People Protecting Place:

Anti-Fracking Campaigns in the United Kingdom

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Acknowledgements

Abstract

This study is concerned with the anti-fracking campaigns that have emerged in the UK in recent years, and on which only a limited social science literature has been developed. Specifically, this thesis is guided by a particular interest in understanding protest participation with regards to the potential influence of place attachments, conceptualised via Olcese and Savage's (2015) 'social aesthetic', as well as through building on existing literature regarding political opportunity structures. In this, efforts are made to develop a more localised conception of opportunity structures which emphasises the role of (perceptions toward) local authorities who play a key role in the planning process and may similarly oppose the pro-fracking agenda of national government. As such, this research asks*: to what extent do place-based approaches complement traditional social movement theories in understanding the motivations behind participation in anti-fracking campaigns*? In this way, it provides an up-to-date analysis of an issue of contemporary significance, seeking to contribute empirically and theoretically to both the burgeoning fracking-specific scholarship and to the wider body of social movement studies literature.

The themes of interest are examined through a protest event analysis alongside a series of semi-structured interviews with community-based protectors. This event analysis drew on activist sources, recording 1006 protest events across 69 counties for the period between 2011 and 2017. It is found that, unlike national-level opportunity structures, those on the local level are seen to be open to campaigns, yet they have weak output structures given national government's overruling of local authority decisions that run counter to their pro-fracking policy agenda. Regarding place, it is argued that in addition to local opportunity structures, concerns around industrialisation and the loss of an area's valued characteristics have played an influential role in protest participation and that, while not a common theme, glimpses of the social aesthetic have been seen. As such, the ideas offered by Olcese and Savage are maintained to provide an evocative means by which to conceptualise and explore the relationship between people, place and protest.

Keywords

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List of Abbreviations

AONB	Area of Outstanding Natural Beauty
BEIS	Department for Business, Energy and Industrial Strategy
BGS	British Geological Survey
CBM	Coal-Bed Methane
CH_4	Methane
CO_2	Carbon Dioxide
DCLG	Department for Communities and Local Government
DECC	Department of Energy and Climate Change
FoE	Friends of the Earth
GHG	Greenhouse Gas
HSE	Health and Safety Executive
LCC	Lancashire County Council
NIABY	Not in anyone's backyard
NIMBY	Not in my backyard
NSM	New Social Movement
OGA	Oil and Gas Authority
PEA	Protest Event Analysis
PEDL	Petroleum Exploration and Development Licence
PNR	Preston New Road
POS	Political Opportunity Structures
RM	Resource Mobilisation
SMO	Social Movement Organisation
UK	United Kingdom
US	United States

<u>Chapter One: Introduction</u>

Hydraulic fracturing, or fracking for short, is a controversial method for oil and gas production which has entered public debate in the United Kingdom in recent years.[1] Since the Conservatives came to power in the Coalition (2010-2015), the UK Government has consistently promoted fracking as an economic opportunity which can benefit the country's energy security and facilitate the transition to renewable energy (for instance, Bomberg, 2015; Cotton et al. 2014). Currently, shale gas and coal-bed methane development is in the exploratory stage following the granting of exploration licences in late 2015, with sites in Lancashire and North Yorkshire targeted specifically for fracking treatments. That said, moratoriums were passed in Scotland and Wales in the same year and followed shortly after by the executive in Northern Ireland. Recently, in October 2017, a full ban was instigated by the devolved authorities in Scotland. As such, England is currently the main focus for exploratory work.

Such developments are not going unopposed, however, and it is the anti-fracking campaigns that have emerged in response which are of interest to this research. Specifically, this study is guided by a question that asks: *to what extent do place-based approaches complement traditional social movement theories in understanding the motivations behind participation in anti-fracking campaigns*? Accordingly, it aims to understand how ideas of place influence community-level participation through drawing on the notion of the 'social aesthetic' conceptualised by Olcese and Savage (2015) which emphasises the importance of individual's embeddedness and embodiment within landscapes in informing their identity, attachments and behaviour. Moreover, it has a secondary interest in exploring the importance of political opportunity structures on the local level through the idea of the local state. These aspects, like anti-fracking campaigns more generally, have not received much in-depth attention from scholars and thus remain underdeveloped within the existing literature, with much of the emphasis currently placed on examining the surrounding discourses and general public opinion (Bomberg, 2015; Howell, 2018). This research, therefore, aims to contribute to both the anti-fracking and wider social movement studies literatures by building upon a sociology of place and aesthetics.

