala, 'Legal Opportunity Structures and the Paradox of Legal Mobilization By the Environmental Movement in the UK' (2012) 46 *Law & Society Review* 523.

mobilize.⁴⁰⁵ Legal opportunity has been introduced by Chris Hilson into social movements theory, as a context variable that should be discussed separately from political opportunities, together with differentiated terms – legal opportunity structure and legal opportunity.⁴⁰⁶ He has employed the two terms to describe, respectively, stable and contingent factors concerning contextual issues.⁴⁰⁷ The relevant literature has suggested and emphasized variables of legal and political opportunity as well as resources, but with an ignorance of grievance.⁴⁰⁸ According to Hilson, grievance is a necessary and important variable in explaining climate change litigation in the UK.⁴⁰⁹ This has brought grievance back in discussion on why NGOs choose litigation as a social movement strategy.

Based on existing literature on law and social movements, I will begin to discuss relevant variables proposed in the literature within the context of GE. In terms of litigation strategy, in recent years, there are only two lawsuits against GE in the US. Although there is one lawsuit against GE in Canada, it was organised by an individual, Daniel Towsey, rather than a NGO, which does not fit in the discussion. The two lawsuits in the US are organised by Geoengineering Action Network and Geoengineering Watch respectively. Both lawsuits are supported by a group of law experts and are targeting chemtrails and GE according to their websites and posts.⁴¹⁰ However, although there are campaigns and

⁴⁰⁵ Holly McCammon and Alison McGrath, 'Litigating Change? Social Movements and the Court System' (2015) 9 *Sociology Compass* 128.

⁴⁰⁶ Hilson (n 314).

⁴⁰⁷ Vanhala (n 404).

⁴⁰⁸ Chris Hilson, 'Climate Change Litigation in the UK: An Explanatory Approach (or Bringing Grievance Back In)' in Fabrizio Fracchia and Massimo Occhiena (eds), *Climate Change: La Riposta del Dirotto* (Napoli: Editoriale Scientifica 2010).

⁴⁰⁹ *Ibid.*

⁴¹⁰ Geoengineering Action Network, 'Class Action Lawsuit Against Geongineering & Chemtrails In The Works' (2015)

<<http://chemtrailsmuststop.com/2015/07/class-action-lawsuit-against-geongineering-chemtrail-in-the-works/>> accessed 9 July 2015; Dane Wigington, 'Pushing Back Against Climate Engineering, Canadian Lawsuit Is Filed' (2016) <<http://www.geoengineeringwatch.org/?s=law>> accessed 23 March 2016.

lobbying activities in terms of GE in the UK, there is no litigation against it so far by NGOs. This raises a question why NGOs in the US have resorted to a litigation strategy against GE while NGOs in the UK have not turned to litigation.

In order to explore answers to the question, I will turn to grievance and urgency from the variable of emotions, and effectiveness from resource mobilization theory. According to Hilson, grievance is a crucial factor in climate change litigation, especially specific grievance rather than general grievance.⁴¹¹ That is to say, with enough specific grievance against GE, legal mobilizations can be triggered even without a high level of concern over climate change. Based on Hilson's theory of specific grievance, I continue to argue that extreme or strong grievance can account for litigation on GE. According to the posts by GE Action Network and GE Watch in the US, they strongly oppose any GE activities and suggest that GE be terminated immediately. With such an extreme emotion, they assume that lawsuits are the quickest way to suggest a ban on GE.⁴¹² In the UK, NGOs involved in GE generally hold a relatively soft view on GE according to my empirical data, which means that they do not strongly oppose all methods of GE research activities. Instead, they indicate that 'I would not say that I oppose to GE research; whether to oppose or support GE research depends on a case-by-case basis'. From the facts above, it can be seen that litigation as a strategy is used by NGOs in the US with strong and extreme grievance against any GE activities, and because of this, NGOs in the UK with a relatively soft attitude towards GE do not adopt litigation to pursue an immediate outcome.

⁴¹¹ Hilson, 'Climate Change Litigation in the UK: An Explanatory Approach (or Bringing Grievance Back In)' (n 408).

⁴¹² Network (n 410).

Another factor concerns the idea of emergency in the context of GE. GE Action Network, have listed a number of serious harms caused by chemtrails and GE and believe that chemtrails sprayed in sky are GE activities. Therefore they propose an immediate termination on GE activities. One important issue to note is that whether chemtrails are a method of carrying out GE is controversial and is not included further in the discussion. In the UK, NGOs involved in GE such as Greenpeace, do not consider chemtrails as urgent with solid scientific evidence.⁴¹³ They regard chemtrails as normal trails sprayed by aircrafts without conspiracy although they have received significant amounts of video or photo ‘evidence’ from the public requesting a campaign or action. By avoiding a discussion on whether chemtrails is a GE method, a critical point can still be identified that whether the issue we are facing is seen as urgent and as having caused damage is important in explaining litigation strategy. In addition, according to GE Action Network, after many strategies adopted to stop GE, litigation is the quickest method to achieve the goal. This suggests that litigation is considered after other strategies are exhausted and a quick solution to make a change. It raises an issue of whether litigation is more regarded as a last resort or an emergency aid in the context of GE, which requires further discussion.

Effectiveness in pursuing a change concerning GE by litigation is frequently mentioned in the claims by GE Action Network and GE Watch. As posted on their websites, lawsuits are seen as the most effective way of disseminating details of GE and are a cost-effective way of halting GE. That is to say, litigation effectively draws attention to the issue of GE no

⁴¹³ For example, Graham Thompson, ‘Greenpeace’s View On ‘Chemtrails’’ (2015) <<http://www.greenpeace.org.uk/greenpeaces-view-chem-trails-20150313-0/>> accessed 13 March 2015.

matter what the outcome of lawsuit is and is likely to have effective impacts among the public. This can also explain why relevant NGOs in the UK do not consider litigation as a strategy. According to my empirical data, all of the respondents in the UK have expressed their reluctance to draw too much attention on GE, as it may distract the public from focusing on mitigation and adaptation. Therefore, litigation, which is able to draw significant public attention, is not the preferred strategy for NGOs in the UK.

In addition to discussing variables within the literature on law and social movements, the perspective of interest group theory can also be incorporated in it. According to some early literature on how law is effective in securing social change, law-based strategies, such as litigation, are considered as difficult for ‘outsiders’ to employ successfully.⁴¹⁴ It suggests that litigation strategy is preferably taken by ‘insiders’. In addition, according to the literature, litigation is considered conservative and led by law elites, and hence, something that many NGOs cannot pursue.⁴¹⁵ However, this seems to fail in explaining the situation in the UK. Some NGOs in the UK, such as Greenpeace and Friends of the Earth, practise a mixture of insider and outsider strategies which is defined as thresholders by Saunders,⁴¹⁶ have a history of employing a bottom-up litigation strategy and are well-resourced both in financial and experience.

In conclusion, grievance and urgency which can be included in the variable of emotions in social movement theory, as well as effectiveness which is situated in resource mobilization

⁴¹⁴ Steven Boutcher, ‘Law and Social Movements: It’s More Than Just Litigation and Courts’ (2013) <<https://mobilizingideas.wordpress.com/2013/02/18/law-and-social-movements-its-more-than-just-litigation-and-courts/>> accessed 18 February 2013.

⁴¹⁵ Ibid.

⁴¹⁶ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

theory have been generated and examined within the law and social movement literature.

5.5 A synthetic analytical framework for understanding NGOs' involvement in GE

This part aims to develop a synthetic analytical framework for combining theories of social movements, interest groups and governance in order to explore comprehensive variables for understanding NGO involvement in GE. To begin with, I will concentrate on the limitations of the various theories in the preceding discussion to provide an initial insight that variables generated only from social movement literature are not comprehensive enough for my research. Next, I will explain why I integrate theories of social movements, interest groups and governance and then illustrate how they can be merged in the context of GE. Finally, integrated variables are tied in with the hypotheses proposed in my literature review to develop a synthetic framework for discussing data in detail in chapters 6 and 7.

5.5.1 Limitations of the theories

The variables identified in different literature are important for understanding NGO participation in GE, and each of them can shape the dependent variable – NGOs' involvement in GE – from different perspectives. Therefore every single literature or theory cannot provide rounded explanations to discuss the data in the UK and China. This is because there are limitations in different theories and literature.

In the social movement literature, three stands of literature are criticized as having limited scope. Resource mobilization theory emphasises organisations and resources among organisations but fails to situate organisations within the broader structural context of a polity. Applying merely resource mobilization theory to understand NGO involvement will lead to a synchronic answer. Political opportunity theory can be used to address the limitation of ignoring the context factor as it concentrates on the political environment facing organisations. However, applying this theory alone is unable to address the complex issues as it is viewed as overly static and focusing purely on the interactions between organisations and the political context.⁴¹⁷ Therefore it is proper to integrate the two theories in my discussion. An integrated theory of resource mobilization and political opportunity does not, however, allow for an emphasis on emotions, which is a crucial element triggering social movement participation. I therefore added this by including a cultural perspective. Overall, social movement literature concentrates on the conflictual nature of movements with non-institutionalized approaches; however, not all of the NGOs in GE adopt a conflict form in their participation.

The interest group literature is a small field in political science and to some extent isolated within the broader politics literature. The theory of variations in strategy in terms of insider/outsider can be applied to understand NGO participation in GE. However, there is a gap when it attempts to address the question of whether different strategies will affect NGOs' involvement in GE. Applying the theory of strategy in the interest group literature alone will not be able to answer the question. This gap requires combining social

⁴¹⁷ Ibid.
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movement literature with the strategy theory. In terms of the governance literature, the dependent variable, namely NGO participation, is situated within the public participation theory. Governance literature addresses mainly normative issues rather than strategic issues however. It has limitations when considering how and why NGOs make strategic choices. The socio-legal literature on law and social movements is more useful in dealing with strategic issues, when addressing the question why social movement organisations practise a litigation strategy. It brings important factor – legal opportunity (structure)– into social movement theories. Variables discussed in this literature can be embedded in the social movements scholarship and will not be discussed separately in the following section. In conclusion, incorporating these literatures may help to shed light on coping with the limitations.

5.5.2 Integration of theories

Theories in the literature on social movements, interest groups and governance can be integrated to some extent. In a general sense, theories on social movements and interest groups provide a political angle for exploring NGO participation, while theories on governance offer a more legally focused perspective.

They are interrelated in several ways. First, the variable ‘openness’ generated from political opportunity theory can be illustrated with interest group theory and also governance theory. The openness of a polity in political opportunity theory can affect the

insider or outsider strategy employed by organisations in interest group theory. Organisations facing a relatively open political environment are more likely to adopt an insider strategy while those facing a closed polity tend to act as outsiders.⁴¹⁸ Openness is also a normative issue of public participation in governance, with openness addressed as an important element of participation in the decision-making process.⁴¹⁹ Second, both social movement and interest group theories have underlined the free rider dilemma based on cost-benefit analysis. The expressive benefit in interest group theory, which suggests people join environmental groups according to their willingness to express the environmental values and make their voices heard during the process, can be used to provide a solution for the free rider dilemma in social movements as well. Expressive incentives in environmental groups emphasize the process of participation itself, which gives participation a more legitimate meaning rather than considering it as an instrument only. Third, the resource dependence theory in the interest group literature shares a similar profile with resource mobilization in the social movements literature. They equally emphasize resources as an essential part of organisations. Thus, there are some points of integration across different theories which provide the feasibility of combining those variables. And the most important point to merge those theories is to make a synthetic and comprehensive framework of variables for discussion in order to try to address the limitations in each literature.

⁴¹⁸ Ibid.

⁴¹⁹ Brownsword and Goodwin (n 384).

5.5.3 Developing variables

As is outlined in the literature review in chapter 2, within the public participation literature and the governance scholarship, several hypotheses have been proposed to understand NGOs' involvement in GE. These hypotheses can be merged into variables generated from preceding discussions. A hypothesis that NGOs with favoured status might push less favoured NGOs out of the arena can be integrated into the competition theme in the variable of resources in the social movement literature. The hypotheses of lack of expertise and possessing limited financial and labour resources⁴²⁰ are considered as an element of the material resources variable generated from resource mobilization theory. The hypothesis that NGOs fear distracting society from focusing on mitigation and adaptation will be discussed under the theme of ceasing to mediate in the governance literature. The hypothesis that NGOs 'feel the dice are loaded in favour of powerful actors'⁴²¹ is a reflection of resignation in the variable of threat from the cultural approach. However, the hypothesis of environmental constraints⁴²² cannot be fully integrated into the variables in political opportunity theory and thus requires developing a more comprehensive variable of context. This is because political opportunity addresses purely political context issues, which can include the hypothesis of legal constraints and political constraints, but means it fails to address the issue of public consciousness in society proposed by environmental constraints.⁴²³ Therefore, it is proper to develop a variable of context that can include both political factors and public consciousness factors.

⁴²⁰ Text to section 2.2.1.

⁴²¹ Morrow and Cullen (n 132).

⁴²² Text to section 2.2.2. Environmental constraints refer to the situation that GE has not draw much public attention in China.

⁴²³ Text to section 2.2.2.

By merging the hypotheses and the theories in the preceding discussion, a synthetic framework of variables can be concluded. First, there is the context variable, which includes sub-variables of openness, the degree of policy development, and public consciousness. Second, there is the emotion variable including sub-variables of threat, blame, and willingness to access information. Third, one has the strategy variable, which entails insider or outsider strategies, ceasing to mediate, efficiency and competition. Finally, there is the resource variable, which includes material resources and the conscience of elites. This framework combines three different strands of literature and theories, which is expected to generate a more comprehensive analytic framework for my further discussion of data in the UK and China in chapters 6 and 7.

This chapter has employed three literatures of different scope – the social movements literature, the interest groups literature and the governance literature – to generate variables for examining empirical data. By acknowledging limitations in explaining NGOs' involvement with each single literature, this chapter proposes a synthetic analytic framework and comprehensive variables for further discussion of the empirical data. The next chapter will discuss these variables in detail with the empirical data in the UK and China, aiming to explore a pattern, if there is one, to help understand NGO participation in the two countries.

Chapter 6 Discussion on the results in China

This chapter discusses the empirical results in China with a theoretical basis of variables identified in chapter 5. It seeks to examine the variables with empirical data in China in order to develop a theory on NGOs' involvement in GE. Therefore, data and results in China are analysed and discussed according to the categorization of variables. The discussion consists of five sections: sections 6.1 to 6.4 examine the four variables – context, emotion, strategy, and resource. The last section draws conclusions regarding the variables and develops a theory for NGO involvement in China.

6.1 Context

The variable of context can be considered as the background for discussing NGO participation in GE. According to the discussion in chapter 5, context comprises three important factors that contribute to the involvement of NGOs in China – openness, public consciousness and the degree of policy development.

The openness of a polity can provide a picture of the general political situation that affects NGO participation. Before discussing the empirical data produced by interviews in China, an investigation in the general political opportunities that NGOs face will be addressed from a dynamic perspective. As mentioned in chapter 5, political opportunities refer not

only to structural factors, such as the openness of a polity, but also to contingent and dynamic factors. NGOs in China have a relatively short history of development compared with those in Western countries, and they did not grow in numbers until the opening up of policy in China in 1979.⁴²⁴ The early stage of development of NGOs, inter alia during the 1980s and 1990s, witnessed a rapid growth in numbers and several political opportunities due to the opening of the political process and transition of the authoritarian regime.⁴²⁵ That is to say, the opening up of the polity and the transition of the regime has provided many political opportunities for NGOs to emerge and develop during the two decades since 1979. In more recent years, NGOs have played a more active role in public policy due to the central policy of ‘harmonious society’ introduced by the Chinese government.⁴²⁶ This policy, emphasising the stability of society, has enabled authorities at various levels to consider NGOs as having an important role to play in terms of reducing conflicts between the general public and the government. In addition to the political preferences during different time periods, structural conflicts between various levels of government and different administrative divisions – stemming from decentralisation of political authority – have also provided political opportunities for NGOs in China.⁴²⁷ For example, different levels of government differ in policy concerning the priority of environmental protection, in that local authorities may consider economic development as a priority while the central government emphasises environmental protection.

Apart from the positive political opportunities that NGOs face, there are also dilemmas or

⁴²⁴ Xueyong Zhan and Shui-Yan Tang, ‘Political Opportunities, Resources Constraints and Policy Advocacy of Environmental NGOs in China’ (2013) 91 *Public Administration* 381.

⁴²⁵ *Ibid.*

⁴²⁶ *Ibid.*

⁴²⁷ *Ibid.*

obstacles for them. The fundamental barrier for their development, as identified by some scholars, is the government's attitude towards NGOs in China.⁴²⁸ Government has shown a contradictory attitude towards NGOs: on the one hand, NGOs' role in providing social services can be considered as a complement to governmental functions in some areas such as caring for the disabled; on the other hand, authorities have fears and suspicions regarding some NGOs which they consider may contribute to social instability and hence, they exert a strict control over their activities.⁴²⁹ This suspicion can further be illustrated as lack of trust in NGOs and results in a constraint on their development. As mentioned in the previous chapter, political opportunity comprises not only objective factors but also a subjective factor concerning how NGOs perceive opportunities. Unfortunately, some NGOs, according to the empirical data, do not have much faith in government, stressing instead its ineffectiveness and reluctance to cooperate with them. This lack of mutual trust between government and NGOs forms a barrier that NGOs are facing in China.

6.1.1 Openness

After drawing a picture of the general political opportunities in China, I now turn to discuss the empirical data under the relevant variables. As pointed out in the general discussion, it is difficult to identify whether a state is open or closed, as it may be closed to some issues of participation while open to others, or closed to some organisations while open to others. Therefore, it requires discussion concerning certain issue of GE and specific types of NGOs in China. According to the respondents in China, the openness or

⁴²⁸ Yuwen Li, 'Introduction: Challenges and Opportunities for NGOs in Different Parts of the World' in Yuwen Li (ed), *NGOs in China and Europe: Comparisons and Contrasts* (Burlington: Ashgate Publishing 2011).

⁴²⁹ Ibid.

ways of participation varies among international NGOs, large and government supported NGOs, and small NGOs. In terms of international NGOs, the respondent from Greenpeace China indicated that they are relatively more independent from government than Chinese NGOs; they also tend to criticize government policy and hence face more difficulties in influencing government and receive fewer opportunities. In order to understand this further, it needs to be illustrated within the current situation to explore why the government holds this attitude towards INGOs. As mentioned in the previous paragraph, NGOs in China face the problem that the government fears that some NGOs may contribute to social instability. This is typical and obvious for INGOs. The Chinese government has concerns about INGOs that could 'broach politically sensitive subjects such as democracy and labour.'⁴³⁰ This results in restrictions on their activities and unclear legal status.⁴³¹ The most serious problem regarding unclear legal status concerns registration. The number of unregistered INGOs is much larger than registered organisations.⁴³² Unfortunately, there is no legal framework for the registration of INGOs in China and they can merely register as a foreign foundation.⁴³³ The respondent from HD Institute of Environment Observation (HDIEO) has confirmed this idea that the Chinese government does not trust international NGOs as 'the government is afraid of publicizing Western values by international NGOs and these organisations sometimes adopt radical strategies'. This again emphasises that international NGOs have more difficulties in influencing government policy mainly because they adopt radical strategies against government. In this regard, the Chinese government is closed to

⁴³⁰ Deyong Yin, 'China's Attitude Toward Foreign NGOs' (2009) 8 Wash U Global Stud L Rev 521.

⁴³¹ Junkui Han, 'International NGOs in China: Current Situation, Impacts and Responses of the Chinese government' in Yuwen Li (ed), *NGOs in China and Europe: Comparisons and Contrasts* (Burlington: Ashgate Publishing 2011).

⁴³² Li (n 428).

⁴³³ Yin (n 430).

international NGOs to some extent.

In terms of large and government-supported NGOs, the respondents admit that they receive more opportunities for participation, as government is relatively open to them. The respondent from the government-supported NGO pointed out that, being politically supported by government, they obtain more opportunities to participate and have particular access to the deputies of the People's Congress. However, there is also a problem that, as pointed out by the respondent, 'large NGOs draw more attention from government than smaller organisations and hence, are likely to face more difficulties in participation as government may have concerns with their increasing social impacts'. This point provides evidence for the idea that government and NGOs in China lack mutual trust and government may fear that organisations with large social impacts could be a threat to social stability, or they may be an alternative to the government on a particular policy. In addition, according to the respondent from the business NGO – HDIEO, 'the precondition of receiving more opportunities for large NGOs is not making trouble with government'. Therefore, it is not reasonable to conclude that the Chinese government is more open to large and government supported NGOs as they have difficulties in influencing policy when they stand on the opposite side to government. In terms of small NGOs, they have less opportunity to influence government policy. However, according to the respondent from HDIEO, small NGOs 'have better communication with government as they help government to monitor pollution and damage to the environment by industries or individuals'. That is to say, whether the Chinese government is open to small NGOs depends to a large extent on their position to help government.

When it comes to policy concerning GE in the particular context of China, this entails several aspects. The first aspect we need to consider is the development of GE technology in China. According to the scientists engaged in the National GE Research Project in China, ‘China does not have much motivation to conduct GE’. This is first because GE is a public good including a free rider dilemma, which has, been discussed in chapter 5.⁴³⁴ However, understanding this dilemma is different compared to other public goods. It suggests that participants in GE may not be benefited and benefits can go to non-participants; however non-participants can be affected not necessarily in a beneficial way but likely in a negative way. According to the scientists, due to the uncertainties on whether conducting GE will guarantee a beneficial outcome to participants themselves, China does not have much willingness to deploy GE projects. However why then does China research on GE at all? The scientists admit that it is a technology backup to at least research on it in case of an emergency need. In addition, GE research, as an alternative to deployment, is restricted to computer modeling and lab-based experiments, and furthermore, funding invested in GE by government is only used for modeling research rather than physical engineering research. This limitation makes it difficult to move on to the stage of deployment. Furthermore, according to the scientists, GE is related to a number of politically sensitive issues such as energy and food security, which requires more research into the complicated social and economic impacts of GE.

The second aspect of context that requires attention is the developing nature of China. The

⁴³⁴ Weismuller (n 302).

developing nature includes an element of a relatively short history of development of NGOs in China. As mentioned earlier in this section, NGOs in China started to grow in number after the policy of opening up in 1979, which is relatively late compared with counterparts in the Western countries. As is pointed out by the respondent from Greenpeace China, 'I don't think it is a Chinese situation that there is no NGOs involved in GE; rather, it is more that the UK is a unique case as a well developed country. Because I don't think you will find NGOs involved in GE in other developing countries'. The respondent continued to explain that when NGOs move to work on novel scientific topics, they typically require the culture of think tanks working with universities and research institutions, which is obviously a sign of well-developed countries such as the UK; while in contrast, NGOs in China do not have a culture of think tanks cooperating with research bodies. However, in reality in China, there are some think tanks with a small scale. They emerged after the opening up policy and have played a role in consultations with 'the Central Committee of the Communist Party of China, the State Council, government departments and the army'.⁴³⁵ Because of the reform and opening up and the development of a market economy, think tanks in China have grown in diversity and numbers.⁴³⁶ However, there are only around 100 think tanks and most of them are not well known.⁴³⁷ Although government is willing to seek consultations from think tanks, they face many restrictions and may not have agency in providing thoughts due to, inter alia, registration problems.⁴³⁸ Therefore, although the respondent has not provided a precise picture of think tanks in China, he still provides an insight that there is no real culture of think tanks in

⁴³⁵ Jia, 'The Development and Institutional Environment of Non-Governmental Think Tanks in China' (n 43).

⁴³⁶ Ibid.

⁴³⁷ Ibid.

⁴³⁸ Ibid.

China as they are recently developed and their functions are marginal or limited.

It is interesting that respondents from the international NGO indicated that, in the case of GE, it is crucial to understand the overall political environment in China and the big themes across the environment generally that the government is trying to focus on when they aim to engage in the area. That is to say, it is important for NGOs to follow what the political preferences of government are, and to try to operate within the scope of the government's preferences. Although there is a national research project on GE, it is currently not a big theme for the Chinese government and is merely at its initial stage of research in China. However, climate change, including mitigation and adaptation, has already been a big theme for the Chinese government, which may lead to a situation that GE, as a topic within the context of climate change, will be given more attention as a theme. However, it is not a necessity for GE to become a theme in the political area because, as discussed earlier in this section, China does not have much motivation to become involved in it according to the scientists in the national GE research project. Following the big themes also requires that NGOs pay attention to keep up with the political environment and wait for the right time to give information across when the Chinese government can actually make use of it and adopt it into policy. This view reflects a contingent factor of political opportunities that NGOs encounter. According to the discussion in the previous chapter, political opportunity includes not only structural factors, such as the openness of a polity, but also the receptivity of a political system that comprises contingent and non-structural factors.⁴³⁹ The emphasis on the timing of exerting

⁴³⁹ Rootes, 'Political Opportunity Structures, Promise, Problems and Prospects' (n 52).

influence on government can be considered the contingent factor of receptivity of the political system in China. In addition, the big themes of government also reflect a contingent factor of the polity that the preferences of government, which can change from time to time, matter when mobilizing around GE. It is a strategy of seeking opportunities in the dynamic political environment. However, respondents from Chinese NGOs⁴⁴⁰ have not paid much attention to opportunities to influence government policy.

6.1.2 Public Consciousness

In terms of public consciousness, most of the respondents admitted that public consciousness of GE is low in China. The respondent from the government-supported NGO indicated that although public consciousness varies in difference regions in China due to their levels of development, the consciousness concerning GE is generally low across the whole of China. In addition, respondents from small NGOs and international NGOs agreed that ‘the public does not have knowledge on GE, do not mention that they are concerned about it or that they would like to see action on it through NGOs’. Since the public consciousness on GE is low in China, NGOs would not receive an active response from the public if they act on it and therefore have no interest in doing so.

Public opinion on GE can also be discussed in relation to issue salience. Salience is an important concept in much of the existing literature on political science, which originally comes from research on voting behaviours aimed at exploring the various levels of

⁴⁴⁰ I use the term ‘Chinese NGOs’ to refer to NGOs that are originally established in China, which excludes international NGOs, in order to make a distinction between domestic NGOs and international NGOs.

importance attached to issues by voters.⁴⁴¹ There are two major strands of literature on salience in political science: salience in policy-making⁴⁴² and salience concerning public opinion. In employing this salience variable, literature on the latter strand will be applied in my discussion. Within this strand of literature, scholars have discussed two main topics: agenda-setting theory and the effects of issue salience on public opinion.⁴⁴³

Agenda setting theory refers to ‘the ability of the news media to influence the salience of topics on the public agenda’.⁴⁴⁴ It focuses on the correlation between the media and the salience of issues. A key topic in agenda setting theory relates to measurement of salience. Initially scholars have turned to ask survey questions like ‘what are the most important problems (MIP) facing the nation?’ and then turn to explore aggregate MIP responses.⁴⁴⁵ However, this measurement has been questioned by some scholars. For example, Wlezien has proposed that an important problem is a combination of importance and the degree to which it is considered as a ‘problem’.⁴⁴⁶ In terms of GE, the variable of salience cannot be applied to discuss Chinese NGOs, as the public in China has not really noticed GE. That is to say, GE is not a salient issue in China. INGOs do not become involved in it perhaps due to the fact of low public salience on GE. According to one of the respondents in Greenpeace China, ‘GE is not a mainstream topic in China and you don’t see GE in daily life’. This point suggests that GE is not considered salient by the public in China, and nor

⁴⁴¹ Christopher Wlezien, ‘On the Salience of Political Issues: The Problem with ‘Most Important Problem’’ (2005) 24 *Electoral Studies* 555.

⁴⁴² See e.g. Rebecca Bromley-Trujillo, Jordan Leising and John Poe, ‘The Importance of Salience: Public Opinion and State Policy Action on Climate Change’ (Annual Meeting of the State Politics and Policy Conference).

⁴⁴³ See e.g. David Ciuk and Berwood Yost, ‘The Effects of Issue Salience, Elite Influence, and Policy Content on Public Opinion’ (2016) 33 *Political Communication* 328.

⁴⁴⁴ Maxwell McCombs and Amy Reynolds, ‘News Influence on Our Pictures of the World’ in Jennings Bryant and Zillmann Dolf (eds), *Media Effects: Advances in Theory and Research* (New Jersey: Lawrence Erlbaum Associates Publishers 2002).

⁴⁴⁵ Wlezien (n 441).

⁴⁴⁶ *Ibid.*

is it even considered as a problem in the public's daily life.

In terms of another topic on determinants of salience, traditional agenda setting theory has focused on the media and its impacts on issue salience. Some scholars seek to explore complements to the media as a determinant, such as real-world cues,⁴⁴⁷ as well as increased knowledge on the issue and more opportunities to participate in politics via, for example, voting and signing petitions.⁴⁴⁸ Opportunities to participate in politics through various methods can be illustrated with the theory on political opportunity, which was discussed earlier in this section. Increased knowledge can be employed to discuss the case of GE. According to David Weaver, increased salience of an issue is accompanied by increased knowledge of its causes and potential solutions.⁴⁴⁹ This may, in turn, imply that low salience of an issue, such as GE, is accompanied by lack of knowledge on it. Respondents from Greenpeace China have confirmed this point that GE is a novel topic even in the scientific community and therefore, they lack information and knowledge on it, which somehow prevents it to become a salient topic. Some scholars, however, have argued that information gain does not always lead to a change of attitude on salience.⁴⁵⁰ This can be interpreted as that information gain does not necessarily lead to increased salience as there is a possibility that the more information the public obtain in terms of an issue, the less salient they consider it. In terms of GE, some UK NGOs would like to prevent it from becoming a salient issue as they regard it as controversial and would rather

⁴⁴⁷ Roy Behr and Shanto Itengar, 'Television News, Real-World Cues, and Changes in the Public Agenda' (1985) 49 *Public Opinion Quarterly* 38.

⁴⁴⁸ David Weaver, 'Issue Salience and Public Opinion: Are There Consequences of Agenda-Setting?' (1991) 3 *International Journal of Public Opinion Research* 53.

⁴⁴⁹ *Ibid.*

⁴⁵⁰ Richard Carter, 'Communication and Affective Relations' (1965) 42 *Journal of Quarterly* 203.

not talk about it.

Another factor in determinants relating to salience is whether an issue is obtrusive.⁴⁵¹ An obtrusive issue can affect nearly everyone that has had direct contact with it.⁴⁵² This factor of obtrusiveness is likely to affect issue salience concerning public opinion. Although GE is a global issue with transnational impacts on the environment, which might affect nearly everyone if finally deployed, it is still considered as unobtrusive at the moment by INGOs in China. According to the respondents from Greenpeace China, GE is not linked to and cannot be seen in daily life, which implies that, in their assumption, GE is not embedded in people's lived experience and is, hence, unobtrusive to them. In addition, GE is still at a stage of computer modeling research that it is no more than an abstract concept which it is not possible for them to have direct contact with.

6.1.3 Development of Policy on GE

When it comes to another variable under contextual factors, namely the development of policy concerning GE, respondents from the China-based international NGO indicated that GE is still a topic located predominantly among the scientific community in China and it has not really been considered at a political level. The deficit in GE policy is a crucial element of political context as it may not be the proper time to engage in GE now for international NGOs. In contrast, respondents in other NGOs have not noticed the policy

⁴⁵¹ E Rogers and J Dearing, 'Agenda-Setting Research: Where Has It Been, Where Is It Going?' (1988) 11 *Communication Yearbook* 555.

⁴⁵² *Ibid.*

deficit issue due to their unawareness.

In conclusion, the openness of polity as a general context issue, and the particular context concerning GE as a contingent factor including political preference of government, public consciousness, salience and the deficit in policy on GE are important factors for understanding both international and domestic Chinese NGOs' involvement in GE in China. It is interesting to identify that international NGOs are strategically seeking political opportunities in GE at the appropriate time. However, as discussed earlier, GE is not a big theme for the Chinese government at the moment and because of this, such NGOs are not involved in it at present. Additionally, international NGOs have identified the deficit in policy concerning GE when they provide explanations for their non-participation. However, these views were not identified by respondents from other NGOs in China. It suggests that the non-involvement of international NGO in China can be illustrated as a more strategic choice than other NGOs in China,⁴⁵³ from whom non-involvement merely results from unawareness.

6.2 Emotion

As defined in the previous chapter on potential variables, the variable of emotion comprises threat, blame and willingness to access information. However, there is a division between threat and blame, and willingness to access information. Although all of them are themes concerning emotional issues, they differ greatly in that threat and blame can be illustrated as active responses to strategically deal with negative emotions, while

⁴⁵³ A strategic choice is contrasted to an outcome of unawareness, including an idea of intentionally making decisions by considering different factors or elements that may have impacts on the choice.

unwillingness to access information is a negative and passive response to participation. In addition, unwillingness to access information, as identified in the governance literature in the previous chapter, refers to the emotion that people can be reluctant to access information to participate. It suggests that people could effectively participate with a reasonable background of common sense and hence, is able to explain that lack of knowledge is attributed to the public's unwillingness to retrieve information rather than an information deficit as such. It is, nevertheless, closely related to the problems of information deficit and the limited capability of elites, which is an objective limitation in organisations. Therefore, while threat and blame is a crucial element of taking strategic action to engage in GE or not, while unwillingness to access information cannot be considered as a strategic option. The issues of threat and blame will be explored in more depth below.

6.2.1 Threat

Threat is a type of useful negative emotion to trigger social movements. As discussed in chapter 5, it comprises a diverse range of negative emotions such as resignation, sense of urgency, technological fear and so on. From the empirical results in China, we cannot see any responses related to resignation and technological fear. This is reasonable because these two types of emotions need to be built on an understandable level of knowledge on GE with which people can generate opinions against authorities or scientists. It is also because the authorities in China do not have a clear position on GE, which means resignation concerning GE cannot really yet exist. Technological fear resulted from

misusing scientific information cannot really exist either, as the general public does not have a reasonable level of knowledge on it. In terms of a sense of urgency, the respondents from Greenpeace China have claimed that, as the impacts of GE are not certain and clear as well as the fact that it is not recognized in daily life, it is still early to pay attention to GE and there are much more pressing and urgent concerns we need to cope with. This suggests that GE is not an urgent issue that requires attention at the moment and reflects a lack of urgency. It is apparent that the sense of urgency plays a role in influencing the involvement of international NGOs in China. However, in terms of domestic Chinese NGOs, they did not mention the element of urgency. However, the respondent from the interviewed small grassroots NGO indicated that directors are not willing to engage with information on GE, which is consistent with the theme of unwillingness to access information. The reason why they did not consider urgency as a factor affecting their non-involvement in GE is lack of understandable knowledge on the issue. Without a basic or reasonable understanding on GE, they cannot make their own judgement on whether it is urgent or not. All the emotion-related reasons they have mentioned concern information gain. Their unawareness of GE has excluded them from engaging in it in the first place, as one can never form an in-depth thought on an issue when it has not been heard of. This is why they all attributed their non-involvement in GE to lack of knowledge on it and continued to attribute this knowledge deficit to unwillingness to gain information. Furthermore, this unawareness of the issue suggests that they did not intentionally stay clear of GE.

6.2.2 Blaming

According to the responses, it also has been found that the variable of blame is not appropriate for understanding NGO participation in GE in China. This is not surprising because threat and blame are interrelated and threat is the precondition of blaming. In order to understand whether blaming is applicable to explain the non-involvement of NGOs in China, I will first discuss it within the literature on naming, blaming and claiming as well as framing, and then propose that naming, centrality and experiential commensurability are applicable, rather than blaming, to explain the case in China concerning GE.

The literature on naming, blaming and claiming within the sociology of law addresses the emergence and transformation of disputes.⁴⁵⁴ The three terms stand for stages of identifying injurious experience, perceived injurious experience transformed into grievance, and grievance voiced to the person responsible and asking for remedy.⁴⁵⁵ In terms of GE in China, difficulties lie in the first stage of transformation – naming – to identify injurious experience. That is to say, the public in China is not able to identify specific harms resulting from GE. The side effects of GE on the living conditions and the environment have not been identified clearly among the scientific community and some harms of GE may not be visible or obvious enough for the public to notice.

Framing goes beyond the context of sociology of law, within which naming, blaming and claiming are discussed, and add ideological considerations in social movements theory.

⁴⁵⁴ William Felstiner, Richard Abel and Austin Sarat, 'The Emergence and Transformation of Disputes: Naming, Blaming, Claiming' (1980) 15 *Law & Society Review* 631.

⁴⁵⁵ *Ibid.*

The concepts – naming, blaming and claiming – coincide well with framing and there are obvious conceptual links between them.⁴⁵⁶ It was introduced to social movements theory by Benford and Snow to conceptualize the work of movements as politics of signification.⁴⁵⁷ They have established four sets of factors affecting framing efforts: core framing tasks, infrastructural constraints, phenomenological constraints and cycles of protest.⁴⁵⁸ Among the core framing tasks of diagnostic, prognostic and motivational framing, diagnostic framing, which refers to identification of harms and attribution of blame, combines the concepts of naming and blaming. In addition, there is a framing dilemma that ‘both diagnosis and prognosis may be framed in such a way that public debate is rendered superfluous’, which is evident when a number of technological terms are employed.⁴⁵⁹ This sheds some light on the response from one of the interviewees in Greenpeace China. As pointed out by the respondent, ‘for a technical issue such as GE, it is still a topic among the scientific community. How to communicate and interpret the research findings of GE and terminologies included in the issue to the ordinary public or non-experts is important’.

In terms of infrastructural constraints affecting framing efforts, centrality is important in understanding the non-involvement of INGOs in China. It means ‘if the values the movement seeks to promote are of low hierarchical salience, the mobilizing potential is weakened considerably’.⁴⁶⁰ According to the preceding discussion on salience, GE is

⁴⁵⁶ Austin Sarat and Stuart Scheingold (eds), *Cause Lawyers and Social Movements* (Redwood: Stanford University Press 2006).

⁴⁵⁷ David Snow and Robert Benford, ‘Ideology, Frame Resonance, and Participant Mobilization’ (1988) 1 *International Social Movement Research* 197.

⁴⁵⁸ *Ibid.*

⁴⁵⁹ *Ibid.*

⁴⁶⁰ *Ibid.*

considered as a low salient issue by respondents from Greenpeace China. It is perhaps less motivational to mobilise around such an issue. Therefore the non-involvement is due in part to the low hierarchical salience attached to GE. In terms of phenomenological constraints, experiential commensurability is another factor contributing to the non-involvement in GE. Framings, which are 'too abstract and distant from the lives and experiences of the targeting people', are considered less salient and hence, less probable to trigger movements.⁴⁶¹ According to the respondent from Greenpeace China, GE is not closely relevant to the living conditions of the public and 'you don't see it in daily life'. This suggests that GE is not easily identified by the general public in their daily life and less able to have resonance with the public, which results in less motivation to become involved.

It can be concluded from this part of discussion that variables of threat, framing including naming, centrality, experiential commensurability, and unwillingness to access information discussed in the previous paragraph can contribute to the explanation for NGOs' non-involvement. However, it is interesting that threat along with naming, centrality and experiential commensurability are only in effect mentioned by the international NGO – Greenpeace China and the last element is only effectively pointed out by grassroots NGOs in China. As discussed in the preceding paragraphs, threat as well as framing is a strategic response while unwillingness to access information is not. It indicates that the Greenpeace in China, as an INGO, is making a strategic choice not to engage in GE, while the other grassroots NGOs are more likely to attribute non-involvement with GE to the limited

⁴⁶¹ Robert Benford and David Snow, 'Framing Processes and Social Movements: An Overview and Assessment' (2000) 26 Annual review of sociology 611.

capabilities among their staff members. Therefore, it can be summarised that threat and unwillingness to access information contribute to the involvement of international NGO and grassroots NGOs respectively, which leads to a conclusion that, under the variable of emotion, the international NGO is responding to GE deliberately while grassroots NGOs are responding unintentionally or unconsciously.

6.3 Strategy

Strategy is another variable contributing to the non-involvement of NGOs in China. According to the previous chapter on potential variables, strategy includes a group of sub-variables – insider and outsider strategies, ceasing to mediate, efficiency and competition. This part aims to examine them in the context of China concerning GE.

6.3.1 Insider/Outsider Strategy

NGOs' employment of insider or outsider strategy is discussed on a general basis to provide a background for exploring the question of whether different choices of strategy will affect their involvement in GE. Government supported NGOs are defined as insiders as they obtain a privileged access to the political process. According to the respondent from the government-supported NGO, they receive policy support from government which other NGOs cannot acquire and they work closely with government on choosing topics and making political recommendations. With their privileged access to the political process, government-supported NGOs normally employ direct strategies to influence government

policy. The HDIEO⁴⁶² does not obtain the same level of a privileged access to policy as government supported NGOs, but they still enjoy a variety of methods to participate in the political process. This is first because, according to the respondent from HDIEO, directors in such organisations have extensive private connections with officers in government and hence have privileges to participate in the policymaking process or are able to influence relevant officers within their own social circle. Second, as there is business power behind these organisations, they normally obtain sufficient resources and have a significant impact in their working areas with the help of this financial power. This leads to more opportunities for business-supported NGOs to apply for government projects on environmental issues. In terms of large grassroots NGOs, they tend to employ a mix of insider and outsider strategy and act as thresholders between insiders and outsiders. For example, according to the respondent from TBEAS, they used to employ radical actions to make criticisms against government but now have adjusted and turned to a moderate strategy. In terms of small grassroots NGOs, they seldom have the privilege of participating in the policymaking process and tend to adopt indirect actions among grassroots networks and hence they are considered according to the discussion in the

⁴⁶² This business-supported NGO is a unique case with Chinese characteristics as the nature of this organisation is ambiguous. It is registered as a NGO aiming to research on regional and national environmental problems. However, it is established by directors from CSD Environment which is a business company providing services on 'contract operation of environmental infrastructure, wastewater treatment and reuse, organic waste treatment disposal and bio-energy utilization, environmental remediation, environmental consulting, etc.' (see <http://www.zchb.net/csd>) These directors are also in charge of the operation of HDIEO. In addition, according to the respondent, the working areas of HDIEO are dominated by directors from CSD Environment, which makes HDIEO less independent from the business company – CSD Environment. Apart from this, as pointed out by the respondent, 'directors of HDIEO are not making clear of whether this organisation is a complete NGO in nature although it is registered and claimed to be so'. Therefore, the boundary between business and NGO is very blur concerning HDIEO. And it is different from the so-called 'business-friendly NGO' in Western countries, which is considered to be working effectively and closely with business. Although business-friendly NGOs cooperate frequently with business companies, they are independent from business power and maintain their nature as NGOs. Therefore I prefer to call HDIEO 'business-supported NGO' rather than 'business-friendly NGO'. Although the boundary of this organisation is difficult to define, even for the directors themselves, it will not affect substantially how they answer the interviewing questions and hence, the response is valid and applicable to my research.

previous chapter, as outsiders. According to the respondent from LvXing TaiHang,⁴⁶³ they have more interactions with the public by conducting field investigations into mainly environmental pollution problems, but little interaction with government such as making recommendations on policy. Therefore, small grassroots NGOs are likely to hold an outsider status. As discussed in the previous chapter including the issue on the agency of insider/outsider strategy, not all types of groups have agency to decide their strategies. According to the previous discussion, outsiders by goals do not have real choices on their outsider status because their policy demand and goals determine which strategy they employ.⁴⁶⁴ Small grassroots NGOs are considered as outsiders by goals, which determine their outsider status, and, as mentioned above, privileged opportunities to participate in the political process are not deemed accessible to them by government. In terms of Greenpeace China, as an international NGO, normally adopts a mix of insider and outsider strategies, as a threshold. When they have an outsider status, it is the result of adopting an outsider strategy with agency. Greenpeace has been defined as an outsider by choice by Maloney⁴⁶⁵ and considered, as discussed in the previous chapter, as having real choices in adopting an outsider strategy. As pointed out by the respondent, they are aiming to influence government policy and yet are also relatively independent from government. The respondent clarifies that, in general, ‘sometimes we are included as experts to make recommendations on policy but we also criticise and influence policy’.

As mentioned in the discussion on the variable of openness as a structural factor, the state

⁴⁶³ Aims of this organisation, as well as other interviewed NGOs, are presented in Table 3.1.

⁴⁶⁴ Binderkrantz and Krøyer (n 369).

⁴⁶⁵ Maloney, Jordan and McLaughlin (n 359).

is more open to organisations adopting a moderate strategy while more closed to those employing a radical strategy. The theory can be integrated with insider and outsider strategy in that the polity is relatively open to insiders and closed to outsiders. Obtaining an insider or outsider status does not merely depend on what strategy a group employs, but also on their political resources and the power of recognition by the state.⁴⁶⁶ As discussed in chapter 5, the state has discretion on whether to accept NGOs as insiders.⁴⁶⁷ That is to say, adopting an insider strategy cannot guarantee an insider status – a status that is ascribed by government. In addition, the polity is open to thresholders which are considered as practising a mixture of insider and outsider strategies when they obtain an insider status and closed to them when obtaining an outsider status.

Based on this analysis above, a question proposed in the previous chapter on potential variables needs to be addressed, which is whether different choices of strategy by NGOs will affect their involvement in GE. It comprises two sub-questions: if NGOs employ an insider strategy, are they more likely to engage in GE or does it work in the reverse direction? If NGOs adopt an outsider or thresher strategy, are they more reluctant or unlikely to engage in GE or actually the reverse? According to Clare Saunders, NGOs with an insider status seek small gains on issues already on the policy agenda, while outsiders prefer to pursue issues that are novel to the policy agenda, many of which are controversial.⁴⁶⁸ When it comes to GE in China, although it is considered controversial by INGOs, it has not yet been placed on the political agenda, nor has it been considered

⁴⁶⁶ Ibid.

⁴⁶⁷ Ibid.

⁴⁶⁸ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

salient as discussed earlier in this section. In addition, however, the fact is that a diverse range of NGOs have not engaged in GE regardless of what strategies they employ. The government-supported NGO, with the most privileged access to the political process and defined as an insider, has not become involved in GE. This is understandable, based on the point by Saunders, in that GE is a controversial topic, which is not on the policy agenda in China. Therefore, we can in part attribute the non-involvement with GE of the government-supported NGO to its insider status. However, as the insider status of the government-supported NGO is not a result of agency as discussed in chapter 5, we can not conclude that it adopts a strategy with agency to deliberately stay clear of GE. Nor could we conclude that NGOs with an insider strategy will decrease the possibility of engaging in controversial issues such as GE. However, in terms of NGOs as outsiders or thresholders, does strategy affect their choice on whether to engage in it or not? According to the theory, a polity is closed to outsiders and thresholders when they practise an outsider strategy. This leads to the situation that they prefer to pursue issues that are new to the policy agenda, irrespective of whether they are controversial or not.⁴⁶⁹ When thresholders practise an insider strategy, they work on issues already on the agenda.⁴⁷⁰ However, the fact is that Greenpeace China, as a thresholder, has not engaged in the area of GE. As discussed in the previous chapter, thresholders, such as Greenpeace, have agency on the choice of strategies. In addition, the respondents from Greenpeace China effectively stated that GE is not yet a topic in the political area and claimed it to be one of the reasons why they have not become involved in GE. This to some extent suggests that Greenpeace prefers to adopt an insider strategy with agency and therefore decides not to engage in GE

⁴⁶⁹ Ibid.

⁴⁷⁰ Ibid.

that is not on the agenda. Furthermore, it suggests that Greenpeace is making a strategic choice to stay clear of GE rather than as an outcome of unawareness. In terms of outsiders, such as small grassroots NGOs in China, they do not have a privileged access to issues on the agenda and are supposed to be in favour of pursuing new issues. However, the fact is that, although GE is novel to the policy agenda in China, they are not involved in it. Therefore, GE not being on the government policy agenda is not the reason why small grassroots NGOs have not become involved. However, the actual reason for their non-involvement is related to resources, which will be discussed in the following part. Therefore, it can be concluded from the analysis that practicing an insider or outsider strategy exerts an influence on the participation of insiders and thresholders rather than outsiders in GE within the current context of China. The difference of involvement between insiders, such as the government-supported NGO, and thresholders, such as the INGO, is that the former does not make a strategic choice on it, as they do not have agency in adopting an insider/outsider strategy, while the latter decides on their involvement strategically as they have agency to adopt an insider/outsider strategy.