To explore this, a protest event analysis and series of nine semi-structured interviews with some of those involved in local campaigns has been conducted. This interview data was then thematically analysed in relation to the various strands of social movement theory considered here, namely the resource mobilisation, political opportunity structure and new social movement approaches, in addition to the social aesthetic.

Given the nature of fracking and the debate surrounding it, this research is necessarily an up-to-date study of an issue of current political significance. With this in mind, this project seeks to generate new insights into place-based anti-fracking campaigns in the context of the UK where significant gaps in the academic scholarship remain. As such, it is argued that by examining protector[2] motivations and campaigns through the methodological approach outlined alongside a novel theoretical perspective, this research can contribute meaningfully to the burgeoning body of literature on the anti-fracking movement in the United Kingdom.

This dissertation is organised as follows: firstly, the next chapter will place this work firmly within the development context as it currently stands in the UK. Within this, the government approach to fracking, what this extractive process entails and what some of the key concerns surrounding the industry are according to academic literature will be discussed. This will then lead into a discussion of local contexts across the UK. Following on from this, attention will be turned to the understandings of anti-fracking campaigns presented in the existing scholarship, gaining insights into the types of people who are involved in campaigning, as well as why they decided to participate and what protest forms different campaigns have adopted. This will be the basis for the discussion in Chapter Three.

Concerning itself with presenting the theoretical underpinning for this work, Chapter Four will focus on some of the key aspects which form the common theories of social movement research noted above, outlining how previous scholars' work can be drawn upon to aid in understanding anti-fracking campaigns and their participants. Beyond this, it will also introduce and argue for the inclusion of the social aesthetic and the local state in producing such an understanding.

In a change of focus, the methodology employed for this research will be detailed in Chapter Five. Here, both the academic debate and the procedure followed in this work will be considered in-depth, covering both the protest event analysis and conducted interviews. Drawing on data collected through the content analysis, Chapter Six will introduce and justify the five selected case study areas. Once these case areas have been examined, themes identified from the interview data are introduced and related to the chosen theoretical perspectives in Chapter Seven, the analysis of which forms the preoccupation for the following chapter.

Finally, regarding opportunity structures, the conclusion will be reached that the local level differs from the national in that it offers greater points of access and is seen to be more receptive to protector concerns. While this is the case, local authorities are simultaneously found to produce uncertainty around their position on fracking, something compounded by their comparably weak output structure given national government's ability to overrule decisions that oppose fracking and, therefore, run counter to national policy. In terms of place, it is found to be an important influence on protest participation in UK-based anti-fracking campaigns due not only to local opportunity structures, but also to the threat that fracking and any subsequent industrialisation of landscapes poses to how local areas are understood, engaged with and valued by residents. While within this the idea of the social aesthetic does not emerge as a prominent theme, glimpses of what Olcese and Savage (2015) discuss are found within the data and so it is argued to remain an evocative and potentially useful way of conceptualising the relationship between people, place and protest. Greater context to this study shall now be given.

Chapter Two: Context

With declining domestic energy production and a subsequently increased reliance on imports, shale gas and fracking have received increasing attention as a potentially viable domestic resource for use in the UK. The questions must therefore be asked as to what shale gas is and what the process of fracking involves, both technically and in terms of potential environmental and social impacts. Further, consideration should also be given to the current regulatory and planning context in the UK. As such, this chapter seeks to address these issues by providing important background into the more technical and geological aspects of shale gas development, and the possible concerns that could be raised as a result. Following on from this, detail will be given about the regulations that are in place to govern the development of the shale industry in the UK, as well as about recent planning decisions to allow exploratory wells to be drilled and fracked in the country. Before this, however, the wider national policy issue and the position of fracking within this will be considered.