6.3.2 Ceasing to mediate, Efficiency and Competition

The idea of ceasing to mediate refers to the strategic use of mediating by NGOs to influence public debates. In general, this theme cannot be identified from responses provided by NGOs in China. However, it will be discussed as an important theme for NGOs in the UK in the next section. In terms of sub-variables of efficiency of operation

and competition between NGOs, they are interrelated due to finite resources that NGOs can acquire. Limited resources of NGOs can lead to divergent decisions: first, with limited resources, NGOs are required to allocate resources into areas where they can make effective contributions; second, they are also likely to pursue a specialised goal because of competition, and the more specialised the goals are, the more obvious their identities are within similar areas according to the niche theory.⁴⁷¹ The first may encourage NGOs to focus on areas such as energy and pollution where they are able to effectively contribute rather than GE; the second may lead NGOs to specialise in their identities. In order to be efficient and competitive, NGOs are likely to form divergent decisions on whether they engage in GE or not. Based on this divergence, the interviewed international NGO Greenpeace in China chooses the former way of being efficient and competitive and result in not engaging in GE. According to the respondents, their choice of topics depends on whether they can effectively make contributions. As GE is not a mainstream topic in China, it is not cost-efficient to engage in it. However, respondents in the UK prefer the second way of being effective and competitive by pursuing a specialised goal on GE, which will be discussed in the next section. Then what contributes to the divergence between NGOs in the UK and China in response to efficiency and competition? It can be identified in the response provided by Greenpeace China, that the divergence lies mainly in the development history of NGOs in two different countries. As clarified by one of the respondents from Greenpeace China, the development of NGOs in the UK has a long history with high competition so that they need to separate themselves from others by focusing on a specialised area; while in China, NGOs have developed with a short history

⁴⁷¹ McCarthy and Zald (n 52).

and hence, with lower competition, which means that they focus mainly on the development of their own priorities without having to think about how these differentiate them from other organisations. That is to say, lower competition in China drives NGOs to focus more on their own development by making efficient contributions while high competition in the UK forces NGOs to consider other organisations and to carve out a unique identity by specialising their goals.

It is important to point out that only the respondent from Greenpeace China indicated efficiency and competition in relation to involvement in GE. Therefore it is proper to conclude that the themes of efficiency and competition contribute to understanding why Greenpeace China does not engage in GE. However, efficiency and competition do not help to explain the involvement of domestic Chinese NGOs. Therefore it can be concluded from the analysis above that the interviewed INGO has made a strategic choice on whether to engage in GE by taking efficiency and competition into consideration. In contrast, this cannot be identified from domestic Chinese NGOs. Combining with the discussion on insiders/outsideers above, within the variable of strategy, a conclusion generated from it is that the interviewed INGO in China makes a strategic choice of not engaging in GE; while in contrast the non-involvement of domestic Chinese NGOs with GE is more an unconscious consequence.

6.4 Resource

The variable of resource includes sub-themes on material resources and conscience elites.

The idea of material resources can be illustrated as money or funding, time and energy, necessary information and knowledge, and organisation itself as a resource. Organisation itself as a resource is emphasised in the resource mobilization theory as organisational infrastructure consisting of target goals and characteristics of organisations. The idea of conscience elites is considered as labour resource responsible for the emergence of social movements, which not only refers to whether there is enough labour in NGOs to be devoted to social movements, but also the concerns of directors and elites in organisations. In general, the variable of resource weighs heavily in understanding NGO participation in GE. As can be seen from the results of interview, all the respondents in China have mentioned funding, time, information, target goals and labour according to their explanations of why they have not been involved in GE.

6.4.1 Goals of organisations

The target goals and characteristics of different types of organisations is one of the first themes generated from the empirical data. According to the respondent from the CBCGDF organisation,⁴⁷² ‘topics and focusing areas are closely related to the characteristics of organisations’. Although there are a variety of organisations as respondents, all of them point out that NGOs have settled target goals in the first instance and based on these goals, they decide to focus on specific environmental areas. These goals, according to the respondents, range from climate change to pollution, which is an explanation of why some NGOs do not get involved in GE in the first place. In addition, as pointed out by

⁴⁷² Aims of CBCGDF are presented in Table 3.1.

respondents from grassroots NGOs, they tend to restrict their goals within local areas covering traditional environmental issues. Localization is a characteristic of most grassroots NGOs in China as different regions in China have distinctive environmental problems. For example, in the north of China, air quality problems draw the most attention and, thus, many NGOs seek to act on this and employ it as their target goal. This means that grassroots NGOs are not likely to focus on GE, as it is neither a local nor a traditional environmental issue. But how do they decide their target goals and why is there a variety between all types of NGOs? As can be concluded from the responses, it varies among different types of organisations. Grassroots NGOs rely heavily on the directors of organisations to decide goals; the goals of the business NGOs depend on the business powers behind it; government-supported NGOs set target goals according to government policy; the interviewed INGO's goals are based on their global vision. The variety of characteristics concerning different types of organisations is responsible for their differentiated target goals and thus, contributes to the explanation of NGO participation in GE.

6.4.2 Information and Knowledge Deficits

Information deficit and lack of knowledge can also be identified as issues from the data. Among the respondents, only the two respondents from the international NGO Greenpeace had knowledge or information on GE, while the other respondents had no idea about it at all. According to the academic respondent involved in the National GE Project, the general public, including Chinese NGOs, does not have enough information about GE, and

because of this, the public are not likely to engage in it. In addition, respondents from Chinese NGOs admitted that GE is a rarely mentioned and novel topic in scientific and political areas, and the respondents from Greenpeace China indicated that the scientific community involved in GE in China has not gained much knowledge. The academic respondent from the National GE Project also admitted that ‘we are at the very start of GE research and have not made much progress. If scientists have not made it clear, the public including NGOs cannot obtain knowledge on it’. This is a new model of information deficit – where it is the scientific community who need to gain more knowledge. When there is deficit of information among scientists due to the early stage of research on GE, it is unlikely that they will publicise information to NGOs. Even if there are research findings on GE by scientists, it is still difficult for NGOs to access information from the scientific community in China. Respondents from grassroots NGOs state that they have no interactions with the scientific community, which gives rise to the classic information deficit model that knowledge is not transferred from experts to non-experts. In terms of the fact that domestic Chinese NGOs have not engaged in GE, therefore, information deficit can contribute in part to the explanation of domestic Chinese NGO non-involvement. In terms of Greenpeace China, it has not engaged in GE either. However, the two respondents have some, albeit limited, knowledge about GE due to their interactions with the head office as well as the scientific community involved in the Chinese National GE project. This lies in direct contrasts with domestic Chinese NGOs: Greenpeace China has certain information and knowledge as well as interactions with scientists, which means that an information deficit or lack of knowledge cannot be responsible for explaining why the INGO has not engaged in GE.

6.4.3 Money and Time

Money and time are critical to the survival of all types of organisations. However, they do not contribute to the non-involvement in GE of all NGOs in China. In terms of the interviewed international NGO Greenpeace, according to the respondents, they have relatively adequate funding compared to domestic Chinese NGOs. However, they will spend time and money on areas that they can work efficiently on as it is not cost-efficient to focus on the specialised area of GE. This suggests that, in terms of Greenpeace China, limitations on material resources, such as funding, are not responsible for its non-involvement with GE; instead, efficiency in mobilizing these resources, as discussed in the previous paragraphs, can contribute in part to explain why it has not engaged in GE. Domestic Chinese NGOs – especially for grassroots NGOs according to the responses – are more likely to face a problem of lacking funding and time. Because of the difficulty in acquiring money, according to the respondents from interviewed domestic NGOs, they prefer not to expand their focus across too many areas. Therefore it is unlikely that they will add GE as a new working area due to limited resources. In addition, it is interesting to find out that small NGOs normally receive funding from large NGOs by applying for projects released by large NGOs. This can be illustrated with resource dependence theory, in that groups controlling key external resources have the potential to influence and control an organisation.⁴⁷³ Small NGOs cannot decide their own working areas as they normally make a living on applying for projects from large NGOs and receiving funding from them.

⁴⁷³ Lowery (n 376).
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This can also develop an explanation in the case of GE that large NGOs have not engaged in GE which then affects the decisions of small NGOs. From this analysis, it can be concluded that the non-involvement of domestic grassroots NGOs in China can be attributed to lack of money and time; while, in contrast, this attribution to money and time does not evidently affect the interviewed INGO.

6.4.4 Labour Resource

Labour resource, especially in the aspect of directors, plays an important role in NGO involvement in GE. In terms of directors, this can be illustrated in two ways: it is up to the directors in Chinese NGOs to make decisions on goals and topics; and the capability of directors themselves can affect the involvement of organisations in particular policy fields. All respondents from domestic Chinese NGOs admit that what areas they engage in depend mainly on the decisions of directors. Among them, respondents who were directors of grassroots NGOs in effect pointed out that as they have limited capability especially on novel technological topics, they have not paid attention to GE. This can be illustrated with resource mobilization theory suggesting that elites are responsible for social movements.⁴⁷⁴ The decisions made by elites can in part contribute to which areas they engage in. Within the context of GE, it is more due to the capability of directors in that they have not been able to follow the debate on GE. In terms of other staff members in organisations, according to their responses, there is a difference between international NGOs and domestic Chinese NGOs in that some staff members in the international NGO have

⁴⁷⁴ McCarthy and Zald (n 52).

scientific-related roles or advanced degrees while these are rarely seen in Chinese NGOs. This is the factor which explains why they have different knowledge on GE.

In conclusion, the sub-elements within the resource variable have been examined to contribute to the analysis of NGO involvement in GE. However, an important point is that these elements work differently in the context of the interviewed international NGO and domestic Chinese NGOs. The idea of target goal and elites can be used to generate explanations for both international and Chinese NGOs. The role of money and time is applicable to both but works differently between them, in that Greenpeace uses money and time strategically so that they choose to devote themselves to more efficient areas rather than GE, while Chinese NGOs lack required money and time to engage. The theme of information can only be used to explain why domestic Chinese NGOs do not become involved as the international NGO Greenpeace has obtained some information on GE and yet has not been engaged in GE. As information, money and time are the basic requirements for engagement, it is interesting to see that the involvement of the INGO and Chinese NGOs differs in nature. In terms of the international NGO, it is more that they are making strategic choices of mobilizing the resources they possess, such as money, time, information and elites, to decide on whether to engage or not, rather than that they lack those resources so that they are not able to engage in GE. However, in terms of Chinese NGOs, they lack basic requirements, such as information and knowledge to engage in GE, which is a more unconscious consequence due to their limitations in resources.

6.5 Conclusion

This chapter has examined four variables with the data on Chinese NGOs to form a finding on which variables are important in understanding NGO participation in GE in the context of China. In terms of the contextual factors, the variables of openness and public consciousness are important in understanding the contextual issues in China when discussing NGO participation in GE. The third variable discussed in this chapter, namely deficit in policy within political opportunity, means that NGOs cannot participate in GE unless there is a dedicated policy on it, and the element of salience, which was discussed under the variable of public consciousness, only helps to explain non-involvement of the international NGO Greenpeace. In terms of the variable of emotion, consideration on whether there is a threat as well as naming is identifiable in the case of the international NGO, Greenpeace, while unwillingness to access information is identifiable in grassroots Chinese NGOs. In relation to the variables of strategy, efficiency and competition, I concluded that these are important in affecting the involvement of the international NGO rather than other Chinese NGOs. The ideas of goals, elites, money and time are identified as crucial factors in affecting NGO participation but work differently between the international NGO and Chinese NGOs. Furthermore, the element of information deficit is only identified in relation to domestic Chinese NGOs.

According to the analysis in this chapter, a table including variables and NGOs can be drawn to show how attributions of variables vary among different NGOs. Variables affecting different NGOs are correspondingly ticked in Table 6.1 as shown below:

Table 6.1: How attributions of variables vary among Chinese NGOs

	Context				
	Political opportunity (PO) Structure	Perceptions of contingency in PO	Public consciousness	Salience	The deficit in policy
INGO: Greenpeace	✓	✓	✓	✓	✓
Government-supported NGO: CBCGDF	✓		✓		
Business-supported NGO: HDIEO	✓				
Large grassroots NGOs: TBEAS and IPE	✓		✓		
Small grassroots NGO: Lvxing Taihang	✓		✓		

	Emotion		
	Threat	Framing	Unwillingness to access information
INGO: Greenpeace	✓	✓	
Government-supported NGO: CBCGDF			
Business-supported NGO: HDIEO			
Large grassroots NGOs: TBEAS and IPE			
Small grassroots NGO: Lvxing Taihang			✓

	Strategy			
	Insiders/outside	Ceasing to mediate	Efficiency	Competition
INGO: Greenpeace	✓		✓	✓
Government-supported NGO: CBCGDF	✓			
Business-supported NGO: HDIEO				
Large grassroots NGOs: TBEAS and IPE				
Small grassroots NGO: Lvxing Taihang				

	Resource			
	Goals	Money and time	Information and knowledge	Labour resource (elites)
INGO: Greenpeace	✓			
Government-supported NGO: CBCGDF	✓		✓	
Business-supported NGO: HDIEO	✓		✓	
Large grassroots NGOs: TBEAS and IPE	✓	✓	✓	✓
Small grassroots NGO: Lvxing Taihang	✓	✓	✓	✓

In this table, there are several interesting findings worth pointing out:

- First, in terms of the variable of political opportunity, although the structure of the polity is objective and is applicable to all types of NGOs in China, Greenpeace China, as an INGO, pointed out that it is important to focus on contingent factors as well as how to perceive and make use of these factors. This suggests that the INGO Greenpeace has made a strategic choice on its involvement in GE by paying attention to, for example, the political preference of the government.
- Second, the variables of salience, the deficit in policy, lack of threat, framing, efficiency and competition were only identified by the INGO concerning engagement

with GE, which again suggests that the interviewed INGO has strategically made a decision on whether to engage.

- Third, although the element of insiders/outsideers applies to both the INGO and government-supported NGO in China, it is divergent as the INGO adopts an insider strategy with agency while the government-supported NGO obtained an insider status without agency as its insider strategy is determined by goal in the first place. This implies that due to its status without real choices, non-involvement of the government-supported NGO is likely to be an unintentional consequence.
- Fourth, the variable of goals is applicable to all the interviewed NGOs in China, which implies that goals and remits are important to understand their involvement. Furthermore, this variable to some extent contributes to their involvement in the first place.
- Fifth, it is not surprising that all of the domestic NGOs mentioned an information deficit and lack of knowledge on GE. This is a crucial variable or obstacle that prevent them from participating in it, which suggests that the non-involvement of domestic NGOs in China is based on unawareness.
- Sixth, lack of material resources, such as money and time, and labour resource, such as elites with capability, are responsible merely for the non-involvement of grassroots NGOs in China.

From all these conclusions above, a finding can be generated that, in the context of China, the international NGO makes strategic choices not to engage in GE while the non-involvement of Chinese NGOs is more an unintentional consequence rather than a strategic one.

Chapter 7 Discussion on the UK Data

This chapter aims to analyse the empirical results of the UK interviews and discuss them with the potential variables generated in chapter 5, such as political opportunity and resource. According to the empirical data from my study, NGOs in the UK can be divided into two types – NGOs involved in GE and those not involved, which is different from the situation in China where no NGOs have engaged in it. Therefore, the data in this chapter is discussed in two categories – involved and non-involved. This chapter addresses the issue of the causal relations between various variables and NGO participation in the UK. The discussion comprises five sections: the first section deals with the contextual factors that affect the involvement or non-involvement of interviewed UK NGOs, which includes an analysis of variables such as openness, public consciousness and the government's deficit in policy; section 7.2 addresses the emotions variable including sub-elements of, for example, threat and blame; the next section on strategy aims to discuss the variables of insider/outsider strategy or status, ceasing to mediate, efficiency and competition; section 7.4 focuses on discussing the variable of resource including both material and labour resources; and the last section draws a conclusion, based on the discussion of the preceding variables, and on whether the involvement/non-involvement with GE of NGOs in the UK is a strategic or unintentional choice. In addition, some additional interesting findings are included based on a table of variables and NGOs in the UK.

7.1 Context

The contextual factors affecting the involvement of NGOs, as discussed in chapter 5, comprise structural and contingent political opportunities, public consciousness and salience, and the government's deficit in policy. This section addresses the application of the three main contextual factors in explaining the involvement or non-involvement of NGOs in the UK. However, the deficit in policy is not applicable in the context of UK as there is policy on GE released by the government.⁴⁷⁵ Therefore, this variable will not be discussed in detail in the following paragraphs.

7.1.1 Openness and contingent factors

According to the discussion in chapter 5, political opportunity includes both structural factors, such as the openness of a polity, and contingent factors, such as how NGOs perceive the openness of a polity, whether they can seize opportunities, and the receptivity of authorities.⁴⁷⁶ Although both are useful in exploring the causal factors of why NGOs become involved or not, openness does not effectively explain the variety of involvement within the same country. The openness of a polity, as defined in the literature, refers to 'the permanent characteristics of political institutional structure, such as the nature of governmental institutions – especially the degree of centralization'.⁴⁷⁷ It is not dynamic

⁴⁷⁵ Existing policy on GE in the UK will be introduced in section 7.1.1. Text to n 498.

⁴⁷⁶ Rootes, 'Political Opportunity Structures, Promise, Problems and Prospects' (n 52).

⁴⁷⁷ Saunders, 'It's Not Just Structural: Social Movements Are Not Homogenous Responses To Structural Features, But Networks Shaped By Organisational Strategies And Status' (n 318).

and hardly varies over different NGOs. That is to say, the structure of a polity may be more useful when comparing NGO participation across different states. In terms of explaining the two types of involvement in the UK, the openness of a polity, which is stable and more or less the same for all NGOs in the country, does not make an effective contribution. Instead, contingent factors, which are dynamic and vary with different NGOs in the UK, are more useful in understanding the variety of engagement. Therefore the analysis in this section emphasises the non-structural, dynamic and contingent factors in the UK.

Before discussing the empirical data of interviews in the UK, it is useful to draw a dynamic picture of the development of UK environmental NGOs as an analytical background. The history of ENGOS in the UK can be traced back to the middle of the Nineteenth Century within the context of ‘an increasing awareness of the impacts of industrialisation upon the natural environment’.⁴⁷⁸ After the First and Second World War, specialised nature protection associations were established, and later in the 1970s, modern environmentalism emerged and promoted a common approach among ENGOS.⁴⁷⁹ The period of the 1980s witnessed a growth and innovation among ENGOS and in the 1990s, and after the Rio Earth Summit in 1992, collaboration among ENGOS emerged.⁴⁸⁰ In more recent decades, there have been many changes in ENGOS due to their broader agendas, more common approaches to achieve aims, and better cooperation.⁴⁸¹ In addition, climate change, which has been considered as increasingly central to political agendas, ‘has emerged as a unifying

⁴⁷⁸ Rootes, *NGOs in Contemporary Britain: Non-state Actors in Society and Politics since 1945* (n 109).

⁴⁷⁹ Ibid.

⁴⁸⁰ Ibid.

⁴⁸¹ Ibid.

frame for the broad range of ENGOs'.⁴⁸²

The non-structural political opportunities, or contingencies, that ENGOs face during a certain period of time can contribute to the explanations of why they became involved in many environmental social movements. These contingent factors are usually related to government policies or certain actions taken by government authorities. Before focusing on how contingent factors affect environmental social movements, I will first briefly summarise the changing history of environmental law and policy in the UK in order to inform the analytical background. UK Environmental Law can be traced back to the Mid-Eighteenth Century and the industrial revolution of that time.⁴⁸³ In the post-war years of the Second World War, rebuilding was the focus and the Town and Country Planning Act 1947 which emphasised the role of the planning systems in rebuilding.⁴⁸⁴ In the late Twentieth Century, modern environmentalism emerged and a number of international events triggered changes in the UK, such as the United Nations Conference on the Human Environment in Stockholm 1972 and joining the EU on 1 January 1973.⁴⁸⁵ During this period, the focus was broadly on sustainable development and therefore, laws regarding, for example, air pollution and climate change were developed and principles of environmental law, such as the 'polluter pays' principle, were established.⁴⁸⁶ Because of UK accession to the EU, EU environmental law 'helped to propel the environment up the domestic political agenda from the 1980s onwards'.⁴⁸⁷ In more recent decades, democracy,

⁴⁸² Ibid.

⁴⁸³ Ben Christman, 'A Brief History of Environmental Law in the UK' (2013) 22 *Environmental Scientists* 4.

⁴⁸⁴ Ibid.

⁴⁸⁵ Ibid.

⁴⁸⁶ Ibid.

⁴⁸⁷ Ibid.

devolution and decarbonisation have been the focus of UK environmental law and have again been affected by international developments, such as the Aarhus Convention.⁴⁸⁸ During this period of time, climate change was highlighted but without any significant efforts or actions to deal with it. Because of this, the ‘Big Ask Campaign’ was triggered and this resulted in a response by the government with the Climate Change Act 2008.⁴⁸⁹ The developmental history of UK environmental law, along with the history of ENGOs in the UK, implies that social movements, or social movements organisations, can be influenced by policies or certain political events, and vice versa. Certain policies or events and social movements are interrelated and the dynamic changes of their relations are, to a large extent, due to non-structural or contingent factors.

In addition, contingency can be used to explain the emergence of many social movements in the UK. For example, due to the fact that the government started to accept environmentalism at the time that the Rio Earth Summit was held in 1992, there was a criticism against many British environmental movements actors of ‘sharing the language’ with the government.⁴⁹⁰ This led to the rise of radical environmentalism among environmentalists in the late Twentieth Century.⁴⁹¹ In addition, the recession in 1992 diverted attention away from the environment on the political agenda.⁴⁹² These events disappointed radical environmentalists such that they deemed mainstream environmental organisations as impotent.⁴⁹³ There were also other contingent events affecting radical

⁴⁸⁸ Ibid.

⁴⁸⁹ Ibid.

⁴⁹⁰ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

⁴⁹¹ Ibid.

⁴⁹² Ibid.

⁴⁹³ Ibid.

environmentalism, such as the government's road building, which led to high volumes of campaigning and protest in the UK.⁴⁹⁴ There was a decrease in the late 1990s due to the withdrawal of the road expansion programme and the ability of the Labour Party which is anticipated more environmentally conscious.⁴⁹⁵ Another example in point is that there was a focus on climate change campaigning after 2007 as the new focus provided activists with opportunities to 'draw on the failure of the anti-capitalist summit-hopping protests' to help to establish enduring social movements.⁴⁹⁶ From these examples, it can be identified that contingent events, rather than structural elements, can help to explain the emergence of many social movements.

When it comes to the case of GE, contingent factors are also important in understanding the involvement of ENGOs in the UK, which has been effectively highlighted by a number of respondents during interviews. Before analysing the data concerning contingent factors, it is useful to look at existing UK policy on GE. There was a high volume of debate on GE from 2009 due to the Royal Society Report on GE.⁴⁹⁷ GE drew attention from the Science and Technology Committee (Commons) and resulted in it producing its own report concerning 'the regulation of geoengineering'.⁴⁹⁸ In response to this report, the UK government then issued a report concerning the government's position on GE.⁴⁹⁹ In the policy report, the UK government put forward its position on the approval of both the research into the science and technology of GE and the need for regulatory

⁴⁹⁴ Ibid.

⁴⁹⁵ Christopher Rootes, 'The Resurgence of Protest and the Revitalisation of British Democracy' in *Social Movements and Democracy* (New York: Palgrave MacMillan 2003).

⁴⁹⁶ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

⁴⁹⁷ Shepherd and others (n 11).

⁴⁹⁸ Science and Technology Committee, *The Regulation of Geoengineering* (Fifth Report of Session 2009-10 2010).

⁴⁹⁹ The UK Government, *Government Response to the House of Commons - Science and Technology Committee Fifth Report of Session 2009-10: The Regulation of Geoengineering* (TSO (The Stationery Office), 2010).

arrangements.⁵⁰⁰ The government policy calling for more research and regulatory frameworks to some extent contributed to the rise of anti-GE campaigns during that time, such as that of Friends of the Earth.⁵⁰¹ The wave of campaigns on GE was also facilitated by the Solar Radiation Management Governance Initiative report with regard to the governance on SRM technology in 2011.⁵⁰² The second peak of campaigns on GE was around 2013 when the UK government issued another policy report on GE research.⁵⁰³ In this report, the government supported the Convention on Biological Diversity (CBD) in reviewing existing regulatory arrangements on GE and contributed to the work under the London Protocol.⁵⁰⁴ In addition, the government emphasised the importance of research and dialogue with the public.⁵⁰⁵ This position by the UK government led to some large campaigns calling for a ban on GE, such as the campaign started by Chemtrails Project UK in 2013.⁵⁰⁶ From these events, two important findings can be identified: first, the UK government has claimed its position and issued policy concerning the need for both research and regulatory arrangements, which partly contributed to the relevant NGO campaigns on GE. This suggests that contingent events can contribute to social movement responses on GE. Second, this can help to illustrate that the variable of deficit in policy is not applicable to UK as there is at least some policy on GE by the UK government.