The National Policy Issue

Under the Conservative-Liberal Democrat Coalition (2010-2015) and continuing into the Conservative majority government under both Cameron and May, fracking has been consistently supported and promoted as an important opportunity for the UK (Carter and Clements, 2015; Cotton et al. 2014; more recently Vaughan, 2018).[3] Such a commitment has been expressed through the rhetoric around the want for the country to 'lead the shale gas revolution', as echoed by Cameron's statement in which he declared that he was 'going all out for shale' (Cotton et al. 2014; Keeler, 2016). More specifically, shale gas has been presented positively as a way in which the UK can: address energy security concerns emerging from declining North Sea oil production and increasing reliance on energy imports by developing a domestic supply; reduce gas prices (Stevens, 2013); create jobs within and ancillary to the industry; help host communities economically through directly sharing revenue generated from frack operations (UKOOG, 2016); and develop a 'bridge' between fossil fuels, of which shale gas is held to be the least polluting in terms of carbon dioxide (CO_2), and

renewable energy sources (in general, BEIS, 2017; Rudd, 2015; also the discourse storylines identified by Bomberg, 2015; Cotton et al. 2014).

To elaborate on this potential by taking the example of energy security and supply, through a study conducted by the British Geological Survey (BGS) an estimated 1300 trillion cubic feet of shale gas is believed to potentially exist in the Bowland-Hodder shale area under northern England (Andrews, 2013). Although the exact figure will remain unknown until exploration occurs, if recoverable this sizable amount of gas may help to allay some of the energy concerns held by the government and alter recent projections published by the UK's Oil and Gas Authority (OGA). Currently, the OGA's energy projections are such that a significant decline in domestic oil and gas production is expected in the period up to 2035, with a corresponding increase in import dependency (OGA, 2016);[4] hence the government's cause for concern and promotion of shale as a useful domestic resource that should, in their judgement, be developed.

What is Shale Gas?

While the resource estimate for shale gas is significant and the government's position clear, the question remains as to what shale gas actually is.[5]

First of all, shale is a finely layered sedimentary rock comprised of a mixture of clay and other minerals alongside organic matter (Andrews, 2013; Stephenson, 2015; Zoback et al. 2010). While it can be found at many different levels including on the surface, for gas exploration shale rock layers at depths between 1500 and 4300 metres are of particular interest (Andrews, 2013; DECC, 2013a). Regarding gas reserves, which are for the most part methane (CH_4), these are formed from the organic material as it is put under pressure from above rock layers and subject to high temperatures (Andrews, 2013; Stephenson, 2015).

Given shale has low permeability, any gas that does form is trapped within the rock making it unable to move freely (AEA, 2012; Andrews, 2013; Stephenson, 2015). As a result, gaining access to shale gas is not as straight forward as drilling for more 'conventional' reserves.

The Process of Unconventional Resource Extraction [6]

As the gas within shale formations is harder to extract than other energy sources with it not being possible to drill down into the rock and tap directly into the reserve, it is referred to as being 'unconventional' (Stephenson, 2015; Younger, 2016). In order to release the gas, the shale rock layers need to be fractured (broken up), and there is a particular way in which this can be done.

In terms of the process, once the well pad is set up a well is drilled vertically and may then also extend horizontally through the shale rock layers below. When it is in place underground the production casing – the final casing in the well – has holes created in it using small explosives which allows access to the surrounding shale formation (Stephenson, 2015; RS and RAEng, 2012). At this point, frack fluid is pumped into the well at high-pressures (as high as 10,000 pounds per square inch in some operations) to fracture the rock (Gullion, 2015; Stephenson, 2015). While its exact composition may vary, this frack fluid is normally comprised mainly of water (approximately 95 percent) but also includes a proppant such as sand to keep the fractures open once they have been created, as well as some chemicals to aid in the fracking process (AEA, 2012; Stephenson, 2015; Younger, 2016). These chemicals are used, amongst other things, to reduce friction through the well and prevent the build-up of bacteria or scale in the casings (Stephenson, 2015; Vengosh et al. 2014; Younger, 2016). It is this process of injecting fluid into the well that is known to the industry as hydraulic fracturing.[7]

Once the fractures have been created, the pressure injected through the well is reduced and the natural pressure exerted from above rock layers helps to bring any gas up through the well to the surface, although the actual extraction of any reserves may take a few days to begin (Stephenson, 2015). In the meantime, some, but not all, of the frack fluid returns to the surface in what is called 'flowback'. Besides flowback, 'produced' water which originates from the areas around or within gas and oil reserves may also come to the surface (AEA, 2012; Holloway and Rudd, 2013). That which returns often contains certain quantities of (potentially harmful) chemicals, minerals and/or radioactive material, and is either disposed of or treated for future use (AEA, 2012; Rabinowitz et al. 2015; RS and RAEng, 2012). Once production fully begins a shale gas well can last for around ten to twenty years, but often with notable annual declines in production (AEA, 2012; DECC, 2013a).

Since early tests in the 1940s, the techniques and technology used for fracking have developed considerably to be something quite modern, making natural gas extraction from shale economically viable (Hawkins, 2015; McGowan, 2014; Willow et al. 2014). It has more recently been used in the UK for conventional reservoirs both on and offshore by the oil and gas industry in Scotland (Younger, 2016), as well as briefly in England in 2011 (Hawkins, 2015). According to The Royal Society and Royal Academy of Engineering (2012), over the last thirty years approximately 200 conventional onshore wells have been fracked in the UK. Outside the UK, fracking has been banned or is subject to a moratorium in various European countries such as France, Germany, Ireland, Denmark and elsewhere, including in some US states (see Krause and Bucy, 2018).

Possible Concerns

While contention exists, the literature on the technical aspects of fracking discusses some of the possible issues that could arise at various points throughout the extraction process, particularly regarding water contamination, emissions and seismicity. It is these that will now be considered.

First of all, concerns may be raised that domestic water supplies could become contaminated as a result of frack operations, specifically focusing on the chemicals used in the frack fluid, some of which can be toxic, the methane released throughout the process and other materials that are collected and form part of the flowback or produced water that can similarly be harmful (Hays et al. 2015; Vengosh et al. 2014). Some of the literature highlights ways in which contamination is more likely to occur, one of these being about the length of the fractures as they extend upwards. This could be understood to pose a risk to water supplies should they extend upwards enough to connect with either more permeable rock layers or an existing network of fractures in shallower formations (Osborn et al. 2011), allowing contaminants to travel towards freshwater aquifers, or connect with the aquifers themselves. However, this is held to be questionable by Stephenson (2015) on the grounds that even if the created fractures are long (normally extending no more than 600 metres; Vengosh et al. 2014), the depths at which fracking takes place (≥1500 metres) results in a sizable distance

between fractures and aquifers making it unlikely that they will connect (RS and RAEng, 2012).

Holloway and Rudd (2013) discuss how a greater likelihood of contamination occurring is posed by the potential for cracks to appear in the cement used to fill the gap between the well casings and the surrounding earth, or from casing failures, rather than from the process of fracking itself (also RS and RAEng, 2012). If cracks such as these do occur, the frack fluid and methane could escape up along the sides of the well and into the exposed rock layers and aquifers, possibly resulting in contamination (Holloway and Rudd, 2013; Stephenson, 2015; Vengosh et al. 2014). To illustrate this, in their study of water samples from 141 drinking water wells in Pennsylvania, Jackson et al. (2013) suggest that issues with well construction were the most likely cause of the higher-than-average levels of methane found in samples taken from water wells within one kilometre of natural gas drilling sites. Moreover, records of the frequency of well casing and/or cement failures demonstrate that they are common to the oil and gas industry, shale gas developments included (see Vengosh et al. 2014).

On a related note, however, it should be highlighted that methane can naturally occur near the surface and aquifers so it can be difficult to determine whether any methane found in water supplies is a direct result of fracking and issues of well integrity (Stephenson, 2015). To elaborate, this is to do with there being two different types of natural gas found in the environment, these being biogenic and thermogenic. Thermogenic is produced deep underground through pressure and heat, and is that contained within the shale layers identified for development (Andrews, 2013; Holloway and Rudd, 2013; Stephenson, 2015). Biogenic on the other hand is formed by bacteria and organic decay closer to the surface, including in places such as bogs and landfills (Andrews, 2013; Holloway and Rudd, 2013; Stephenson, 2015). While normally found far underground, thermogenic gas may also be present near the surface without fracking taking place through the presence of natural seeps and fractures in the earth which allow it to escape upwards (Holloway and Rudd, 2013). The two forms are distinguishable, including through the presence of other hydrocarbons such as ethane and propane which are more indicative of thermogenic gas (Jackson et al. 2013; Osborn et al. 2011).