However, a turn towards NGO reluctance to become involved in GE can be witnessed

⁵⁰⁰ Ibid.

⁵⁰¹ Randall Abate and others, *Climate Change Geoengineering* (Cambridge: Cambridge University Press 2013).

⁵⁰² Pyle and others (n 13).

⁵⁰³ Department of Energy and Climate Change, 'The Government's View on Geo-engineering Research' (2013) <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/522010/The_government_position_on_geoengineering_research_Mar16.pdf> accessed 27 February 2013.

⁵⁰⁴ Ibid.

⁵⁰⁵ Ibid.

⁵⁰⁶ Chemtrails Project UK, 'Directive to Ban Stratospheric Aerosol Geoengineering and Aerial Aerosol Spraying in the United Kingdom' (2013) <<https://www.chemtrailsprojectuk.com/take-action/directive/>> accessed 21 December 2013.

more recently. According to both the empirical data collected for my research and online search results, the majority of NGOs in the UK are reluctant to even talk about GE. I will focus on analysing the data to explore the explanations for their involvement or non-involvement. The respondents from GE Monitor, Action Group on Erosion, Technology and Concentration (ETC Group),⁵⁰⁷ FoE, and Greenpeace, which are involved in GE, have in effect mentioned contingent factors in interview to explain their involvement. Among them, the respondent from FoE attributed the engagement in GE to the Paris Agreement and indicated that ‘one reason is it is clear to us that our chances of meeting 1.5 degrees target of the Paris Agreement are incredibly limited, so we need to be looking to see what efforts CDR⁵⁰⁸ could have’. This is consistent with the opinion by the respondent from Greenpeace in that the 1.5 degrees in the Paris Agreement means we still have to address emissions efficiently, which may increase the potential and possibility of GE methods. It is interesting to identify that the Paris Agreement was mentioned by many respondents who have engaged in GE, no matter whether they pointed it out as a direct reason for their involvement or not. This implies that the Paris Agreement, as a contingent political opportunity event, has contributed to the involvement of NGOs with GE in the UK. This is surprising because the aim of the Paris Agreement was to exert more pressure on mitigation and engage governments and people with the target of reducing GHGs. However, perhaps due to the difficulty of achieving the mitigation target in the agreement, it generates more space and opportunity for developing GE. This, therefore, partly explains the involvement of FoE and Greenpeace with GE. Another contingent factor identified from those involved in the relevant NGOs is the policy preference of the government. The

⁵⁰⁷ A brief introduction of this group as well as other NGOs will be displayed in the appendix.

⁵⁰⁸ Carbon Dioxide Removal.

respondent from Greenpeace indicated that, in terms of the debate on GE, there was quite intense discussion around it from 2009 up to a few years ago, but not much recently. This is perhaps because, as he explained, the government is still focusing its climate policy on dealing with the issue of fossil fuels where it can have the biggest impact on climate change. This point was supported by the respondent from FoE when he explained why many NGOs do not become involved in GE, stating that ‘NGOs are still making efforts on getting off fossil fuels quickly according to the priority of the government and hence we don’t have the resources or even the base to concentrate on the debate on GE’. The evidence of the policy priority or preference by the UK government can be found in the report that ‘the priority is, and must be, to tackle the root cause by reducing emissions of greenhouse gases from human activities and adapting to those impacts that are unavoidable’.⁵⁰⁹

In terms of non-involved NGOs, the respondents from TearFund and ClientEarth mentioned the contingent factor of policy preference of the government when explaining why they are not involved. According to the respondent from TearFund, focusing on GE may divert attention away from mitigation that is and should still be the main focus of the government. Similarly, the respondent from ClientEarth indicated that we should focus on the priority identified by the government, which is mitigation. In addition, the respondent added to the explanation that most NGOs are focusing on using available technologies to achieve the Paris Agreement target rather than GE. Furthermore, she highlighted that ‘it depends on the government whether GE is going to be a solution they want to pursue; if it

⁵⁰⁹ Change (n 504).

is, then it would draw attention from NGOs'. This suggests that the focus of the government is an important contingent factor affecting their non-involvement in GE.

From the analysis above, three vital findings can be concluded: first, the Paris Agreement is important, as a contingent event, in understanding NGO participation in GE; and it is mentioned by respondents from both types of NGOs, which implies that the difference concerning participation between the two types of NGOs can be partly attributed to their different understandings or illustrations of the target in the Paris Agreement. That is to say, NGOs involved in GE consider the target as difficult to achieve and therefore see the potential in employing GE technology; while NGOs not involved in it regard the target as requiring an exclusive emphasis on mitigation and hence believe that we should keep government policy focused on mitigation rather than GE. Second, the contingent factor of policy preference was only effectively mentioned by respondents from non-involved NGOs, which makes sense because of the fact that mitigation, rather than GE, is the priority of the government. Third, it can be effectively concluded that both types of NGOs in the UK deliberately or strategically make decisions on whether to become involved in GE or not, no matter whether they are concerned about the potential for GE in the Paris Agreement or the priority of mitigation.

7.1.2 Public consciousness

Public consciousness on GE in the UK was investigated by academics around 2010 and 2011, when there was the first peak in attention by the government, academics and civil

society. The first large scale international survey conducted in the US, Canada and the UK between 19 November and 7 December 2010 mapped a picture of public awareness on GE.⁵¹⁰ The results of their awareness were higher than expected, which is 8% and 45% for GE and climate engineering respectively.⁵¹¹ The two terms ‘geoengineering’ and ‘climate engineering’ are frequently employed concepts in the relevant literature to describe the technology. The survey supports the idea that the term ‘geoengineering’ is less effective than ‘climate engineering’ because ‘it is difficult for the public to understand and derive its correct meaning.’⁵¹² In addition, it can be identified from the survey that ‘the increase in available media and increase in assessed familiarity from past studies suggests a growing public interest in GE’.⁵¹³ Combining all the results from the survey, one can conclude that interest in GE has expanded to the general public rather than being confined to academics and political elites.⁵¹⁴ Apart from this survey, there was a public dialogue conducted in the UK in 2010 by the Natural Environment Research Council on GE in order to understand public opinions on GE.⁵¹⁵ The key finding was that the awareness of GE had increased during the public dialogue and that the public, paying heed to ethical⁵¹⁶ and practical concerns,⁵¹⁷ was in favour of researching GE cautiously.⁵¹⁸ However, it also found that some members of the general public need to be provided with more information as they may have low consciousness of GE.⁵¹⁹ In addition to these efforts by academics such as

⁵¹⁰ A. M. Mercer, D. W. Keith and J. D. Sharp, ‘Public Understanding of Solar Radiation Management’ (2011) 6 *Environmental Research Letters* 1.

⁵¹¹ *Ibid.*

⁵¹² *Ibid.*

⁵¹³ *Ibid.*

⁵¹⁴ *Ibid.*

⁵¹⁵ NERC, *Experiment Earth? Report on a Public Dialogue on Geoengineering* (Ipsos MORI, 2010).

⁵¹⁶ Clive Hamilton, ‘The Ethical Foundations of Climate Engineering’ in William Burns and Andrew Strauss (eds), *Climate Change Geoengineering* (New York: Cambridge University Press 2013).

⁵¹⁷ Rafael and Filis-Yelaghotis (n 63).

⁵¹⁸ NERC (n 516).

⁵¹⁹ *Ibid.*

NERC, the media – such as BBC News – has disseminated the results of the first international survey on GE on 24 October 2011, which to some extent increased the public awareness of GE.⁵²⁰ There were also some awareness events aiming at improving the public awareness of GE in the UK by environmentalists.⁵²¹

However, despite a reasonable level of awareness, the respondents in my research expressed their concerns about public consciousness on GE. In terms of non-involved NGOs, when asked about the reasons behind their non-involvement, the respondent from Practical Action explained that he feared that some methods of GE might in theory look like a solution to climate change, and because of this, the general public would be less worried about climate problems and more inclined to support moving away from expensive mitigation. He continued with his explanation that, although the NGO community and the scientific community could understand the pressures of focusing on mitigation and adaptation, there was a problem with the public due to their capacity to misunderstand the issues. That is to say, although they may have reasonable awareness of it, the public may yet fail to grasp the complexity of GE and misunderstand what it can really deliver and hence, expect it to be the solution. Therefore, the respondent highlighted this as an important reason why, as an NGO, they refused to engage in it. In terms of NGOs involved in GE in contrast, the relevant respondents did not mention concerns about public consciousness and did not consider it as a reason for their involvement. This is surprising because one might expect NGOs, especially membership based NGOs, to have

⁵²⁰ Mark Kinver, 'Public Supports Geo-engineering Ideas, Study Suggests' *BBC News* (London) <<http://www.bbc.co.uk/news/science-environment-15399832>> accessed 24 October 2011.

⁵²¹ Chemtrails Project UK, 'Geoengineering and Chemtrails Awareness Day' (2014) <<http://www.uk-skywatch.co.uk/Awareness%20Events.html>> accessed 5 May 2014.

some sense of directing their attention where public consciousness lies. However, NGOs involved in GE do not seem to take the salience of the issue to the public into consideration.

With reasonable awareness of GE among the public, salience concerning public opinion is worthy of discussion concerning the involvement of NGOs in the UK. The literature on salience was addressed in chapter 6. As mentioned in that chapter, salience is a concept in political science referring to various levels of importance attached to issues by voters.⁵²² The relationship between increased awareness or knowledge and issue salience can be illustrated as, according to David Weaver, increased salience of an issue is accompanied by increased knowledge of its causes and potential solutions.⁵²³ A question arising from this is that, can this point be illustrated the other way around, which is the more the public know about GE, the more salience they may attach to it? However, some scholars have argued that information gain does not always lead to a change of attitude on salience, which means it does not necessarily follow that increased knowledge on GE will result in increased salience. Therefore, in terms of the salience of GE in China and the UK, more public consciousness in the UK than that in China does not necessarily lead to more salience in the UK. In addition, scholars on salience also claim that information gain can lead to increased salience but not necessarily in a positive way; instead, it can result in increased negative public opinion.⁵²⁴ For example, around 2010 and 2013, there was a high volume of debate on GE and public awareness increased rapidly during that time.

⁵²² Wlezien (n 441).

⁵²³ Weaver (n 448).

⁵²⁴ Ibid.

Many environmentalists and NGOs strongly suggested a ban on GE and started several campaigns against it. These strong reactions can be regarded as indicative of negative public opinion and much importance has been attached to a non-commencement of GE. However, in the UK, some non-involved NGOs want to avoid making it a positively salient topic. That is to say, in terms of NGOs, many of them are reluctant to talk about or engage in GE. This will be illustrated through analysing the empirical data in the following paragraph.

In terms of NGOs which do not engage in GE, the respondent from ClientEarth pointed out that the reason why they are not involved is that GE is not high on their agenda. That is to say, GE is not considered important to them. She continued explaining that the issues on GE are not major ones within climate change that need to be addressed currently, which implies that they need to focus on more important issues, such as mitigation and adaptation. In terms of NGOs involved in GE, it is surprising that many respondents do not consider GE important even though they have focused on it. According to the respondent from WWF, 'it is not something you are doing necessarily as a first choice', which means it is not a significant issue for WWF to consider currently. The respondent from FoE also expressed his concern that 'there is too much talk around GE, and the more we talk about it the more we raise the idea that there is a magic solution; and we should therefore not consider GE as an important focus'. In addition, the respondent from Greenpeace – a group which has been actively involved in many activities concerning GE – also considered it as an insurance policy that is less important than mitigation. From the responses, we can identify that both types of NGOs attach little importance to GE. Therefore, one can

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conclude that while importance can help to illustrate why NGOs are not involved, it fails to explain why NGOs engage. This is because, as generated in the data, involved NGOs nevertheless attach little importance to GE.

In addition, it is interesting to identify a transition from strong reaction around 2010 to little importance recently. From 2009 to 2011 when there was the first peak in debate on GE, the novel topic first drew attention from the public due to the reports released by academics and the government. As a newly proposed method to tackle climate change, it was important to address the unknowns and uncertainties of GE at that time. Therefore, it is understandable to consider it as a salient issue for the public. In addition, the need for more research was supported by the government in a policy report,⁵²⁵ which more or less contributed to the high volume of debate. However, in recent years, many NGOs have a concern about the potentially overwhelming debate on GE and fear that it may reduce the importance which the public attach to mitigation. For example, the respondent from FoE indicated that ‘there is too much talk around GE...we need to concentrate on talking about mitigation’. The respondent from Greenpeace considered it as a distraction from mitigation to focus too much on GE. It can be identified that the transition happened when there was more public salience attached to GE than mitigation. In order to ensure the relative salience of mitigation compared with GE, which addresses the root cause of climate change, many NGOs started to cool down the hot debate on GE and highlighted that it is less important than mitigation. Based on the analysis on the transition in importance, we can conclude that the proportion of importance attached to GE and mitigation by the public is

⁵²⁵ Change (n 504).

responsible for the non-involvement of NGOs.

In conclusion, although public consciousness of GE is higher than expected in the UK, non-involved NGOs have concerns that the public cannot address the complexity of GE and may misunderstand what it entails, and because of this, fear that the public might consider it as a magic solution. This is the reason why those NGOs are reluctant to engage with GE. However, public consciousness was not mentioned by NGOs involved in GE, which suggests that it does not contribute to explain why they participate. In terms of salience, NGOs involved in GE do not take it into consideration to explain their involvement. Therefore, we cannot identify a connection between issue salience and involvement. However, importance appears to explain the non-involvement of NGOs in the UK as discussed above. Furthermore, in understanding the non-involvement of NGOs, it is important to emphasise the relative importance placed on GE and mitigation, which can explain the transition from strong reaction to little or no focus.

7.2 Emotion

The variable of emotion comprises three sub-elements: threat, blame and unwillingness to access information. The idea of threat includes urgency, technological fear and resignation, with which the data will be analysed respectively in the following parts. In terms of blame, it will be discussed within the theory of naming, blaming, and claiming, as well as framing. The element of unwillingness to access information is not applicable in analysing the UK data and therefore, will not be discussed in this section. This is because, according to the data in the UK and China, UK NGOs do not face the problem of deficit in information

while Chinese NGOs, especially small grassroots NGOs, have to deal with this issue.

7.2.1 Threat

Emotion, as discussed in chapter 5, is required to generate strategic action,⁵²⁶ and is considered by commentators to provide ‘ideas, ideologies, identities and interests to motivate people who take actions’.⁵²⁷ Threat, as a negative emotion, comprises various aspects, such as the urgency of the threat, technological fear as one typical type of threat, and resignation as a reaction to threat. First, the power of negative emotions, along with ‘collective bads’, will be discussed. Urgency and the emotion of technological fear will then be the focus of discussion in this part. In terms of resignation, there is no evidence shown in the responses that this is a causal factor in the involvement or non-involvement of NGOs with GE in the UK.

The power of negative emotions aims to understand the phenomenon that people are more motivated to become involved in movements by ‘searching for the least harmful outcome rather than the most beneficial’.⁵²⁸ This is because people place more emphasis on the security of the status quo than gaining benefits and hence are more inclined to take action to avoid threats.⁵²⁹ This is defined by scholars as ‘risk aversion’ – in other words, that people tend to ‘place a higher value on what they already have than on what they might acquire’.⁵³⁰ This can also be illustrated with the theory on ‘collective bads’, which was

⁵²⁶ Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (n 52).

⁵²⁷ Jasper, *The Art of Moral Protest: Culture, Biography and Creativity in Social Movements* (n 331).

⁵²⁸ Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (n 52).

⁵²⁹ Ibid.

⁵³⁰ Ibid.

discussed in chapter 5. This theory means one is more likely to take action or become involved because of public bads than collective goods.⁵³¹ In other words, people are likely to participate to prevent a bad consequence than gaining a good outcome. The power of negative emotions can be employed to understand why NGOs engage in GE. In terms of those involved NGOs, some of the respondents effectively expressed their concerns about preventing a bad consequence. For example, the respondent from FoE stated that the reason why they engaged in GE is trying to prevent ‘the political and scientific community from giving the message that we don’t need to bother with mitigation and this is a real fear’. This implies that the motivation for them to become involved in GE is to avoid a bad consequence. Similarly, the respondent from Greenpeace attributed their involvement to the potential for GE to have negative impacts on biodiversity, which again proves the theory that for a number of groups involvement is motivated by bad consequences.

Technological fear is a typical kind of negative emotion concerning bad consequences. It means people tend to oppose new technologies and generate bias against them, as people are concerned about destroying the status quo even though there is little chance of this happening.⁵³² It is closely related with collective bads discussed above, in motivating people to become involved. That is to say, collective bads is the root cause for people to have technological fear. People become involved to oppose novel technologies because these technologies will have negative consequences and then destroy the status quo. Negative consequences are in fact collective bads, which cause technological fear. People with technological fear have great concerns about the uncertainties and side effects of a

⁵³¹ Jordan and Maloney (n 345).

⁵³² Jasper, *The Art of Moral Protest: Culture, Biography and Creativity in Social Movements* (n 331).

new technology, such as GE, and tend to stay clear of engaging in GE. This can effectively help to explain the non-involvement of NGOs in the UK. The respondent from TearFund was skeptical about technologies, such as SRM, having unpredictable effects, and because of this, they chose not to be involved. The respondent from ClientEarth similarly explained why they did not focus on GE, arguing that emphasis should be placed on, for example, management of soils to combat climate change that would not necessarily have the negative impacts of GE. Therefore, technological fear of negative impacts of GE is an important element to understand their non-involvement.

Resignation refers to the situation where people are pessimistic about the status quo and prefer to accept it rather than act for change.⁵³³ It happens when people are disappointed with government authorities and therefore believe that it makes no difference whether to participate or not as outcomes would not change anyway. In terms of the data, no respondents from either involved or non-involved NGOs show a sign of resignation and therefore cannot be considered as a contribution to their non-involvement.

The sense of urgency suggests that situations could become worse if we do not respond or take action now.⁵³⁴ That is to say, NGOs may prefer to focus on what they regard as more pressing concerns at the moment rather than worry about what is yet to come. In terms of NGOs that have not engaged in GE, all interviewed respondents have in effect mentioned that GE was currently not an urgent issue. For example, the respondent from Practical Action indicated that 'it is not a pressing concern at the moment'. The respondent from

⁵³³ Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (n 52).

⁵³⁴ Ibid.

ClientEarth also claimed that ‘issues around GE are not something we need to be concerned with right now’. The responses imply that lack of urgency can partly help to explain the non-involvement of NGOs in the UK. However, it is interesting to find the same views on GE in some of the responses from involved NGOs. For example, the respondent from WWF indicated that ‘GE is not at a stage where you need to go for governance and this is not something that has to happen now’. In addition, the respondent from FoE confirmed this opinion that GE was not urgent at the current stage and it was more urgent to concentrate on current issues rather than problems in the future such as GE. Although both types of NGOs mentioned the variable of urgency, they illustrate it in divergent ways: NGOs not involved in GE partly attribute their non-engagement to lack of urgency; while involved ones have participated despite admitting that there was a lack of urgency concerning GE. Therefore the variable of urgency appears to explain non-involvement but it does not contribute to involvement.

In conclusion, the variable of threat is applicable to both types of NGOs and every interviewed NGO in each type. The power of negative or collective bads only contributes to explain why NGOs engage, while technological fear can only help to understand why NGOs do not engage. Although the variable of urgency was mentioned by both types of NGOs, it is considered as a reason only by respondents from non-involved NGOs. Finally, as the involvement and non-involvement of both types of NGOs in the UK are affected by the variable of threat which is related to strategic actions, we can conclude that they are making strategic decisions on whether to engage in GE or not.

7.2.2 Blame

As mentioned in the chapter on potential variables, if a threat is in place, strategic action requires someone to blame.⁵³⁵ It comprises causal blame and remedial blame, referring to who cause problems and who should be responsible for remedying respectively. In terms of GE, the potential target of causal blame could be the scientific community or government who conduct GE related activities. Remedial blame may also happen when there is no readily identifiable causal blame, which means the target is often turned on someone who should take remedial actions concerning damage when the causal subject cannot be identified. In many cases, the remedial blame goes to government.⁵³⁶ According to the empirical data, the respondent from FoE in effect included causal blame as one of the reasons why they became involved in GE. He indicated that ‘the second reason why we are involved is that we are trying to stop the political and scientific community from giving the message that we don’t need to bother with mitigation’. He suggests that the political and scientific community is considered as the one who causes the misunderstanding of GE among the public, and because of this, FoE has become involved against those who should be blamed for this misunderstanding.

Blaming, as a variable, needs to be illustrated with the literature on naming, blaming and claiming within a broader context of the sociology of law.⁵³⁷ As discussed in the chapter on analysing the data in China, the literature addresses the emergence and transformation of disputes and includes stages of identifying an injurious experience, transforming the

⁵³⁵ Ibid.

⁵³⁶ Ibid.

⁵³⁷ Carolyn Wiethoff, ‘Naming, Blaming, and Claiming in Public Disputes’ (2003) 44 *Journal of Homosexuality* 61.

perceived injurious experience into a grievance, and voicing the grievance to the person responsible and asking them for a remedy.⁵³⁸ The last stage of claiming is crucial to a litigation strategy but does not affect whether social movements can be triggered into action or not in the first place. Therefore, naming and blaming are essential to triggering social movement action. In terms of NGOs involved in GE, according to the empirical data, they in effect indicate that they are able to identify problems as well as find someone responsible for the problems. Therefore, blaming can help to explain their involvement in GE. However, in terms of non-involved NGOs, the variable of blaming cannot be identified in their responses. This suggests that NGOs do not engage with GE due to their failure to blame. Based on this, blaming appears to explain both involvement and non-involvement of NGOs in the UK, as it is effectively mentioned by involved NGOs while it does not show in the data of non-involved NGOs. Based on the analysis of naming, blaming, and claiming, we can conclude that naming and blaming can help to explain the engagement of NGOs in the UK.

7.3 Strategy

Strategy, as a variable of analysis, comprises elements of insider/outsider strategy, ceasing to mediate, efficiency and competition. It is an important variable to understand the involvement/non-involvement of NGOs with GE in the UK. In this section, the idea of insider/outsider strategy will first be examined combined with political opportunity theory. Ceasing to mediate, identified as a crucial sub-variable when analysing the data in the UK, will then be discussed by employing the literature on governance. Efficiency and

⁵³⁸ Felstiner, Abel and Sarat (n 455).
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competition, rooted in the resource mobilisation literature, will be analysed as a third element of strategy.

7.3.1 Insider/outsider strategy

Distinctions between insider and outsider strategy are identified in the interest group literature. As discussed in chapter 5, an insider strategy entails a privileged access to the political and administrative process and employs close consultation with political actors while an outsider strategy involves mobilization from grassroots networks with indirect action through the media or mobilisation of citizens.⁵³⁹ Insiders normally form direct contact with advisory bodies, committees and agencies to provide their expertise especially on technical issues.⁵⁴⁰ Outsiders tend to start campaigns and protests and work with the media to influence the public interest.⁵⁴¹ In practice, it is difficult to define, for example, an environmental NGO as wholly an insider or outsider, as they will normally take the form of a mixture of both types as a threshold.⁵⁴² Therefore, whether a NGO is defined as an insider/outsider or thresholder should be examined on a case-by-case basis. The adoption of an insider/outsider strategy by NGOs in the UK is first discussed in the following paragraphs to provide a background for answering the question of whether different strategies will affect their involvement in GE.

⁵³⁹ Binderkrantz, 'Different Groups, Different Strategies: How Interest Groups Pursue Their Political Ambitions' (n 52).

⁵⁴⁰ Beyers (n 374).

⁵⁴¹ Katharina Rietig, *Public Pressure Versus Lobbying - How Do Environmental NGOs Matter Most In Climate Negotiations?* (Centre for Climate Change Economics and Policy, 2011).