Although Stevens (2013) observes that most of the more technical and scientific literature holds fracking-associated issues to be avoidable, contention does still exist over whether these issues, particularly around water contamination and methane emissions, have occurred as a direct result of shale gas development. For instance, upon analysis of samples taken from 68 water wells in Pennsylvania and New York in areas which overlie the Marcellus and Utica shales, Osborn et al. (2011) found concentrations of methane in 85 percent of the samples. These concentrations were found to be significantly higher where samples were collected within one kilometre of a natural gas drilling site, accompanied further by ethane and propane indicating that the gas concentrations were thermogenic and originated from the shale gas deposits being developed. Samples gathered from beyond one kilometre away from drilling sites had lower methane concentrations of either a biogenic or mixed biogenic-thermogenic nature. Based on this data, the authors suggest that the higher concentrations of thermogenic methane in water wells closer to natural gas extraction sites demonstrates that contamination of domestic water supplies does occur as a result of shale gas exploration (Osborn et al. 2011; see also Jackson et al. 2013; Vengosh et al. 2014).

These findings, however, were subject to critique. Molofsky et al. (2011), for instance, emphasise the role of the study area's geology behind gas being present in water samples, a result of its natural migration through a pre-exiting network of fractures unrelated to fracking. This has in turn been critiqued with arguments that while geology does play a role, fracking has still contributed to the higher than normal levels of gas in water supplies, potentially through well casing failures, as indicated by the significant differences in methane concentrations within one kilometre of an active site vis-à-vis those farther away (Vengosh et al. 2014).

Continuing with methane, another issue that is subject to debate is the release of fugitive emissions throughout the extraction process, with uncertainty existing over how much methane could – or does – get released into the atmosphere (MacKay and Stone, 2013; Stephenson, 2015). This is a particular concern regarding climate change as methane is a more potent greenhouse gas (GHG) than CO_2 (AEA, 2012; Hays et al. 2015; MacKay and Stone, 2013; McGowan, 2014). As with the literature examining water contamination, similar contention

exists between scholars who investigate the potential links between fracking and emissions. For instance, some demonstrate that this link undermines arguments that shale gas could act as a bridge fuel (see Howarth et al. 2011; Howarth, 2014) while others state that fracking's GHG contributions are negligible (Cathles et al. 2012).

Finally, turning attention to seismic activity, concerns are mainly either in relation to the high-pressure injection of water and/or the frack fluid acting as a lubricant for fault lines, particularly due to the disposal of wastewater down specially designated wells (Gullion, 2015; Hays et al. 2015; Holloway and Rudd, 2013).

This issue of frack-induced seismicity was illustrated by two tremors measuring 2.3 and 1.5 magnitude respectively, as recorded near Blackpool in 2011. These tremors occurred in the hours following test frack operations with the BGS placing the epicentre around 500 metres away from the well site itself (DECC, 2014). This event led the UK Government to temporarily suspend drilling pending research into the incident (Cotton et al. 2014; Davey, 2012; Hawkins, 2015). Reports concluded that it was likely that fracking was the cause of the tremors with the site at Preese Hall being close to a fault line (see Green et al. 2012), thereby demonstrating that some degree of correlation exists between fracking and seismic activity, at least under certain conditions (Hawkins, 2015; Stephenson, 2015).

UK Policy Context

While it is the opportunities that are promoted by the government, some consideration has still been given to the issues that may arise from shale gas development. In 2011, for instance, available data was evaluated by the Energy and Climate Change Select Committee which concluded that fracking does not pose any particular threat to aquifers so long as the wells are constructed properly (DECC, 2014), relating possible issues specifically to well integrity and thereby echoing Holloway and Rudd's (2013) perspective. The point was further made that the issues and risks surrounding well integrity are no different from those associated with conventional wells and extraction processes (DECC, 2014), this view also being reflected by Holloway and Rudd.