⁵⁴² Binderkrantz, 'Interest Group Strategies: Navigating Between Privileged Access and Strategies of Pressure' (n 358).

According to the existing literature on environmental NGOs' strategies, most scholars have admitted that ENGOs in the EU are more likely to practise outsider strategies or a mixture of insider and outsider strategies.⁵⁴³ In addition, it is useful to examine the strategies of NGOs on a case-by-case basis in order to define them respectively. The interviewed NGOs, which are involved in GE, are Greenpeace, FoE, WWF, Blue & Green Tomorrow, ETC Group and Biofuel Watch. Greenpeace and FoE, which are often considered as thresholders in the literature,⁵⁴⁴ practise both insider and outsider strategies in a general sense. For example, the respondent from Greenpeace indicated that he was involved as an expert on GE, concerning both technical and governance issues, in producing the Convention on Biodiversity (CBD) report and the London Convention and Protocol (LC-LP) report. This is a typical form of inside arena. The respondent from FoE also indicated that their organisation was involved in some discussions on governance issues concerning GE organised by authorities. In addition to insider strategies, they also act as environmental campaign groups and are involved in campaigns on GE in that capacity. For example, Greenpeace joined the campaign against the Indo-German research project LOHAFEX dumping six tonnes of iron into the Southern Ocean.⁵⁴⁵ FoE also campaigns on climate change including GE and has published a policy position on it.⁵⁴⁶ In terms of WWF, ETC Group, and Biofuel Watch, they similarly practise both insider and outsider strategies as thresholders because they participated in producing reports on GE, such as the 2009 Royal Society Report while they also joined campaigns against GE, such as the

⁵⁴³ Beyers (n 374).

⁵⁴⁴ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

⁵⁴⁵ Geoengineering Monitor, 'Resistance to Geoengineering: A Timeline' (2015) <<http://www.geoengineeringmonitor.org/resistance/>> .

⁵⁴⁶ Friends of the Earth, 'Geoengineering: Friends of the Earth Position Paper On Managing Carbon Sinks And Solar Radiation' (2009) <<https://www.foe.co.uk/sites/default/files/downloads/geoengineering.pdf>> accessed November 2009.

'Hands Off Mother Earth' campaign.⁵⁴⁷ In terms of Blue & Green Tomorrow, the respondent indicated that they worked mainly as a publisher with interests in disseminating issues around sustainability including GE, which suggests that they practise an outsider strategy by working as a form of media to influence the public.

The strategies of the other NGOs – Practical Action, ClientEarth and TearFund – will be examined in a general sense, as they have not engaged in GE. In terms of Practical Action, it adopts a combination of insider and outsider strategies in non-GE policy areas and acts as a thresholder. According to its approach stated on its website, it includes publishing services, which can be considered as working through the media to influence the public, sharing ideas with governments which can be considered as a form of lobbying, and working directly with poor people.⁵⁴⁸ These approaches are predominantly forms of an outsider strategy. Apart from these, it is on the government's consultation list on technical issues, which suggests an insider strategy.⁵⁴⁹ In terms of TearFund, as a Christian charity group, it mainly aims to reduce poverty caused by climate change, through starting campaigns and working directly with the public. From this perspective, it employs an outsider strategy. ClientEarth seeks to protect the environment through advocacy, litigation and science and acts on legal opportunities.⁵⁵⁰ Litigation, as a tactic, is typically considered as a form of an outsider strategy.⁵⁵¹ It can be identified from this that ClientEarth mainly employs an outsider strategy.

⁵⁴⁷ Monitor (n 546).

⁵⁴⁸ Practical Action, 'Practical Action Publishing' <<https://practicalactionpublishing.org/>> .

⁵⁴⁹ Practical Action, 'Our Distinctive Practical Approach: Transforming Lives, Inspiring Change' <<https://practicalaction.org/our-approach>> .

⁵⁵⁰ ClientEarth, 'What We Do' <<https://www.clientearth.org/what-we-do/>> .

⁵⁵¹ Marie Weil, Michael Reisch and Mary Ohmer (eds), *The Handbook of Community Practice* (2nd edn, London: Sage Publications 2012).

After exploring what strategies these groups employ, it is also important to investigate whether they have agency on their choices. As discussed in chapter 5, practising an insider strategy does not guarantee an insider status, as it needs to be ascribed by government.⁵⁵² This suggests that insider/outsider strategy needs to be separated from insider/outsider status, which leads to a typology: groups with insider status include core insider groups, specialist insider groups and peripheral insider groups; and groups with outsider status comprise outsiders by goal and outsiders by choice.⁵⁵³ The three types of insider groups differ in insider status ranging from ‘regularised participation on a wide variety of issues cognate to a policy area (core) to participation in particular areas (specialist) to participation that has the insider form but little influence (peripheral)’.⁵⁵⁴ The difference between ‘outsider by goal’ and ‘outsider by choice’ is that an outsider by goal is ‘usually self-selected by the group through adopting goals that cannot be accommodated in the consultative process (e.g. Campaign for Nuclear Disarmament)’, while an outsider by choice may ‘make an explicit policy decision not to become an insider’.⁵⁵⁵ The main difference between the two is that the former does not have agency on its outsider strategy which is decided by the goal, while the latter chooses to adopt an outsider strategy with agency. Based on this typology, the discussion in chapter 5 has drawn a conclusion that insiders and outsider groups by goal do not have agency on their strategies that are determined by their goals in the first place, while outsiders by choice, which normally adopt thresholder strategies, have agency on their choices. That is to say, thresholders

⁵⁵² Maloney, Jordan and McLaughlin (n 359).

⁵⁵³ Ibid.

⁵⁵⁴ Ibid.

⁵⁵⁵ Ibid.

practising a mixture of insider and outsider strategies, such as Greenpeace and WWF, are defined as outsiders by choice that have agency on their choices. In terms of ClientEarth, TearFund and Blue & Green Tomorrow that practise only outsider strategies, they can be defined as outsiders by goals without agency within the path they have taken. For example, the goal of ClientEarth is to achieve environmental justice through litigation and legal opportunities. Litigation, as its predominant way of taking action, is an outsider strategy by goal, which implies that the aim of ClientEarth has forced it to adopt an outsider strategy in the first place. Therefore, it is defined as an outsider by goal with no agency on strategies once its goal is chosen.

In terms of the openness of a polity to insiders/outside, a conclusion has been drawn in the previous chapter that the state is more open to insiders and thresholders when they practise insider strategies, and closed to outsiders and thresholders employing outsider strategies. In addition, adopting an insider strategy does not guarantee an insider status, as the status also depends on the discretion by government on whether to accept a group as an insider. The analysis leads to a question, raised in the preceding chapter, of whether different strategies of NGOs will affect their involvement in GE. This can be illustrated in a two-fold manner: if NGOs employ insider strategies in general, are they more likely or less likely to be involved in GE? And if NGOs generally adopt outsider or thresholder strategies, is it more possible for them to engage in GE or the reverse? In the following paragraphs, I will seek answers to these questions.

According to Saunders, insiders seek small gains on issues already on the policy agenda;

thresholders not only focus on issues already on the policy agenda, but also add new but uncontroversial issues; outsiders emphasise novel issues for the policy agenda and many of the issues, if not all, are controversial.⁵⁵⁶ From the literature, we can identify two elements that affect the relations between strategies and involvement: whether an issue is already on the agenda or is a novelty, and controversy. This idea can be concluded in a table according to her book *Environmental Networks and Social Movement Theory*.⁵⁵⁷

Table 7.1: The relationships between insider/outsider/thresholder and focused issues

Insider	Seeks 'small incremental gains on issues already on the policy agenda', ⁵⁵⁸
Thresholder	Focuses on issues already on the policy agenda; and adds novel uncontroversial issues.
Outsider	Works on issues novel to the policy agenda; 'many of them would be controversial'. ⁵⁵⁹

In the context of the UK, GE, as analysed in the first section, has already been taken into consideration by the authorities and resulted in several policy reports, which means the topic is already on the policy agenda. Although it is on the agenda, it is a controversial topic to some extent. This suggests that, concerning the two elements identified above, GE is not novel to the policy agenda, but has attracted a degree of controversy. In addition, in terms of the facts regarding their involvement and strategies, the interviewed NGOs can be divided into four types: NGOs which are involved in GE and practise thresholder strategies

⁵⁵⁶ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

⁵⁵⁷ Ibid (Pp 99).

⁵⁵⁸ Ibid.

⁵⁵⁹ Ibid.

with agency, such as Greenpeace, FoE, WWF, ETC Group, and Biofuel Watch; NGOs which are involved in GE and adopt an outsider strategy with no agency, such as Blue & Green Tomorrow; NGOs which have not engaged in GE and employ a thresholder strategy with agency, such as Practical Action; and NGOs which have not engaged in GE and practise an outsider strategy with no agency, such as ClientEarth and TearFund. This categorization is presented in Table 7.2 below to provide a clear picture for analysis:

Table 7.2: The relationships between UK NGOs' involvement/non-involvement, what strategies they adopt, and whether they have agency on choices of strategies

	GE Involvement	Strategies	Agency
Greenpeace, FoE, WWF, ETC Group, Biofuel Watch	Involved	Thresholder	Agency
Blue & Green Tomorrow	Involved	Outsider	No agency
Practical Action	Non-involved	Thresholder	Agency
ClientEarth, TearFund	Non-involved	Outsider	No agency

The first type of group in Table 7.2 are thresholders, which focus on issues that are usually already on the agenda according to Table 7.1. GE, as identified above, has already been put on the policy agenda in the UK and therefore, appears to explain why those thresholders engage in GE. The second type of NGO in Table 7.2 – Blue & Green Tomorrow – practises an outsider strategy, which, according to Table 7.1, seeks to bring novel issues or controversial issues on to the policy agenda. Although GE is not that novel to the political domain, it is generally considered as controversial to a large extent, which seems to follow

the pattern in Table 7.1 that outsiders pursue support on controversial issues. The third type of NGO in Table 7.2 – Practical Action – adopts a threshold strategy generally that is considered to emphasise issues already on the agenda according to Table 7.1. However, the non-involvement of Practical Action cannot be regarded as contradictory to what Saunders says (i.e. Table 7.1). This is because thresholders focusing on issues in the political domain do not necessarily become involved in GE. Therefore, a threshold strategy cannot guarantee the involvement in GE and cannot help to explain the non-involvement of Practical Action. In terms of the last type of NGO in Table 7.2 – ClientEarth and TearFund, outsiders, according to Table 7.1, focus on new and mostly controversial issues to the policy agenda. GE is not completely new to the policy agenda, therefore it seems to explain why ClientEarth and TearFund do not engage with it. However, comparing Table 7.1, which is a theory developed by Saunders in the literature, and Table 7.2, which summarises the situation in the context of GE, it seems that, although the pattern displayed in Table 7.1 may work for most cases, it cannot be simply applied to the case of GE. That is to say, the same pattern in the literature cannot be identified concerning GE.

Therefore, from the analysis of Table 7.1 above, we can only cautiously draw a conclusion that the general insider/outsider strategy partly influences the involvement of groups in GE. But we cannot identify a uniform pattern on how strategy affects the involvement in GE, as the relations between strategy and involvement are not sufficiently obvious and straightforward. This suggests that although insider/outsider strategy may have some role in affecting involvement, the involvement of NGOs in GE is not only determined by

strategy. We can also conclude that the pattern of the relations is more complex, in the case of GE within the context of the UK.

7.3.2 Ceasing to mediate

According to the governance literature, NGOs can mediate between public voices and government, which has been criticized by scholars as controversial because it is possible for them to stop mediating and to define public interests by themselves.⁵⁶⁰ In the context of GE, NGOs being reluctant to talk about GE is a form of ceasing to mediate between the government and the public and avoiding placing attention on GE. They stop mediating by staying clear of GE rather than shaping the debates. This suggests that NGOs strategically stop using their mediating role in order to avoid a distraction of attention. The idea of ceasing to mediate is an important element to understand the involvement or non-involvement of NGOs with GE in the UK.

In terms of non-involved NGOs, all the interviewed respondents in effect included ceasing to mediate as one of the reasons why they did not engage. The respondent from Practical Action indicated that ‘there would be lots of NGOs opposed to engaging in GE because it will divert the public’s attention away from more pressing concerns’. He placed considerable emphasis on the idea of diverting the general public away from critical issues, which suggests that they have a role in mediating the public interests and may strategically stop using it. The respondents from TearFund and ClientEarth held the same concerns on

⁵⁶⁰ Brownsword and Goodwin (n 384).

diverting the public interests and described it as a distraction. Therefore, ceasing to mediate can be considered as a critical element of the explanations to their non-involvement in GE.

However, in terms of NGOs involved in GE, they generated the same views that GE might distract attention from preventing the root causes of global warming, such as mitigation. For example, the respondent from Blue & Green Tomorrow indicated that they had a concern about GE in that it might divert attention away from mitigation. In addition, the respondents from ETC Group and Biofuel Watch supported this idea that GE might draw attention away from other approaches. An interesting point identified from the data is that both types of NGOs have concerns about the distraction of GE. However, why do some NGOs choose to engage in it although it is a distraction, or why does the concern of distraction result in two divergent ways of involvement? The explanation to this question lies in the mediating role of NGOs. The mediation between government and the public can be illustrated in two directions: the connection with government, and the connection with the general public. Ceasing to mediate, therefore, can also be illustrated in two directions: stop government from disseminating information on GE, and stop the public from receiving information on GE. The former leads to a situation that NGOs become involved in order to stop government from giving potentially misleading messages on GE; while the latter forces NGOs to stop talking about or engaging in GE. The two ways of ceasing to mediate help to explain why NGOs with the same concerns on distraction resulted in different choices of involvement. For example, the respondent from FoE indicated that the reason why they became involved in GE was ‘trying to stop the political community from

giving the message that we don't need mitigation'. This suggests that NGOs becoming involved in GE is also a way of ceasing to mediate, but in a way that emphasises trying still to steer the direction of government.

Therefore, it can be concluded from the discussion that ceasing to mediate contributes to explain both the involvement and non-involvement of NGOs in the UK. The involvement can be illustrated as stopping the government from disseminating messages and the non-involvement can be explained as stopping the public from receiving information. As this variable suggests a strategic use of their mediating role by NGOs, it can also be identified that they are making strategic decisions on whether to engage with GE.

7.3.3 Efficiency and Competition

According to the discussion in chapter 6, the variables of efficiency of operation and competition between NGOs are interrelated due to finite resources that NGOs can acquire. Although they both rely on limited resources, efficiency and competition lead to divergent outcomes: in terms of efficiency, due to the uncertainties of GE technology, it is not clear enough for NGOs to have an impact on it and therefore they prefer to allocate limited resources to areas where they can efficiently make contributions and tend to focus on approaches that already exist, such as mitigation, rather than GE; with regard to competition, NGOs can pursue a specialised goal, such as GE, to claim their identities when in competition with other NGOs, as the more specialised the goals are, the more obvious their identities are, according to niche theory.⁵⁶¹ Therefore, efficiency and

⁵⁶¹ McCarthy and Zald (n 52).

competition can result in opposite outcomes on involvement.

However, in the case of GE, we cannot simply conclude that efficiency leads to non-involvement while competition leads to involvement. In the empirical data, both efficiency and competition are effectively mentioned by each type of NGO in the UK. In terms of involved NGOs, for example, the respondent from WWF in effect indicated that WWF, as an environmental NGO, was in competition with other NGOs, which has made them keep on top of GE as it developed. This confirms the variable of competition in affecting involvement with GE. However, other respondents from involved NGOs mentioned efficiency as well when explaining why they did not become particularly involved. For example, the respondent from FoE stated that they had to use limited resources to focus more on areas where they could have the greatest impact. In addition, the respondent from Greenpeace also claimed that ‘NGOs inevitably have limited resources. We don’t want it to take up all of our time and energy when we know that we can put that more productively elsewhere. That is why we are not deeply involved in it’. That is to say, although they are involved in GE, they do not want to engage too much as more efficient efforts can be achieved elsewhere. This raises an important point concerning the perceptions of GE by involved NGOs: the proportion of resources matters in that not too much resource should be allocated to GE. This is because a large proportion of resource on GE will be a distraction from mitigation and adaptation which also require more resource. Therefore, they decided to engage but not to a large extent. The proportion of resource is a critical element when understanding the involvement of NGOs and was mentioned by all the respondents from involved NGOs. It is important to notice that,

despite their engagement in GE, they do not consider GE as a main focus of their work. Instead, they would like to be involved as long as there is not a large proportion of resource placed on it. Furthermore, efficiency can be considered as useful to explain the limited involvement of some NGOs in GE.

When it comes to non-involved NGOs, the respondent from ClientEarth effectively included efficiency as one of the reasons why they did not engage. She indicated that, to have effective impacts, ClientEarth should focus on using technologies that we already have. This suggests that efficiency contributes to the explanation of the non-involvement of NGOs in the UK. However, some respondents also in effect mentioned competition when explaining why they noticed GE in the first place. The respondent from Practical Action, for example, explained that ‘it is important to stay up to speed with negotiations and discussions around GE; otherwise we might fall behind others’. It is interesting to identify the competition variable in those non-involved NGOs. However, it is reasonable as competition helps to explain why they came to notice or know about GE even though they did not then become involved.

Therefore, from the discussion above, we can effectively conclude that efficiency contributes to non-involvement as well as limited involvement of NGOs in the UK; and competition contributes to the explanations of both involvement and why, even if not involved, groups noticed and followed the topic in the first place. In addition, as the variables of efficiency and competition are related to strategic actions, we can also conclude that both types of NGOs make strategic choices concerning their involvement

and non-involvement.

7.4 Resource

The resource variable comprises material resources, such as money, time and information, and labour resource, such as elites or experts. These sub-elements will be discussed respectively to explore whether they affect the involvement or non-involvement of NGOs with GE in the UK. It is important to point out that the element of labour resource was not identified in the responses from either type of NGO, which differs from that in China, and therefore, will not be discussed in further detail in this section.

7.4.1 Goals

According to resource mobilization theory, target goals link groups to specific social movements.⁵⁶² The idea of goals contributes to explaining why NGOs do not engage in the first place. According to the empirical data, this element plays an important role in understanding the involvement and non-involvement of NGOs in GE. In terms of respondents from involved NGOs, most of them attribute their engagement to pursuing a goal relevant to GE. For example, the respondent from WWF explained why they became involved in GE in that WWF was an ENGO with a goal in climate change. The respondent from Blue & Green Tomorrow also attributed their involvement to their goal in climate change and sustainability. Similarly, the respondent from Greenpeace indicated that ‘one of reasons is that we are committed to dealing with the problem of climate change’. In

⁵⁶² Ibid.
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addition, the respondent working for both ETC Group and Biofuel Watch included the element of goals as the main reason to explain their involvement: ‘in terms of Biofuel Watch, the main area of concern is biology, and the two leading GE techniques are biology with CCS,⁵⁶³ which include our main area of work; in terms of ETC Group, it always focuses on the emerging and new technologies; therefore it is within our remit’. From these responses, we can identify that the idea of goals is crucial when understanding the involvement of NGOs in GE.

When it comes to non-involved NGOs, the respondent from TearFund also made reference to the element of goals. As he pointed out, ‘we did not get involved in GE because it is outside our remit. The NGO has its own specific mandate and focus. Our mission is poverty; therefore we focus on climate change which causes poverty. But we do not research much on the causes of climate change.’ From the responses from both types of NGOs, it can be concluded that the element of goals effectively affects their involvement and non-involvement in GE.

7.4.2 Funding and time

Money and time are crucial to the survival and maintenance of organisations, and are considered as a typical type of material resources. All the respondents from non-involved NGOs mentioned the element of funding and time, which implies that this element effectively influences non-involvement. The respondent from Practical Action was

⁵⁶³ CCS stands for Carbon Capture and Storage.

concerned about becoming involved in GE in that ‘it might look like a good idea that we should invest our time and energy in it’. Likewise, the respondent from TearFund stated that NGOs had to focus on their remit due to limited resources and time. In addition, the respondent from ClientEarth indicated that ‘it is a question of priority of resources; if you have to choose between research on different subjects, then it depends on the possible costs of solutions, risks and disadvantages of solutions’. This response raises an important point with regard to the proportion of resources discussed above. It suggests that money and time allocated to GE should not be considered as a priority when distributing resources; and if some resources are allocated to it, it should not be a large proportion.

The proportion or priority of resources can also explain the responses from involved NGOs. The respondent from FoE, for example, effectively indicated that as many NGOs still considered fossil fuels as the main focus, it did not have too much resource to concentrate on GE. The respondent from Greenpeace confirmed this point by stating that ‘NGOs inevitably have limited resources. We don’t want it to take up all of our time and energy when we know that we can put that to use more productively elsewhere’. In addition, the interviewee from ETC Group and Biofuel Watch claimed that they should not be too involved with GE as it took away resources from other approaches. Therefore, from the discussion, we can identify that the proportion or priority of resources is important when understanding the non-involvement and limited involvement of NGOs in the UK.

7.4.3 Information and knowledge

The deficit in information and knowledge on GE is a critical element contributing to the non-involvement of NGOs in China. However, the same situation cannot be identified in the UK, as both types of NGOs have good or reasonable knowledge on GE. In terms of the involved NGOs, all of them have knowledge and information on GE. The respondent from ETC Group and Biofuel Watch, for example, indicated that ‘enough information is out there for people who are new to the issues to be able to campaign on it’. In terms of non-involved NGOs, all of the respondents claimed that they had obtained reasonable knowledge on GE. For example, the interviewee from TearFund admitted that he was familiar with some aspects of GE and had reasonable knowledge on it.

From the empirical results, it is appropriate to conclude that the element of deficit in information and knowledge does not contribute to the non-involvement of NGOs in the UK. When it comes to explain involvement, it does not help either, as the interviewees from involved NGOs did not include it as an attribution. Therefore, the idea of knowledge and information does not appear to explain the situation in the UK.

Based on the discussion in this section, several conclusions can be drawn: the element of goals is an important factor affecting both types of NGOs in the UK; the idea of funding and time can explain both the non-involvement and limited involvement of NGOs with GE; information and knowledge cannot be identified as a factor influencing NGOs in the UK, as both types of groups have acquired reasonable knowledge; and labour resource cannot

be identified as influencing NGOs in the UK either.

7.5 Conclusion

According to the analysis in this chapter, a table can be drawn in order to provide a clear picture on how variables vary between two types of NGOs in the UK. Applicable variables or sub-elements are ticked in Table 7.3 below:

Table 7.3: How variables vary between two types of NGO in the UK

		Context			
		Political opportunity	Public consciousness	Importance	Deficit in policy
Involved	FoE	✓			
	WWF				
	Greenpeace	✓			
	Blue & Green Tomorrow				
	ETC Group and Biofuel Watch	✓			
Non-involved	Practical Action		✓		
	TearFund	✓			
	ClientEarth	✓		✓	

		Emotion		
		Threat	Blaming	Unwillingness to access information
Involved	FoE	✓	✓	
	WWF	✓		
	Greenpeace	✓		
	Blue & Green Tomorrow	✓		
	ETC Group and Biofuel Watch			
Non-involved	Practical Action	✓		
	TearFund	✓		
	ClientEarth	✓		

		Strategy		
		Insider/outsider	Mediating	Efficiency and competition
Involved	FoE		✓	✓
	WWF			✓
	Greenpeace		✓	✓
	Blue & Green Tomorrow		✓	

	ETC Group and Biofuel Watch		✓	
Non-involved	Practical Action		✓	✓
	TearFund		✓	
	ClientEarth		✓	✓

		Resource			
		Goal	Funding and time	Information and knowledge	Labour resource
Involved	FoE		✓		
	WWF	✓	✓		
	Greenpeace	✓	✓		
	Blue & Green Tomorrow	✓			
	ETC Group and Biofuel Watch	✓	✓		
Non-involved	Practical Action	✓	✓		
	TearFund	✓	✓		
	ClientEarth		✓		

As can be concluded from the table above, these variables and elements can be classified in three types: variables affecting both types of NGOs, variables influencing only one type of NGO, and variables not applicable in the context of the UK.

Variables or elements of political opportunity, threat and blaming, mediating, efficiency and competition, funding and time, and goal appear to explain both types of NGOs. However, some of the variables need clarification when understanding both types of NGO. Political opportunity, especially contingent or non-structural factors, contributes to explaining both types of NGOs. The Paris Agreement, as an important contingent event, influences both involvement and non-involvement of NGOs due to their different understandings of the 1.5-degree target in the agreement. The idea of policy preference, also as a contingent factor, only explains non-involvement. In terms of threat, this was mentioned by almost all the respondents. However, the power of the negative or collective bads only contributes to explaining why NGOs engage, while technological fear can only help to understand why NGOs do not engage. In addition, sense of urgency contributes merely to non-involvement. In terms of efficiency and competition, efficiency contributes to non-involvement as well as limited involvement of NGOs in the UK; and competition contributes to the explanations of both involvement and, for non-involvement, why they noticed and followed the topic in the first place. In addition, funding, time and goals are the most frequently mentioned elements applying to both types of NGOs.

There are variables contributing to only one type of NGO: public consciousness and importance are merely effective in explaining the non-involvement of NGOs in the UK. In addition, there are variables not evidently influencing the involvement or non-involvement of NGOs in the UK: the deficit in policy, unwillingness to access information, insider/outsider strategy, information and knowledge on GE, and labour resource.

Therefore, we can identify an interesting finding that, as the element of deficit in knowledge and information is not applicable in the context of the UK, both types of NGOs are making strategic decisions on involvement or non-involvement, rather than acting unintentionally, with these decisions based on concerns about strategic related factors, such as efficiency, threat and mediating. Apart from this main finding in this chapter, there are some interesting sub-findings: first, the proportion of resource and goals are the most frequently mentioned variables, which implies that they can be considered as the main factors affecting NGOs in the UK. Second, although some NGOs are involved in GE, they prefer to have limited engagement due to the distraction from mitigation and adaptation. Third, although some variables affect both types of NGO, the reasons for their involvement and non-involvement are slightly different within the variables. For example, the element of mediating is identified in both types of NGOs. However, according to the discussion in previous paragraphs, the two directions of mediating – stopping the government from disseminating information and preventing the public from accepting information – lead to different decisions on whether to engage or not. Therefore, in terms of this kind of variable, we cannot simply conclude that they work identically in both types of NGOs.

In this chapter, empirical results in the UK have been examined with variables to form a conclusion that involvement and non-involvement of NGOs in the UK can be considered as intentional and deliberate outcomes. This is different compared to the conclusion on Chinese NGOs in chapter 6 in that only INGOs in China made strategic decisions on non-involvement and domestic Chinese NGOs did not engage unintentionally. In addition, due to differences between the context of China and the UK, the effects of variables on

NGOs concerning GE vary significantly in the two countries. The comparison and contrasts of variables in the UK and China will be analysed further in chapter 8.

Table 7.4: Aims of interviewed NGOs

NGO	Aims and scope
FoE	Campaign group on various topics in environment area, such as climate change, environmental justice.
WWF	Aiming at ensuring the harmony between human beings and nature.
Greenpeace	Campaign group with various focuses, such as climate change, oceans and peace.
Blue & Green Tomorrow	Focusing on sustainable living.
ETC Group	Aiming at monitoring power, tracking technology, and strengthening diversity.
Biofuel Watch	Providing information, advocacy and campaigning with regard to the climate, environment, human rights, and public health.
Practical Action	Aiming at using sustainable technology to challenge poverty.
TearFund	A Christian charity dealing with reducing poverty.
ClientEarth	Lawyers using environmental law to protect oceans, forests, other habitats and people.

Chapter 8 Comparison between the UK and China

This chapter addresses a comparative analysis of the empirical data in the UK and China. It aims to explore and identify more findings contributing to the existing literature on social movements and public participation through comparison. To be more precise, this chapter focuses on several questions: which variable or variables are the most relevant to NGO participation in each country and why? Which variable or variables are responsible for NGO participation in both capitalist (UK) and post-socialist (China) countries? In terms of similarities and differences of variables in each country, is there a pattern? From these questions, it can be identified that transnational comparison can contribute to social movement theory by generalizing theories to other societies. Social movement theory was established in the US and then spread to Europe and the main body of studies in this area have been limited to Western or developed countries. Transnational comparison including a developing country like China will help to develop the theory in terms of its application in state socialist countries.

Before comparing variables and empirical data, it is necessary to justify the comparison between the UK and China. This is because these two countries are very different in various aspects: not only in their social ideology in that China is a socialist and developing country while the UK is a capitalist and developed country, but also in areas such as social

movements context and development of civil society. That is to say, it seems that China and the UK are different to a large extent and thus, incomparable. However, I argue that it is possible and meaningful to compare these two countries under the scope of social movement theory. I will make justifications on comparison on two levels: in a broad sense, thanks to contentious politics theory, it is feasible to analyse social movements in capitalist and socialist countries in the same frame;⁵⁶⁴ in a narrow sense, political opportunity theory in the social movements literature can and has been applied to both capitalist and socialist countries, and has been proved to share the same set of core variables, notably sub-variables of political opportunity, between them.⁵⁶⁵ Based on the core argument that ‘it is political opportunity structure which is responsible for the emergence and effects of social movements in different societies’,⁵⁶⁶ my research aims to examine this and then add to it that not only political opportunity structure, but also other variables can help to explain the emergence of social movements in different societies, which will be analysed in detail later in this chapter. Before continuing to discuss this, a significant link needs to be made between emergence of social movements on GE and engagement of NGOs in GE. In terms of research on ‘movements’, a question that draws attention is that ‘what exactly are social movements’, namely are they ‘a kind of public opinion in favour of change? Or networks of individuals and organisations? A collective identity? A series of public events and statements?’⁵⁶⁷ According to Jasper, in a social movement, there are a range of players including formal organisations, informal groups, networks of individuals and organisations,

⁵⁶⁴ See the previous studies, for example, Xie (n 48).

⁵⁶⁵ Xie and Van Der Heijden (n 49).

⁵⁶⁶ Ibid.

⁵⁶⁷ James Jasper, ‘Players and Arenas Formerly Known as the State’ in James Jasper and Jan Duyvendak (eds), *Breaking Down the State: Protesters Engaged* (Amsterdam: Amsterdam University Press 2015).

campaigns bringing informal and formal players together.⁵⁶⁸ Engagement of NGOs, as formal organisations with resource and internal rules, is an essential component of social movements. Efforts by NGOs to oppose GE can be considered as triggering social movements on it.⁵⁶⁹ Therefore, in this research, ‘emergence of social movements on GE’ is treated identical to involvement of NGOs/SMOs in GE.

Contentious politics is considered as a broad concept including elements such as social movements and civil wars.⁵⁷⁰ It is defined in the literature as ‘consisting of public, collective making of consequential claims by connected clusters of persons on other clusters of persons or on major political actors, when as least one government is a claimant, an object of claims, or a third party to the claims’.⁵⁷¹ Therefore, social movement theory is only one part of contentious politics, but has attracted the most study in the area. Among studies in contentious politics, scholars have explored an integrated approach to break up all the boundaries of contention – disciplinary, historical, geographic, and different forms of contention – and ‘try to use the same concept and method to analyse the inner logic of these collective actions’.⁵⁷² One attempt at an integrated approach is to examine whether concepts developed in ‘one part of the world – generally in advanced industrial democracies – apply under other scope conditions’.⁵⁷³ Another attempt is to break up the boundaries of geographic areas of contentious politics study and extend them into

⁵⁶⁸ Ibid.

⁵⁶⁹ Halpin (n 50).

⁵⁷⁰ Doug McAdam, Sidney Tarrow and Charles Tilly, ‘Comparative Perspectives on Contentious Politics’ in Mark Lichbach and Alan Zuckerman (eds), *Comparative Politics: Rationality, Culture, and Structure: Advancing Theory in Comparative Politics* (Cambridge: Cambridge University Press 2007).

⁵⁷¹ Ibid.

⁵⁷² Xie (n 48).

⁵⁷³ McAdam, Tarrow and Tilly (n 571).

transnational scope.⁵⁷⁴ Therefore, with regard to the social movements theory developed in the Western countries,⁵⁷⁵ it is meaningful to conduct research across the UK and China to shed light on the application of social movement theory in different societies. It adds to the efforts to break up the boundaries of the study of contentious politics that are generally limited to Western countries.

In a narrow sense, political opportunity structure, as defined in the literature as one of the factors giving rise to contentious politics, is responsible for the emergence of social movements in both capitalist and socialist countries.⁵⁷⁶ As different political conditions in different countries are considered as decisive variables in explaining social movements, political opportunity structure 'has developed into a powerful analytical tool in transnational comparative political science'.⁵⁷⁷ One question arising from political opportunity structure research is whether it is a 'universal concept, applicable to both capitalist and socialist countries'.⁵⁷⁸ The main body of research in this area has been conducted merely among Western countries.⁵⁷⁹ Recently, however, there have been studies addressing the issue across capitalist nations (e.g. US) and socialist countries (e.g. China).⁵⁸⁰ However, comparison between the UK and China concerning political opportunity structure theory is still a gap in research. In addition, research conducted by Pickvance proves that political opportunity theory is universal and applicable to socialist

⁵⁷⁴ Ibid.

⁵⁷⁵ Ibid.

⁵⁷⁶ Xie and Van Der Heijden (n 49).

⁵⁷⁷ Ibid.

⁵⁷⁸ Ibid.

⁵⁷⁹ Ibid.

⁵⁸⁰ See for example, Kevin O'Brien and Lianjiang Li, *Rightful Resistance in Rural China* (Cambridge: Cambridge University Press 2006); Xie (n 48).

countries as well.⁵⁸¹ My comparative analysis, therefore, not only seeks to bridge the gap by comparing the UK and China – a comparison which has attracted little attention in political opportunity theory, but also expects to identify other variables, other than political opportunity structure, affecting social movements in both capitalist and socialist countries under the scope of contentious politics.

However, it is necessary to acknowledge that the comparative method on the UK and China has limitations. As defined in the relevant literature, a fundamental problem of comparative method ‘concerns the choice of the units being compared’.⁵⁸² In terms of my comparative analysis, only two countries – the UK and China – have been chosen as objects. Although the two countries are typical examples of capitalist and socialist countries, the findings cannot be generalised to all the other nations as each case may have different situations. Another problem facing the comparative method concerns overwhelming variables.⁵⁸³ This research has established four sets of variables including many sub-elements and therefore may render the problem of handling all the variables more difficult to solve. However, a solution to this problem is focusing on the key variables.⁵⁸⁴ In terms of my study, I will concentrate on those more predominant variables in each country in order to minimize the limitation. The comparative analysis will be classified into four parts as in the following sections: context, emotion, strategy, and resource. According to the Tables 6.1 and 7.3 summarizing discussion on China and the

⁵⁸¹ Pickvance Chris, *Local Environmental Regulation in Post-Socialism: A Hungarian Case Study* (Aldershot: Ashgate Publishing Limited 2003).

⁵⁸² Reza Azarian, ‘Potentials and Limitations of Comparative Method in Social Science’ (2011) 1 *International Journal of Humanities and Social Science* 113.

⁵⁸³ Lijphart (n 274).

⁵⁸⁴ *Ibid.*

UK results respectively, the focus in each part of analysis will be on key variables identified in the tables.

8.1 Context

Contextual factors, as identified in chapter 5, comprise sub-elements of political opportunity, public consciousness, salience, and deficit in policy. Comparing the two Tables 6.1 and 7.3, political opportunity is the only variable that plays an important role in involvement of social movement organisations with GE policy in both countries, which will be the main focus of analysis in this section. As political opportunity structure has been identified in the literature as responsible for social movements in both capitalist and socialist countries, the comparative analysis in this section also aims to test whether this conclusion holds true for the UK and China in the context of GE. The other variables are responsible for the involvement of social movement organisations merely in the UK or in China, and will also be analysed to explore the differences between the two countries.

8.1.1 Political opportunity

In the existing literature on contentious politics, scholars often employ the concept of ‘political opportunity structure’ when conducting transnational comparative studies. This is because different political conditions in different countries are considered as decisive variables in explaining social movements in transnational comparative studies.⁵⁸⁵ Two key contributions to the theory have been defined as a ‘strong approach’ by Saunders: one

⁵⁸⁵ Xie and Van Der Heijden (n 49).

approach, proposed by Kitschelt, includes 'input structures and output structures' as measurements of the openness of a polity; the other approach, proposed by Kriesi, comprises formal institutional structure and informal elite strategies.⁵⁸⁶ The two approaches overlap to some extent and both are labeled as 'structural'.⁵⁸⁷ However, few of these variables are truly structural in nature as defined by Rootes.⁵⁸⁸ The two approaches are also criticised by Saunders to 'have cherry-picked variables that suited what they wanted to say and finally reach different conclusions about which states are open or closed'.⁵⁸⁹ Therefore, as discussed in chapter 5, the terminology of 'political opportunity', rather than 'political opportunity structure', is more precise to include not only structural factors of a polity but also contingent and non-structural factors. Additionally, in order to propose a synthesized approach, Saunders has made efforts to establish a set of indicators of openness with a classification of structure and contingency: structural factors include the degree of centralisation and configuration of power;⁵⁹⁰ contingent indicators comprise political culture, policymaking capacity, elite divisions, electoral stability, tolerance of protest, and alliances.⁵⁹¹ However, the two strong approaches are only developed in Western countries; and the synthesized approach has not been tested in developing or socialist countries in the literature, although it is claimed to be applicable broadly across countries. Therefore, my comparative study can help to examine the approach in a socialist and developing country like China.

⁵⁸⁶ Saunders, *Environmental Networks and Social Movement Theory* (295).

⁵⁸⁷ Ibid.

⁵⁸⁸ Rootes, 'Political Opportunity Structures, Promise, Problems and Prospects' (n 52).

⁵⁸⁹ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

⁵⁹⁰ The two extremes of configuration of power refer to proportional representation in an idealized open polity and totalitarian in an idealized closed polity. See *ibid.*

⁵⁹¹ Ibid.

Thus, as we have seen, in the existing transnational comparative studies, political opportunity structure is concluded to be applicable in capitalist and socialist countries. However, structural factors alone have been criticised by scholars, such as Saunders and Rootes, as discussed above. I will first examine whether structural factors alone – the degree of centralisation and configuration of power – can help to explain the involvement of NGOs in GE in the UK and China. In terms of degree of centralisation, an idealized open polity is decentralized and has a proportional representation while an idealized closed state is centralised with totalitarian rule.⁵⁹² The term ‘idealized’ adopted by Saunders can be illustrated as an open or closed state at the extreme. In terms of China, it used to be a highly centralised state.⁵⁹³ In the transition time period from ‘a planned to a market economy’, highly centralised power has weakened as local governments have their own tax revenues and many state-controlled public goods have been devolved to them.⁵⁹⁴ The UK has historically been generally considered as one of the most centralised countries in the Western world.⁵⁹⁵ The devolution drive in recent years has changed this so that power is now much more decentralized than in the past.⁵⁹⁶ However, the UK is still regarded as a highly centralised developed country.⁵⁹⁷ It seems that both the UK and China are deemed to be centralised although they differ in many fundamental aspects, such as capitalism or socialism, and developed or developing. From this perspective, China and the UK can be considered as centralised and thus closed to some extent. In terms of the policy area of GE and the involvements of NGOs in them, they differ significantly between the two countries.

⁵⁹² Ibid.

⁵⁹³ Xie and Van Der Heijden (n 49).

⁵⁹⁴ Ibid.

⁵⁹⁵ Department for Communities and Local Government, *Decentralisation - An Assessment of Progress* (ISBN 9781409834687, 2012).

⁵⁹⁶ Ibid.

⁵⁹⁷ See for example, Winnie Agbonlahor, ‘UK ‘Almost Most Centralised Developed Country’, Says Treasury Chief’ *Global Government Forum* (London).

The situation in the UK can be described as some NGOs having engaged while some have not; in China no NGOs are involved. It can be seen that the degree of centralisation cannot help to explain the difference between the involvement or non-involvement of NGOs in the UK and China, as both of them are highly centralised countries and yet involvement in GE differs.

Regarding configuration of power, Saunders has described an idealized open polity as 'proportional representation' and an idealized closed polity as 'totalitarian'.⁵⁹⁸ This is related to the electoral systems. The electoral system in the UK is, predominantly, a first-past-the-post system.⁵⁹⁹ This is considered as relatively closed.⁶⁰⁰ In China, elections are not based on popular vote; rather they take place within the framework of single-party rule.⁶⁰¹ The system is considered as centralised and thus closed by scholars and citizens cannot 'access the local People's Congress or higher level legislative bodies'.⁶⁰² This is because although citizens are 'entitled to express opinions through the legislative bodies of the People's Congress system and elect members to the Congress, the ruling Communist Party committee plays a decisive role in the selection of candidates'.⁶⁰³ In addition, deputies of the national and local Congress are selected by the authorities.⁶⁰⁴ As discussed above, the electoral systems in the UK and China can both be categorized as closed. Given the fact that the involvement of NGOs in GE in these two countries differ greatly,

⁵⁹⁸ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

⁵⁹⁹ First-past-the-post is employed to 'elect MPs to the House of Commons and for local elections in England and Wales'. See The UK Parliament, 'Voting Systems In The UK'

<<http://www.parliament.uk/about/how/elections-and-voting/voting-systems/>> .

⁶⁰⁰ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

⁶⁰¹ Xie and Van Der Heijden (n 49).

⁶⁰² Ibid.

⁶⁰³ Ibid.

⁶⁰⁴ Ibid.

differences of structural factors alone – both degree of centralisation and configuration of power – in political opportunity cannot help much to understand the different situations. Therefore, the traditional strong approach of employing political opportunity structure to understand social movements in both capitalist and socialist countries, as the main body of the existing literature does, cannot contribute to the comparison between the cases of the UK and China, at least in the context of GE.

After identifying the failure of structural factors to explain the cases of GE in the UK and China, I will now turn to examine contingent and non-structural factors. As discussed in chapters 6 and 7, contingent factors are important in understanding the involvement of NGOs with GE in the UK and China respectively. In the UK, as analysed in chapter 6, government policy in calling for more research and regulatory frameworks on GE led to a rise in anti-GE campaigns in 2009.⁶⁰⁵ The second peak of campaigns on GE was around 2013 when the government issued another policy report concerning GE research.⁶⁰⁶ The active time of movements on GE in the UK are, it seems, triggered by government policy and reports on it, which implies that policymaking is an important factor in understanding the involvement of social movements organisations with GE. This raises an issue concerning the contingent factors identified by Saunders – policymaking capacity. In her framework of measuring the openness of a polity, an idealized open polity has strong policymaking capacity while an idealized closed polity enjoys weak policymaking capacity.⁶⁰⁷ However, this contingent factor – policymaking capacity – does not accurately

⁶⁰⁵ Abate and others (n 502).

⁶⁰⁶ Change (n 504).

⁶⁰⁷ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

explain the situation concerning GE. This is because, the UK may be identified as having a strong policymaking capacity, given the government's active reactions to a policy area; however, it does not necessarily mean policymaking capacity is weak if there are no reactions to the area. Therefore, it is the existence of policy or policymaking, rather than policymaking capacity, which contributes to the explanations for the involvement of social movement organisations. In the UK, the government has reacted actively to GE research and this resulted in several policies and reports on it. In comparison, the policymaking on GE in China is relatively weak because, as pointed out by the respondent from Greenpeace China, GE is still a topic located predominantly among the scientific community and it has not really been considered at a political level. In addition, the respondent effectively claimed that as there was no policy on GE in place, it was not the proper time to engage in it. It suggests that policymaking contributes to understanding the non-involvement of NGOs in China. Therefore, in a comparative perspective, relatively strong policymaking in the UK and relatively weak policymaking in China can help to explain the difference in the emergence of movements on GE.

Another important contingent factor to explain the difference between the UK and China concerns the political preference of government. In the UK, as discussed in chapter 6, there was quite intense discussion on GE from 2009 up to a few years ago, but not as much recently. This is because, as explained by the respondent from Greenpeace UK, the government is still focusing on dealing with the issue of fossil fuels, where they can have biggest impacts on the environment. The evidence of political preference by the UK government can be found in the report that 'the priority is, and must be, to tackle the root

cause by reducing emissions of greenhouse gases from human activities and adapting to those impacts that are unavoidable'.⁶⁰⁸ This implies that their focus or preference is mitigation. In addition, the non-involved NGOs in the UK include political preference of government as one of the reasons why they do not engage. For example, the respondent from ClientEarth highlighted that 'it depends on the government whether GE is going to be a solution they want to pursue, then it would draw attention from NGOs'. From the responses, it can be concluded that tolerance of protests, especially political preference, is an important indicator when understanding the non-involved NGOs in the UK. In China, the idea of political preference of government also helps to explain the non-involvement of the interviewed INGO. As mentioned in chapter 7, the respondent indicated that it was crucial to understand the overall political environment in China and what are the big themes across the environment generally on which the government is trying to focus. This suggests the importance of understanding the government's political preference when becoming involved. Looking in comparative terms, this indicator can be applied to both non-involved NGOs in the UK and INGOs in China.

In conclusion, structural factors cannot be applied in comparative study between the UK and China in the context of GE. This is not consistent with the majority of conclusions in the existing literature on comparative studies of political opportunity structure that political opportunity structure can be applied to explain the emergence of social movements in capitalist and socialist countries. Instead, in accordance with the theory of Saunders and Rootes, contingent factors appear to play a predominant role in transnational comparative

⁶⁰⁸ Change (n 504).

studies between the UK and China on social movements. To be more precise, policymaking and the political preference of governments are the two main contingent indicators that are responsible for the emergence of movements concerning GE in the UK and China. Policymaking and political preference may lead to different directions concerning involvement or non-involvement with GE, as policymaking may result in triggering or facilitating involvement of social movement organisations while preference of government elsewhere may lead to non-involvement with GE. In the UK, there is policy on GE, which seems to trigger involvement of NGOs with GE, while in the long term the political focus of government lies elsewhere (i.e. mitigation) and NGOs agree that it should be like this, which leads to non-involvement in that NGOs do not want to divert the public attention away from mitigation. In China, both lack of policy outputs and preference of government elsewhere lead to non-involvement of NGOs with GE, which helps to explain the situation that no NGOs become involved in it. In this respect, this section has examined a synthesized approach combining structural and non-structural elements, which can be applied in a socialist and developing country like China.

8.1.2 Other Variables

The other three variables concerning contextual factors are public consciousness, salience, and deficit in policy. They have different levels of impacts in the two countries. Public consciousness is an important element affecting the non-involvement of NGOs in China while it is not considered as important concerning the situation in the UK. In China, public consciousness on GE is generally low across the whole country, as the public does not

have knowledge on it, and nor are they apparently concerned about it. NGOs would not receive a positive response from the public if they were to act on it and therefore they have no interest in doing so. In contrast, public consciousness on GE in the UK has been investigated and proved to be higher than expected.⁶⁰⁹ In addition, it can be identified from relevant surveys that ‘the increase in available media and increase in assessed familiarity from past studies suggest a growing public interest in GE’.⁶¹⁰ However, a high level of public consciousness is not considered as the reason why NGOs engage with GE in the UK according to the interview data. Nevertheless, a concern about public consciousness in the UK was mentioned by one of the respondents from non-involved NGOs as the reason to explain their non-engagement. They worry that some methods of GE might in theory look like a solution to climate change, and because of this, the public would be less worried about climate problems. This suggests a concern about the public’s misunderstanding of GE in terms of what it can really deliver. This is slightly different from public consciousness used elsewhere in the thesis in that it emphasises possible negative effects of public consciousness here. Apparently, although only one NGO considered the element of public consciousness, it contributes to the non-involvement of NGOs in the UK to a lesser extent compared with China. However, the idea of public consciousness in the two countries differs greatly in that the public in the UK might have the possibility of misunderstanding GE while the public in China does not know about it at all. It is also important to mention that, as groups within one country face the same level of public consciousness, this cannot explain both involvement and non-involvement in that country; rather, it works when comparing groups across different countries, such as the UK and

⁶⁰⁹ Mercer, Keith and Sharp (n 511).

⁶¹⁰ Ibid.

China.

The variable of salience concerning public opinions, according to Tables 6.1 and 7.3, is not identified as a key element affecting the situations in both countries.⁶¹¹ The idea of deficit in policy does not affect the involvement or non-involvement in the UK while it affects the non-involvement of the interviewed INGO in China.⁶¹² This is reasonable and can be understood along with policymaking capacity in political opportunity in that the UK government has engaged in relatively strong policymaking on GE while the Chinese government is considered to be weak on it.

In conclusion, among those contextual factors, political opportunity, especially contingent factors, can be applied to understand the movements both in the UK and China in the context of GE. The same cannot be said of other variables, such as deficit in policy. Therefore, in this section, the comparative analysis helps to prove that structural factors alone cannot be applied in transnational comparative studies and contingent factors play a predominant role. Furthermore, it adds to the literature, from an empirical perspective, in finding that policymaking and political preference of government are the main elements when comparing GE-related movements in the UK and China. In addition, it is important to specify that contingent factors only work in relation to the INGO in China and all UK NGOs. According to the conclusions in chapters 6 and 7 on whether NGOs make strategic choices on GE or it is an unintentional outcome, a further conclusion can be drawn that,

⁶¹¹ As mentioned in Chapter 6, salience is an important concept in much of the existing literature on political science, which originally comes from research on voting behaviors aiming at exploring the various levels of importance of issues attached by voters.

⁶¹² The deficit in policy on GE means, as mentioned in Chapter 6, there is no dedicated policy on GE activities or the topic of GE has not been considered at a policymaking level.

although contingent factors can be applied to both countries, they are only responsible for the intentional involvement and non-involvement of NGOs with GE.

8.2 Emotion

Emotion-related factors, as defined in chapter 5, comprise the variables of threat, blaming, and unwillingness to access information. By comparing Tables 6.1 and 7.3, it is reasonable to identify that the variable of threat is a key emotion-related variable for the intentional involvement and non-involvement in both countries.⁶¹³ This will be illustrated in further detail in section 8.2.1. Other variables, including blaming, and unwillingness to access information, will also be analysed briefly concerning the differences between the UK and China.

8.2.1 Threat

As discussed in chapter 6, threat is necessary for generating strategic actions and is considered to provide ‘ideas, ideologies, identities and interests to motive’.⁶¹⁴ It is a type of negative emotion to trigger social movements including a diverse range of elements, including resignation as a reaction to threat, sense of urgency as the reason for threat, and technological fear as one particular type of threat. In this section, each of the three elements will be analysed from a comparative perspective between the UK and China. Conclusions on differences between the two countries will then be drawn in Table 8.1 at

⁶¹³ Intentional involvement and non-involvement refer to NGOs that make strategic choices on their engagement or non-engagement.

⁶¹⁴ Jasper, *The Art of Moral Protest: Culture, Biography and Creativity in Social Movements* (n 331).

the end of this section.

The sense of urgency is the key element identified as responsible for the involvement or non-involvement of NGOs both in the UK and China. As mentioned in chapter 7, urgency suggests that situations could become worse if we do not respond or take action now.⁶¹⁵ In the UK, the idea of lack of urgency was mentioned by all interviewed NGOs concerning GE. The concept of ‘urgency’ needs to be defined as it can be illustrated as two-fold: some may consider GE not urgent because it is not a tipping point for us to carry out GE, which means there are still other options such as mitigation; others could argue that GE, as a policy area, requires a governance framework. The term ‘urgency’ identified in the interview responses refers to the former. However, it is important to point out that, as discussed in chapter 7, the variable of urgency only helps to explain non-involvement of NGOs in the UK.⁶¹⁶ In China, lack of urgency has also been employed as one of the reasons for non-involvement with GE. However, this element is applicable solely to the interviewed INGO in China as only the respondents from Greenpeace China claimed that ‘as the impacts of GE are not certain and clear as well as the fact that it is not recognized in daily life, it is still early to pay attention to GE and there are much more pressing and urgent concerns we need to cope with’. From a comparative perspective, one could argue that the sense of urgency is applicable for explaining the non-involvement of NGOs in the UK and the non-involvement of INGOs in China. According to the conclusions drawn in chapters 6 and 7, INGOs in China deliberately do not engage in GE while domestic

⁶¹⁵ Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (n 52).

⁶¹⁶ As mentioned in chapter 7, although both types of NGOs have mentioned the variable of urgency, they illustrate it in divergent ways: NGOs not involved in GE partly attribute their non-engagement to lack of urgency; while involved ones have participated despite admitting that there was a lack of urgency concerning GE. Therefore the variable of urgency appears to explain the non-involvement but it does not explain involvement.

Chinese NGOs unconsciously stay clear of it, and all the UK NGOs make strategic choices on their involvement or non-involvement with it. Therefore, a further conclusion across the boundaries of the UK and China can be identified in that the element of urgency contributes only to the intentional non-involvement of NGOs in the context of GE.

Technological fear means people tend to oppose new technologies and generate bias against them as people are concerned about destroying the status quo even though there may be little chance of this happening.⁶¹⁷ In the UK, the idea of technological fear is applicable to the non-involvement of NGOs, as the respondents effectively include this to express their concerns about the uncertainties and side effects of GE. In relation to the empirical results in China, technological fear related responses couldn't be identified. This is understandable because the general public does not have a reasonable level of knowledge on GE, which suggests technological fear resulted from misusing scientific information cannot really exist. Due to different levels of understandings on GE in the UK and China, the element of technological fear only helps to explain the non-involvement of NGOs in the context of the UK. Resignation, as discussed in chapter 7, this refers to the situation where people are pessimistic about the status quo and prefer to accept it rather than act for change.⁶¹⁸ It happens when people are disappointed with bureaucracies and therefore believe that it makes no difference whether they participate or not as outcomes would not change anyway. This provides a consideration that NGOs may be disappointed with bureaucracies and thus reluctant to become involved in GE. However, the idea of resignation has not been identified as a reason for the involvement or non-involvement by

⁶¹⁷ Jasper, *The Art of Moral Protest: Culture, Biography and Creativity in Social Movements* (n 331).

⁶¹⁸ Jasper, *Getting Your Way: Strategic Dilemmas in the Real World* (n 52).

NGOs in both countries. Therefore, it is not applicable to the emergence of movements on GE in either country. According to the discussion in chapter 7, it is applicable when explaining the non-involvement and limited involvement of NGOs in the UK. However, this element does not help to explain involvement or non-involvement of NGOs in China.

Therefore, from the comparison above, it can be identified that the sense of urgency is the only key variable responsible for involvement or non-involvement with GE in both countries. More precisely, it is applicable to the intentional non-involvement of NGOs in the two countries. Other elements of the threat variable are only valid in either China or the UK and therefore, cannot be treated as effective for comparison. This conclusion can be shown as Table 8.1 below:

Table 8.1: How elements of threat vary between UK and Chinese NGOs

	UK	China
Urgency	Applicable for the non-involved NGOs	Applicable for the non-involvement of INGO
Technological fear	Applicable for the non-involved NGOs	Not applicable
Resignation	Not applicable	Not applicable

8.2.2 Other Variables

In this section, the variables of blaming and unwillingness to access information will be analysed in a comparative way between the UK and China. The variable of blaming can be illustrated with the literature on naming, blaming, and claiming. As discussed in chapter 6,

naming, blaming, and claiming stand for the stages of identifying an injurious experience, the perceived injurious experience being transformed into grievance, and grievance being voiced to the person responsible and asking for a remedy.⁶¹⁹ Naming, the first stage of identifying an injurious experience, may be regarded as providing an explanation for the non-involvement of the interviewed INGO in China due to lack of ability to identify harms, which has been discussed in chapter 6. In terms of blaming, it is only applicable in explaining the involvement of NGOs in the UK and is not considered as a main variable by the respondents. According to the empirical data, the respondent from FoE indicated that ‘the second reason why we engage in GE is we are trying to stop the political and scientific community from giving the message that we don’t need to bother with mitigation’. This implies that the respondent blamed the political and scientific community for disseminating the wrong message, which leads FoE to become involved in GE. Similarly, according to the analysis in chapter 7, centrality⁶²⁰ can also be used to explain the non-involvement of NGOs in the UK. Integrated with the conclusion that INGOs in China and all the UK NGOs make strategic decisions on their involvement or non-involvement, it thus can be identified that centrality, although it is not a key element identified in the empirical data, is partly responsible for the intentional non-involvement of NGOs both in the UK and China.

With regard to the variable of unwillingness to access information, this is only identified in relation to Chinese NGOs, which results in their lack of knowledge on GE. Furthermore, it

⁶¹⁹ Felstiner, Abel and Sarat (n 455).

⁶²⁰ As mentioned in section 6.2.2, it refers to ‘if the values the movement seeks to promote are of low hierarchical salience, the mobilizing potential is weakened considerably’; see Snow and Benford (n 458).

is merely applicable to small grassroots NGOs in China to understand their non-engagement with GE. It is closely related to the problems of information deficit and limited capability of elites, which is an objective limitation in Chinese NGOs, and is thus considered as an unconscious option.

In conclusion, among the emotion-related factors, threat is identified as a key variable applicable to both countries. Within the variable, the sense of urgency is responsible for the intentional non-involvement of NGOs with GE in the UK and China. This adds to the existing literature on transnational comparative studies on contentious politics in that not only political opportunity but also threat, at least in the context of GE, can be useful in understanding social movements in both capitalist and socialist countries such as the UK and China.

8.3 Strategy

As is defined in chapter 5, strategic factors include variables of insider/outsider strategies, mediating, efficiency and competition. In the literature on interest groups, strategy includes insider/outsider strategies that groups employ. 'Strategy' mentioned in this section refers to broad strategic factors including not only insider/outsider strategies, but also other variables, such as mediating, efficiency and competition. This is because the variables of efficiency and competition affecting involvement or non-involvement suggest strategic choices or decisions rather than unintentional outcomes. Among the variables, efficiency

and competition are identified as key variables responsible for the movements on GE in both countries, which will be discussed in detail in the following sections. In terms of insider/outsider strategies and mediating, although these two variables are identified as important in one country, namely insider/outsider strategies in China and mediating in the UK, they are found to play a predominant role respectively in determining the involvement or non-involvement of NGOs in that country. Therefore, these two variables will also be the focus of my discussion in this section.

8.3.1 Insider/outsider strategy

In the existing literature on social movements and contentious politics, the approaches of using political opportunity structure and that including contingent factors have been examined in transnational comparative studies. Some scholars researching in Western Europe, following criticism of these approaches, argue that ‘local level factors based on ideologies and strategies are more influential in determining movements within countries than macro-political opportunity factors are at explaining variation between countries’.⁶²¹ Furthermore, more recently, scholars, such as Saunders and Rootes have proposed that ‘when comparing environmental organisations within as well as across countries, it seems to make more sense to consider political opportunities based on strategies and status rather than on structures or other properties of a polity’.⁶²² My comparative analysis in this section aims to examine this theory or approach in two ways: first, to see whether the approach of focusing on organisational strategy and status is applicable in the context of

⁶²¹ Saunders, *Environmental Networks and Social Movement Theory* (n 295).

⁶²² Ibid.

GE; second, as the theory was originally developed in organisations in Western Europe or industrialised countries, it is useful to investigate whether it is applicable for organisations in a socialist and developing country like China and therefore, to examine whether it holds true for comparative studies between capitalist and socialist countries.

As discussed in chapter 5, an insider status entails a privileged access to the political and administrative process and employs direct actions of close consultation with political actors while an outsider strategy involves mobilisation from grassroots networks with indirect actions through media or mobilisation of citizens.⁶²³ A distinction between strategy and status has been identified in that practising an insider strategy does not guarantee an insider status – something that needs to be ascribed by government.⁶²⁴ Therefore, based on the distinction, a conclusion has been drawn, in chapter 5, that not all types of groups have agency on their choice of strategies. To be more precise, outsiders by goals do not have real choices on their outsider status because their policy demand and goals determine which strategy they employ, while outsiders by choice have real agency in adopting an outsider strategy.⁶²⁵ In chapters 6 and 7, a question has been answered in the context of the UK and China of ‘whether different choices of strategy adopted by NGOs would affect their involvement in GE’. That is to say, if NGOs practise an insider strategy, are they more likely to engage in GE or the reverse direction? Or, if NGOs adopt an outsider strategy or threshold strategy, are they more reluctant or unlikely to engage in

⁶²³ Binderkrantz, ‘Different Groups, Different Strategies: How Interest Groups Pursue Their Political Ambitions’ (n 52).

⁶²⁴ Maloney, Jordan and McLaughlin (n 359).

⁶²⁵ Outsider by goal refers to a group attaining an outsider status through its adoption of goals, which is a ‘self-selected’ process. Outsider by choice have agency in making decisions on its outsider status.

GE or actually the reverse?⁶²⁶ In terms of involvement with GE in China, the conclusion drawn in chapter 6 is that the adoption of strategy does exert influence on the participation of insiders and thresholders rather than outsiders. In addition, the difference of involvement between insiders, such as the government-supported NGOs in China, and thresholders, such as the INGO, is that the former do not make a strategic choice on it, as they do not have agency in adopting an insider strategy, while the latter decide their involvement strategically as they have agency to practise an insider/outsider strategy. However, surprisingly, according to the analysis in chapter 7, it can only be cautiously concluded that insider/outsider strategies partly influence the involvement of NGOs in the UK, as there is no uniform pattern on how insider/outsider strategy affects NGOs' involvement with GE that can be identified. This is because the relations between strategy and involvement shown in Table 7.1 are not obvious or straightforward enough. This further suggests that how insider/outsider strategies influence the involvement of NGOs is more complex in the context of GE in the UK.

From the review of discussions in chapters 6 and 7, it can be identified that organisational insider/outsider strategy does not exert direct or straightforward influence on the involvement or non-involvement of NGOs in the UK, which implies that the approach of focusing on strategies and status cannot be simply applied in the case of GE in the UK. In contrast in China, organisational strategy and status does influence the non-involvement of NGOs with GE, which suggests that this approach, identified in the literature, is applicable in a socialist and developing country like China in the context of GE. Therefore, at least in

⁶²⁶ Thresholder strategy refers to an integrated strategy of outsider and insider strategies.

the case of GE, this approach cannot help to explain the transnational comparative study between the UK and China, which to some extent challenges what has been identified – the approach focusing on strategy and status for transnational comparison– in the existing literature and indicates that GE is a more complex case. In conclusion, the variable of insider/outsider strategy is merely applicable in China in the context of GE. Integrated with the conclusion that the interviewed INGO strategically stays clear of GE (which suggests an intentional non-involvement) while domestic Chinese NGOs do not become involved unconsciously (which suggests unintentional non-involvement), it can be further concluded that this variable is considered responsible for both intentional and unintentional non-involvement of NGOs in China.

8.3.2 Mediating

The variable of mediating in this section refers to NGOs strategically employing their mediating role between government and the public or intentionally ceasing mediating in terms of involvement or non-involvement with GE.⁶²⁷ The governance literature suggests that it is possible for NGOs to stop mediating and to define public interests themselves.⁶²⁸ In the context of GE, they stop mediating by staying clear of it rather than shaping the debates in order to avoid a distraction of attention on the part of the public. This is a key variable for understanding the situation in the UK, as all of the respondents considered it responsible for the involvement and non-involvement of NGOs with GE. As discussed in chapter 7, both types of NGOs in the UK – involved and non-involved – included

⁶²⁷ The role of mediating has been discussed in chapter 5. In terms of fostering openness of participation, there are two ways of having public voices heard: through individuals directly and via representative NGOs indirectly. The latter way of having public voices heard suggests the role of mediating.

⁶²⁸ Brownsword and Goodwin (n 384).

mediating as one of the reasons why they did not engage. This is because, as mentioned in chapter 7, stopping mediating can be illustrated as a two-fold process: stopping government from disseminating information on GE; and stopping the public from receiving information on GE. Some NGOs engage in order to stop government from giving messages concerning GE while other NGOs stay clear of it in order to prevent the public from accessing information on it. Therefore, mediating is an important and main variable in terms of the UK. However, in China, the idea of ceasing mediating cannot be identified from the data and therefore, it is not applicable in understanding the non-involvement of NGOs with GE. Furthermore, it is not responsible for the involvement and non-involvement in both countries and does not work in the transnational comparative study at least in the context of GE. This makes sense because, as concluded in chapter 7, unlike Chinese NGOs, all of the UK NGOs strategically make decisions on their involvement or non-involvement and stopping mediating entails a strategic element. Based on this, one could further conclude that the variable of mediating is responsible for intentional involvement and non-involvement in the context of UK.

8.3.3 Efficiency and competition

The variables of efficiency and competition are identified as key variables that work in both countries. As discussed in chapters 6 and 7, they are interrelated due to finite resources that NGOs are able to acquire which can lead to divergent outcomes between different NGOs concerning involvement and non-involvement: NGOs prefer to allocate limited resources to areas where they can effectively make contributions, and thus tend to focus on approaches to climate change that already exist, such as mitigation, rather than

GE; NGOs can pursue a specialised goal, such as focusing on GE, to claim a particular identity when in competition with other NGOs.

In the UK, as discussed in chapter 7, it cannot simply be concluded that efficiency leads to non-involvement while competition leads to involvement. This is because the proportion of resource is a critical element when understanding the involvement of NGOs and was mentioned by all the respondents from involved NGOs. It is important to notice that, despite their engagement in GE, they do not consider GE as a main focus of their work. Instead, they would like to be involved as long as a large proportion of their resources are not placed on it. In terms of competition, although it is included as the reason why NGOs engage, it was also mentioned by respondents when they explained why they noticed GE in the first place.

In China, the variable of efficiency is important in understanding the non-involvement of INGOs. The respondent effectively indicated that ‘their choice of topics depends on whether they can have effective impacts and contributions’. The difference between the UK and China is that competition is more influential in determining involvement in the UK while it cannot be identified that much in China. That is to say, due to a short development history of NGOs in China, lower competition drives NGOs to focus on their organizational maintenance, such as acquiring enough funding or attracting members, rather than getting involved in novel environmental areas to become more competitive than their peers. In addition, lower competition means NGOs in China do not have to specialise their goals in GE as they would under high competition. This suggests that low levels of

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competition can be considered as responsible for the non-involvement of INGOs in China. It is also important to point out that only the interviewed INGO in China included efficiency and the low level of competition as factors influencing non-engagement with GE. However, they do not work in relation to domestic Chinese NGOs.

Therefore, it is reasonable to conclude that the variables of efficiency and competition work in both countries in the context of GE (although they only works in relation to INGOs in China). In addition, they are responsible for the intentional involvement and non-involvement with GE in the UK and China. In conclusion, in this section, the variables of efficiency and competition are identified as key variables that work in both countries, which adds to the existing literature that efficiency and competition can be applied in transnational comparative studies in capitalist and socialist countries, at least in the case of GE. The variable of insider/outsider strategy is surprisingly identified to be less influential in determining the involvement or non-involvement of NGOs in the UK, which challenges the conclusion in the literature that we should conduct transnational comparative studies based on organisational strategy and status. However, it is considered as an important element in China. In terms of the variable of mediating, it has been found to play a predominant role in determining the engagement and non-engagement in GE in the UK.

8.4 Resource

This section will discuss elements of resource: goal, funding and time, information and knowledge, and elites as labour resource. From Tables 6.1 and 7.3, the variable of goals is

found to be a key factor in both countries as nearly all the respondents from the UK and China regarded it as responsible for the involvement and non-involvement of NGOs with GE.⁶²⁹ The idea of funding and time was identified as influential in determining the situation in the UK;⁶³⁰ in China, it also works but merely for Chinese grassroots NGOs. These two variables – goals, funding and time – will be the main focus of discussion in this section. In terms of information and knowledge, as well as elites, they are only responsible for the non-involvement of Chinese NGOs and cannot be identified in the context of the UK. However, the variable of information and knowledge is important in understanding the difference between intentional and unconscious choices in the UK and China, and will also be discussed in detail in this section.

8.4.1 Goals

As can be apparently discovered from Tables 6.1 and 7.3, the variable of goals plays the most important role in both countries. It helps to explain why NGOs engage or do not engage in the first place. In the UK, both involved and non-involved NGOs have effectively included it as partly responsible for their involvement with GE. As mentioned in chapter 7, for example, the respondent from Greenpeace indicated that ‘one of the reasons for our involvement is that we are committed to dealing with the problem of climate change, and GE is within the remit’. The respondent from TearFund also attributes their non-involvement to it, stating that ‘the reason why we did not get involved is because GE is outside our remit’. In terms of Chinese NGOs, as analysed in chapter 6, all of the

⁶²⁹ As discussed in chapter 5, according to resource mobilization theory, target goals of organisations link them to specific social movements.

⁶³⁰ Money and time refers to material resource that organisations require for their survival.

respondents pointed out that ‘NGOs have settled goals and tend to focus on specific areas within their goals’. In addition, they decide target goals in different ways. For example, grassroots NGOs rely heavily on the directors of organisations; government-supported NGOs depend on government policy. From a comparative perspective, the idea of goals can be generally applied to understand different types of NGOs in different countries. Therefore, it is reasonable to conclude that this variable is in part responsible for the involvement and non-involvement of NGOs in both capitalist – the UK – and socialist – China – countries in the context of GE. In addition, as the UK NGOs are making strategic choices and those of domestic Chinese NGOs are a result of unconsciousness, one could further conclude that the variable of goals helps to explain both intentional and unconscious involvement and non-involvement with GE.

8.4.2 Funding and time

As mentioned in the previous two chapters, funding and time are important to the survival and maintenance of organisations. They are key variables in understanding the movements concerning GE in both countries. In the UK, funding and time are important elements influencing the non-involvement of NGOs. From the empirical data, it can be identified that the proportion of distribution of money and time resources is the crucial point in that money and time allocated to GE should not be considered as a priority or should not be a large proportion. This critical idea can explain the limited engagement of involved NGOs in the UK as well. However, in China, it is not applicable for all types of NGOs in that only grassroots NGOs included lack of money and time as the explanation for their non-involvement. That is to say, due to the difficulty in acquiring money, they prefer not to

expand their focus across many areas, such as GE. However, in terms of other types of NGOs in China, such as INGOs and government-supported NGOs, funding and time do not help to explain their non-involvement as they obtain more sufficient funding support than grassroots NGOs. According to the country comparison, the variables of funding and time can be applied to both countries, but it is important to point out that while the elements can effectively help to explain both involvement and non-involvement in the UK, in China they merely help to explain the non-involvement in China. Integrated with the conclusion concerning whether it is a strategic choice or unconscious one, one could argue that the variables of funding and time are useful in understanding the intentional involvement and non-involvement in the UK and the unconscious non-involvement of NGOs in China.

8.4.3 Other variables: information and knowledge, and elites

The deficit in information and knowledge on GE cannot be identified in terms of UK NGOs, as both involved and non-involved NGOs have satisfactory or reasonable knowledge. Therefore, it is not applicable in understanding the situation in the UK. However, it is an important element to explain the non-involvement of Chinese NGOs. According to the empirical data in China, only the interviewed INGO Greenpeace had some knowledge and information on GE, while the other respondents knew nothing about it at all. All the respondents from domestic Chinese NGOs included the deficit in knowledge as the predominant reason why they have not participated, which makes sense in that they cannot participate in an area unknown to them like GE. In addition, the deficit in knowledge and information is the decisive variable in determining whether their

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non-involvement is an unconscious result. That is to say, it is the key variable in understanding the difference between intentional and unintentional behaviour in the UK and China. Therefore, with regard to all UK NGOs and INGOs in China, which make strategic choices, the deficit in knowledge is not applicable to them; while in terms of domestic Chinese NGOs with a lack of consciousness of GE, this variable is effective in understanding their non-involvement. The element of deficit in information and knowledge plays a decisive role in affecting the unintentional non-involvement with GE. When it comes to the labour resource – elites, it is only identified in grassroots Chinese NGOs in that the major disadvantage of this type of NGO is lack of professionalism. It thus does not work in relation to the UK NGOs and other types of Chinese NGOs.

In conclusion, from the comparative analysis in this section, the variable of goals has been examined as the most important factor responsible for the intentional and unconscious involvement and non-involvement in both countries. It adds to the literature that this variable can be applied in transnational comparative studies between both capitalist and socialist countries. The variable of funding and time has been examined as a key factor in influencing the intentional involvement and non-involvement in the UK, but it only works for understanding the unconscious non-involvement of grassroots NGOs in China. When it comes to the variable of information and knowledge, this has been identified as the key factor for Chinese domestic NGOs in explaining the difference between unconscious action and a deliberate choice.

8.5 Conclusion

In this part, conclusions will be drawn according to the comparative analysis above. The findings will be concluded from two perspectives: first, in terms of the UK and China respectively, I will examine which variables play the predominant role in influencing the involvement or non-involvement in each country; second, and more importantly, I will consider what can be added to the existing literature on transnational comparative studies on social movements, especially between capitalist and socialist countries. That is to say, what variables can be applied to transnational comparative studies between capitalist and socialist countries? In addition, the comparative analysis in this chapter will also add to the literature in a way of integrating with the theory on strategic choices in order to develop comparative social movements theory.

The first perspective focuses on the UK and China respectively in order to investigate which variable or variables play a predominant role in determining the situation in each country in the context of GE. In the UK, it can be concluded that contingent factors in political opportunity, threat in emotion, mediating, efficiency and competition in strategy, goals, funding and time in resource play the main roles in influencing the movements on GE. All of these variables can be illustrated as intentional or strategic choices. In China, political opportunity structure, public consciousness, goals, information and knowledge are identified as the most influential variables concerning non-involvement with GE. The variable of goals is responsible for both intentional and unintentional non-involvement in China, and is considered as a key factor in determining the non-involvement in the first

place. The variable of information and knowledge is partly responsible for unconscious non-involvement in China, and is regarded as the main factor in explaining the difference between intentional and unconscious involvement.

With regard to transnational comparative studies on social movements, the analysis in this chapter helps to add to the existing literature in two ways: first in analysing what variables are applicable in the situations in both countries; and second in determining which of these are responsible for intentional and unconscious involvement or non-involvement. The existing literature proposes three approaches in transnational comparative research: the approach of employing the variable of political opportunity structure, the approach of focusing on contingent factors of political opportunity, and the third approach based on organisational strategy and status. The analysis in this chapter has examined the three approaches and found that structural factors cannot be applied to understand the case of GE while contingent factors play a predominant role in both capitalist and socialist countries like the UK and China. In detail, policymaking and political preference of government are the two main contingent factors that are responsible for involvement of social movement organisations with GE in both countries. In addition, contingent factors are only responsible for the intentional involvement and non-involvement with GE (not unconscious actions). In terms of the third approach based on organisational strategy and status, it was surprisingly found that this approach cannot help to explain involvement or non-involvement in the transnational comparative study between the UK and China, which to some extent challenges what has been identified in the literature and implies that GE is a more complex case.

The variables of efficiency and competition under organisational strategy and status work in the transnational comparative study between the UK and China in the context of GE. They are partly responsible for the intentional involvement and non-involvement with GE. The variable of threat, especially the sense of urgency as a reason for threat, is partly responsible for the movements on GE in both countries. Furthermore, it helps to explain intentional non-involvement of NGOs in the UK and China. In terms of the variable of goals, it works in understanding different types of NGOs in both countries. It helps to explain both intentional and unconscious involvement and non-involvement with GE. The elements of funding and time helps to explain involvement or non-involvement in both countries, but it is important to point out that they are useful in illustrating intentional involvement and non-involvement in the UK and unconscious non-involvement in China.

The conclusions above contribute to the existing literature on transnational comparative studies on contentious politics. In detail, in the context of GE, not only political opportunity, but also threat from cultural perspectives, efficiency and competition under organisational strategy, goals, funding and time identified from resource mobilisation theory, can be useful in understanding social movements in both capitalist (i.e. the UK) and socialist (i.e. China) countries. In addition, these variables work differently in affecting intentional or unconscious involvement/non-involvement. This can be seen in Table 8.2 below:

Table 8.2: Variables that work in both countries

	Involvement or Non-involvement	Intentional or Unconscious
Contingent factors in political opportunity	Both	Intentional
Efficiency and competition	Both	Intentional
Threat	Non-involvement	Intentional
Goals	Both	Both
Funding and Time	Both	Both

Chapter 9 Conclusion

This chapter draws an overall conclusion of the thesis. The first section addresses the background within which my research has been carried out, including a discussion on the governance system of GE as well as the role of NGOs. Section 9.2 provides a summary of the thesis, including issues that have been discussed, how the research questions have been answered, and what the findings are. Based on this summary, I go on to expand the issue concerning the role of NGOs further to briefly discuss the question of whether they are ready to take a role in the governance on GE. The last section focuses on potential for future work, namely remaining issues to be solved and what further research might be done.

9.1 Background

The thesis concentrates on the issue of GE and discusses NGO participation within a broader scope of public participation in governance of GE more generally. Therefore, the background of this research concerns potential governance systems for GE. As discussed in chapter 2, the issue of governance has been addressed in the literature on GE. Some work has focused on the international framework for governing GE technology;⁶³¹ another group of scholars has investigated governance under a national legal framework;⁶³² some

⁶³¹ For example, Redgwell (n 20); Long (n 84); Hansson, Rayner and Wibeck (n 86).

⁶³² For example, Neil Craik, Jason Blackstock and Anna-Maria Hubert, 'Regulating Geoengineering Research through Domestic Environmental Protection Frame-works: Reflections on the Recent Canadian Ocean Fertilization Case' [2013] CCLR 117; Armeni and Redgwell, 'Geoengineering Under National Law: A Case Study of the United Kingdom' (n 27); Redgwell and Armeni (n 28).

have addressed the research governance of GE research and development,⁶³³ others have dealt with issues regarding public participation including civil society engagement.⁶³⁴ In fact, a governance system for GE is likely to need all these elements – an international framework, national legal regimes, research governance and public engagement – to provide oversight on the development of GE technology. The 2009 Royal Society report, in its section on governance sets out considerations of ethics, international frameworks, governance of GE research and development, public engagement as well as economic factors.⁶³⁵ A synthetic system integrating all of these elements is likely to be required for GE governance.

In terms of the international framework, although a new and dedicated agreement is not considered necessary among scholars,⁶³⁶ applying existing treaties and regimes, such as UNFCCC, CBD, and LC/LP, in an integrated way seems important. That is to say, although some articles in each potential treaty may contribute to regulating GE, how to integrate and coordinate them in practice matters. Some GE related activities which cannot be covered by these treaties may be subject to principles in international law. Governing GE at national level is also important, either by incorporating international law directly or by adjusting it according to domestic circumstances. As this national level of governance concerns state sovereignty, it could be complicated to put it into practice, which may require cooperation among states. With regard to research governance, which may be

⁶³³ For example, Pyle and others (n 13); Erin Tanimura, 'Geoengineering Research Governance: Foundation, Form, and Forum' (2013-2014) 37 *Environ Entl L & Pol'y J* 167.

⁶³⁴ For example, J. Stilgoe, Matthew Waston and Kristy Kuo, 'Public Engagement with Biotechnologies Offers Lessons for the Governance of Geoengineering Research and Beyond' (2013) 11 *PLOS Biology* 1; D. Scheer and O. Renn, 'Public Perception Of Geoengineering And Its Consequences For Public Debate' (2014) 125 *Climatic Change* 305.

⁶³⁵ Shepherd and others (n 11).

⁶³⁶ Kuokkanen and Yanmineva (n 20); Parker (n 90).

required much sooner, it depends on the nature and scale of the relevant experiments. Indoor experiments and research, such as computer modeling that have been considered non-hazardous in the literature,⁶³⁷ could be left to self-regulation by scientists. Field trials, which could pose a potential risk to the environment, may be permitted in certain circumstance or given a ban.⁶³⁸ Public and civil society involvement is important in the decision-making process concerning GE. As stated in the 2009 Royal Society report, any GE related activities should not proceed unless a dialogue between scientists, policymakers and the public including civil society organisations is included.⁶³⁹ Therefore, NGO engagement is a critical part of ensuring public participation in GE governance. However, we have seen that NGOs, as a significant element of GE governance, were not actively involved in GE as a policy area in the UK and China. This thesis therefore focuses on the role of NGOs to explore why they did not engage with it. After briefly discussing, in this section, what the governance system on GE is like and how this research is situated in it, the following section then moves on to provide an overall summary of the thesis.

9.2 Summary of the thesis

This thesis addresses the issue of why NGOs do or do not become involved in GE as a policy area in the UK and China. As discussed above, governance is a key issue in the academic literature and public policy concerning GE. Among the elements included in a governance system regarding GE technology, according to the 2009 Royal Society report,

⁶³⁷ Pyle and others (n 13).

⁶³⁸ Shepherd and others (n 11).

⁶³⁹ Ibid.

public and civil society organisation participation is important and should be included in the decision-making process.⁶⁴⁰ Scholars have paid attention to this issue concerning the public and civil society in GE and discussed it in the existing literature within environmental law and related fields. However, the issue of NGOs' participation stands out due to their limited involvement. It is thus meaningful to investigate the reasons for engagement or non-engagement of NGOs with GE as a policy area. Although public participation has long been an interest of study, the literature has paid little attention to the causes of participation. The thesis contributes to the existing literature by way of adding a consideration of why certain groups participate or not in particular areas of environmental law and policy.

The thesis is generally based on the literature on public participation in environmental law. The main research question of the thesis is 'why do NGOs participate in GE or not in the UK and China?' In order to explore the causes of participation, qualitative interviews were employed as the research method of the thesis: notably in-depth interviews were conducted among environmental NGOs in the UK and China. Through in-depth qualitative interviews, empirical data concerning respondents' opinions of GE, whether their organisations have engaged with GE, and why they participate or not in GE as a policy area were collected. In relation to the research design, it is a comparative design aiming to compare the two contrasting cases to explore explanations for differences and identify similarities applicable in both countries. Based on the empirical data, the thesis employs the literature on social movements, interest groups and governance in public policy to generate variables

⁶⁴⁰ Ibid.

for analysing the relevant data, which were set out in chapter 5. Variables of context, emotion, strategy, and resource are identified in these strands of literature and each of them consists of sub-elements. The context variable includes elements of openness,⁶⁴¹ the degree of policy development,⁶⁴² and public consciousness; the variable of emotion consists of threat, blame and willingness to access information; the strategy variable entails an insider/outsider strategy, ceasing to mediate,⁶⁴³ efficiency and competition;⁶⁴⁴ finally the variable of resource includes money, time, information and knowledge, and elites.

Through analysing the data with the variables mentioned above, findings concerning which variables help to explain non-involvement or involvement of NGOs in China and the UK were identified. Chapter 6 examined four variables with the data on Chinese NGOs to form a finding on which variables are important in understanding NGO participation in GE in the context of China. In terms of the contextual factors, the variables of openness and public consciousness are important in understanding the contextual issues in China when discussing NGO participation in GE. The deficit in policy within political opportunity, which means that NGOs cannot participate in GE unless there is a dedicated policy on it, and the element of salience is only identified and applied in the international NGO Greenpeace in China. In terms of the variable of emotion, consideration on whether there

⁶⁴¹ Text to section 5.2.1. Openness refers to the question whether a polity is open or closed.

⁶⁴² Degree of policy development means whether there is deficit in GE policy in the UK and China.

⁶⁴³ Text to section 5.4.1. NGOs can mediate public voices. However, this role of NGOs has been criticized by scholars as controversial because it is possible for NGOs to stop mediating and to define public interests by themselves. NGOs being reluctant to talk about GE is a way of them ceasing to mediate by pausing the communication between government and the public.

⁶⁴⁴ Text to section 5.2.1. Based on costs and benefits analysis, NGOs not involved in GE are potentially attributed to the free rider dilemma that they will be benefiting even if they do not participate. Furthermore, as GE is a novel and specialised area, NGOs can devote resources into areas where they can make contributions more efficiently than GE. The element of competition refers to competition for finite resources. The more competitive the area is, the more specialised and narrow the goals pursued by NGOs, such as GE, to make their specialised identities.

is a threat as well as framing⁶⁴⁵ is identified in the international NGO Greenpeace while unwillingness to access information on GE is identified in grassroots Chinese NGOs. In relation to the variables of strategy, efficiency and competition, I concluded that these are important in affecting the involvement of the international NGO rather than other Chinese NGOs. The ideas of goals, elites, money and time are identified as crucial factors in affecting NGO participation but work differently between the international NGO and Chinese NGOs. Furthermore, the element of information deficit was only identified in domestic Chinese NGOs. Furthermore, it was found that the international NGO makes strategic choices to not engage in GE while the non-involvement of Chinese NGOs is more an unintentional consequence without even noticing the area of GE rather than a strategic one.

In chapter 7, findings were stated in relation to the UK. Variables or elements of political opportunity, threat and blaming, mediating, efficiency and competition, funding and time, and goals appear to explain both involved and non-involved of NGOs. However, some of the variables need clarification when understanding both types. Political opportunity, especially contingent or non-structural factors, contributes to explaining both types of NGOs. The Paris Agreement, as an important contingent event, influences both involvement and non-involvement of NGOs due to their different understandings of the 1.5-degree target in the agreement. The idea of general political preference of the government, also as a contingent factor, only explains non-involvement. In terms of threat, it was mentioned by almost all the respondents. However, the power of the negative or

⁶⁴⁵ Text to section 6.2.2. Framing including sub-elements of naming, centrality, and experiential commensurability can help to explain NGOs' non-involvement in China.

collective bads⁶⁴⁶ only contributes to explaining why NGOs engage; while technological fear can only help to understand why NGOs do not engage.⁶⁴⁷ In addition, the sense of urgency contributes merely to non-involvement. In terms of efficiency and competition, efficiency contributes to non-involvement as well as limited involvement of NGOs in the UK; and competition contributes to the explanations of both involvement and why they noticed and followed the topic in the first place. In addition, funding, time and goals are the most frequently mentioned elements applying to both types of NGOs. There are variables contributing to only one type of NGO (either involved or non-involved NGOs): public consciousness and importance can only help to explain non-involvement of NGOs in the UK. Furthermore, both involvement and non-involvement of NGOs in the UK can be considered as intentional and the deliberate outcome of strategic choices.

After exploring the reasons in each country, the thesis then focused on a comparative study between the UK and China as well as across different NGOs, which was covered in chapter 8. In detail, policymaking and political preference of government are the two main contingent factors that are responsible for involvement of social movement organisations with GE in both countries. The variables of efficiency and competition under organisational strategy and status work in a transnational comparative study between the UK and China in the context of GE. They are partly responsible for the intentional involvement and non-involvement with GE. The variable of threat, especially the sense of urgency as a reason for threat, is partly responsible for the involvement of movements on

⁶⁴⁶ Text to section 5.3. Collective bads means people are more motivated to join a group to prevent a bad consequence than achieving a good outcome.

⁶⁴⁷ Text to section 7.2.1. People with technological fear have great concerns about the uncertainties and side effects of a new technology, such as GE, and tend to stay clear of it. This can effectively help to explain the non-involvement of NGOs in the UK.

GE in both countries. Furthermore, it helps to explain intentional non-involvement of NGOs in the UK and China. In terms of the variable of goals, it works in understanding different types of NGOs in both countries. It helps to explain both intentional and unconscious involvement and non-involvement with GE. The elements of funding and time helps to explain involvement or non-involvement in both countries, but it is important to point out that they are useful in illustrating intentional involvement and non-involvement in the UK and unconscious non-involvement in China. These conclusions regarding comparison contribute to the existing literature on transnational comparative studies in that, at least in the context of GE, not only political opportunity but also other variables can be useful in understanding social movements in both capitalist and socialist countries such as the UK and China.⁶⁴⁸

In summary, the overall contribution of the thesis is three-fold. It adds to the literature on social movements, interest groups and public policy by concentrating on whether NGOs make strategic choices on becoming involved in GE or not and why. It also contributes to the future governance framework of GE by understanding what may lead NGOs, as a potentially critical part of this framework, to become involved. Aside from this, the thesis makes a contribution in an empirical way by mapping the picture of NGO involvement with GE in the UK and China.

⁶⁴⁸ Other variables include threat from cultural perspectives, efficiency and competition under organisational strategy, goals, funding and time identified from resource mobilisation theory.

9.3 Are NGOs ready to take a role in governing GE?

The thesis addresses the issue regarding the causes of NGO participation in the UK and China in order to understand why NGOs have not taken a role in GE. In this regard, one could move forward a little to consider the question of whether NGOs are ready to take a role in governing GE. This needs to be discussed in terms of the two countries respectively. In order to answer this question, what kind of role is referred to needs to be addressed first. As the basis of discussion in this thesis is in relation to public participation, the role of NGOs will also be considered in this field. That is to say, this section will address the question whether NGOs in the UK and China are ready to take a role in public participation.

Section 2.2.1 focused on a review of the general role of UK NGOs in political and legal processes, and public participation. In terms of improving public participation, NGOs have been a critical facilitator in the UK. In order to foster openness of participation, it is seen as important to let various voices including NGOs be heard at different stages of the decision-making process.⁶⁴⁹ There are two ways of having public voices heard: through individuals directly and via representative NGOs indirectly. According to the report released by the UK House of Lords Science and Technology Committee, there is a difficulty in engaging the public with complicated issues which require sufficient information, as the general level of scientific education in the general public is low.⁶⁵⁰ As the ordinary public often trusts NGOs more than the government, they have been

⁶⁴⁹ Brownsword and Goodwin (n 384).

⁶⁵⁰ Ibi Committee; Brownsword and Goodwin (n 384).

successful in shaping public opinion and mobilizing members.⁶⁵¹ They also contribute to public debates and generate publicity for issues and coordinate or undertake research.⁶⁵² It seems that NGOs not only represent the ordinary public, but also shape and mediate public voices, and can be described as a bridge between the government and the ordinary public. This general mediating role of NGOs in the UK raises a question: are they ready for this role in GE specifically? I will go on to address this question below.

The inspiration for doing this research is identifying a lack of NGO engagement with GE as a policy area in the UK. Therefore the initial hypothesis regarding the role of NGOs is that they did not take a mediating role in governing GE. However, after analysis of the empirical data, it is surprisingly to find out that NGOs in the UK turn out to have played this role, and their non-involvement is actually the result of it. That is to say, NGOs in the UK were strategically using this mediating role by not engaging with GE to prevent the general public from focusing on it. As discussed in section 7.3.2, NGOs being reluctant to talk about GE is a form of ceasing to mediate between the government and the public and avoiding placing attention on GE. They stop mediating by staying clear of GE rather than shaping the debates. Therefore, one could argue that NGOs in the UK were ready, or more precisely, have in fact taken a mediating role in governing GE.

Section 2.2.2 reviewed the role of NGOs in China discussed in the existing literature. With regard to public participation, NGOs have in recent years contributed to making China's

⁶⁵¹ Hilton and others (n 109).

⁶⁵² Nurse (n 115).

environmental governance a more open process.⁶⁵³ They are increasingly contributing to the emergence of a pluralistic civil society and no longer restrict their role to uncontroversial service provision. They thus tend to act as an arena for pluralistic debate. Despite this, NGOs in China are considered, in the existing literature, as lacking both strength and independence to pressure the state to move in a more democratic direction. The overall context for NGOs in China has been discussed in section 6.1: civil society, which has a relatively short history of development, is not mature enough in China compared with that in the UK. Government has shown a contradictory attitude towards NGOs: on the one hand, NGOs' role in providing social services can be considered as a complement to governmental functions in some areas such as caring for the disabled; on the other hand, authorities have fears and suspicions regarding some NGOs which they consider may contribute to social instability and hence, exert a strict control over their activities.⁶⁵⁴ This suspicion can also be illustrated as lack of trust in NGOs and result in a constraint on their development. Different types of NGOs have received different restrictions from the government. INGOs may be afraid to exert pressure on the government for fear of the fact that they could get 'kicked out'. Illustrative of this is that, in early 2017, the Chinese government tightened control over INGOs, which was described as a crackdown against foreign forces.⁶⁵⁵ Domestic Chinese NGOs rely on the government in terms of funding and operations to some extent so that they too may be afraid to exert pressure.

⁶⁵³ Tang and Zhan (n 140).

⁶⁵⁴ Li (n 428).

⁶⁵⁵ Rob McBride, 'New Chinese Law Tightens Control Over NGOs' (2017) <<http://www.aljazeera.com/news/2017/01/china-ngo-law-170101083414954.html>> accessed 1 January 2017.

In this regard, I would argue that NGOs in China are still far away from achieving a mediating role in general as well as in GE specifically. As mediating concerns interactions with the government and the general public, this can be explained in a two-fold way. As discussed above, NGOs in China may not be effective in influencing the government, as they are restricted or need to rely on it. In terms of representing the general public, government-supported NGOs seem to speak for the government and mainly work in areas where the government wants them to; although grassroots NGOs may have more interactions with the general public, they hardly seek to shape the public voices and instead let the voices be heard or taken in by the government unmediated. Therefore, it is challenging for NGOs to play a mediating role in China in general. With regard to GE specifically, according to the analysis of empirical data in Chapter 6, they did not have a role in it. For example, grassroots NGOs did not have any knowledge or information on GE and lack expertise in dealing with scientific issues; government-supported NGOs did not step into the area of GE due to the deficit in GE policy from the government. It may be more challenging for NGOs to take a role in a novel area like GE. However, they now need to start to consider how they can be involved in GE. This is because the on-going National Research Project on GE funded by the Chinese government implies that China has entered into this area. It may require public participation in the decision-making process which NGOs need to be ready for.

9.4 Potential for future work

This research has its originality in exploring the causes of NGO participation regarding GE in the UK and China. It involves empirical elements, namely qualitative interviews, to

provide data for analysis. However, there were some difficulties in conducting in-depth interviews in practice. As mentioned in section 3.3.6, the first aspect of difficulty lay in accessing participants. As the respondents needed to speak for the organisations they represent, it was better to invite directors or staff members with high positions in these groups. Although most of the interviewed respondents were directors in their organisations, there was a difficulty in accessing chief directors in some large NGOs, such as Greenpeace. Another obstacle in approaching potential participants is that, especially in China, people turned down my request for an interview in the first place when they heard about the topic of GE, as they were reluctant to make comments if they had little knowledge on it. It takes time to persuade people to participate to talk about why they do not engage with GE and some still refused to be interviewed in the end. The second aspect of difficulty was conducting interviews in different national contexts as well as a time issue. As mentioned earlier, this research involves a comparison between the UK and China. Due to the different situation concerning GE in the two countries, as well as the different languages required, it was difficult to arrange all the interviews in both countries in a relative short period of time to situate responses in different social contexts. In addition, translating the transcripts of interviews in China required considerable time, and also the accuracy of translation matters when understanding their responses.

Due to the difficulties mentioned above, there is still a remaining issue concerning this research. The access issue and limited time led to a situation that this research was not able to include a large number of respondents. Instead, although I tried to interview as many eligible respondents as I could, it was still relatively a small number of them. However, as

discussed in section 3.3.2, a small-N approach is not a substantial problem concerning interpretivist qualitative studies. An advantage of small number approaches is that they have better internal validity and measurement validity,⁶⁵⁶ which means the approaches allow more in-depth study into what we want to explore.⁶⁵⁷ However, it has problems with generalising, which means the findings cannot be over generalised among all groups in the UK and China. Therefore, the remaining issue is that more NGOs can be included in this research to make a more generalised conclusion, which is likely to be one of my post-doctoral research focuses.

There are also related research areas which can be explored for future studies. My research addresses the role of NGOs regarding GE in the UK and China with a specific focus on the causes of their engagement. In this regard, future research could focus on how they should engage and contribute to GE governance, namely what role they should play in it. This potential research angle will add a normative element to the thesis. Another potential focus might be studies on NGOs in different countries. As mentioned in section 3.3.6, the thesis employs a ‘most-different design’ including the UK and China, which refers to a method examining cases as different as possible to identify similar factors influencing these different cases. Future research could be done within, for example, the US and the UK which are the two leading countries in GE research and public policy, to achieve a ‘most-similar design’ aiming to identify differences between them. There is also a potential

⁶⁵⁶ Internal validity, as opposed to external validity was introduced by Campbell in 1957. Internal validity aims to deal with the question of whether ‘a treatment had an effect in a given study’ while external validity addresses the issue of whether this effect could be generalised. See Campbell (n 272); Reichardt (n 272). Measurement validity relates to the concern whether operationalization ‘adequately reflect the concept the research seeks to measure’. See Adcock and Collier (n 272).

⁶⁵⁷ Baker and Edwards (n 241).

research angle concerning the role of the ordinary public in GE governance. The thesis explored the reasons why NGOs became involved or not in GE as a policy area to contribute to the literature on public participation. Within the area of public participation, previous research has been carried out in terms of exploring public perceptions of GE.⁶⁵⁸ Future research may concentrate on the ordinary public to investigate the causes of their engagement or non-engagement. However, this kind of research typically involves a quantitative element to include a large number of participants, which may require a long period of time.

⁶⁵⁸ Scheer and Renn (n 635).
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