In terms of how the industry is to be regulated, and given how the main risk of water contamination is understood to be posed by well construction and integrity, proposed well designs are to be examined by an independent third party as well as by the Health and Safety Executive (HSE). The HSE is the body with the main responsibility for monitoring sites to check whether operations are being conducted as planned and in line with relevant safety regulation, including through periodic site inspections (DECC, 2014; HSE, 2015, no date). Beyond this, the chemical composition of the frack fluid to be used must be disclosed to the Environment Agency, the primary environmental regulator for England, or to the relevant body in Scotland, Wales or Northern Ireland prior to use (DECC, 2014).

These actions are listed within The Infrastructure Act 2015 as requirements that must be met before the Secretary of State can grant consent for hydraulic fracturing to take place, appearing alongside others governing the monitoring of methane in groundwater prior to fracking beginning and the need for sufficient arrangements to monitor methane emissions during operations (The Infrastructure Act, 2015), potentially helping to minimise the contribution of shale gas to national GHG emissions and climate change (MacKay and Stone, 2013).

Finally, as a further requirement under Section 50 of The Infrastructure Act 2015, a statutory instrument was introduced in which 'protected groundwater source areas' were defined. Through this, fracking cannot take place at depths less than 1200 metres below an area where water is abstracted for use (see The Infrastructure Act, 2015; The Onshore Hydraulic Fracturing (Protected Areas) Regulations, 2016), arguably addressing concerns around the possible contamination of domestic water supplies. It is in part because these and similar regulations are in place that the Department for Energy and Climate Change (DECC) and the Energy and Climate Change Select Committee have both seen no need for a blanket moratorium on fracking in the UK (DECC, 2014).

However, it should be noted that in a study of the UK regulatory system for fracking, Hawkins (2015; also Stevens, 2013) raises concerns over the existence of gaps in the current approach. As part of her discussion Hawkins points to, amongst other things, the inexperience of regulators in dealing with the fracking industry. This is not held to be the case by the government which sees, as stated above, the issues that may result from fracking as being no different to those

related to conventional operations of which regulators are knowledgeable and for which the current regulatory framework is suitable (for instance, Lang, 2014). This can be related to a more general claim made by the author that as regulations are seen to be adequate, the risks associated with shale gas development are considered to be lower than they perhaps are in reality (Hawkins, 2015; also Hays et al. 2015).

Interestingly however, the HSE recognises that while they have sufficient knowledge and resources to cover the exploratory stage, their capabilities will need to be reassessed should large-scale production ensue (HSE, 2015). Moreover, although the Department for Business, Energy and Industrial Strategy (BEIS) holds that regulations are currently adequate, it too acknowledges that this position will need to be reviewed periodically as the industry develops (BEIS, 2017).[8]

To further highlight these perceived inadequacies, Hawkins also points to the way in which it was only after test drilling in Blackpool resulted in tremors that regulations for seismic activity were introduced. These include: a traffic light system whereby if certain tremor magnitudes lower than those experienced in Blackpool are recorded either a reduction in or cessation of frack fluid injection is required (Davey, 2012; DECC, 2013b; Stephenson, 2015); a requirement that seismicity is monitored before, during and after any frack operation; and a further impetus placed on operators to recognise local fault lines in an effort to reduce the likelihood of disturbing any that may exist (Davey, 2012). In short, although they are now in place to minimise the risks of frack-induced seismicity occurring, regulation in this case was reactive (i.e. insufficient) rather than proactive.

Either way, prospective shale gas development areas have been located through various studies conducted by the BGS for DECC (for instance, Andrews, 2013; DECC, 2014) with northern England being the predominant area identified alongside smaller areas in southeast England and in Scotland (see Figures 2.1 and 2.2 below). It should be noted that in 2015 the Scottish Government introduced a moratorium in Scotland on the development of unconventional oil and gas, including fracking, pending research into the potential impacts of such developments and a public consultation on the matter (Scottish Government, 2015; 2017a). At the start of October 2017, and following over 60,000 consultation responses of which 99 percent were reportedly in opposition to the

industry, the devolved executive imposed a ban on fracking within Scotland (Scottish Government, 2017b).

In terms of the UK Government, following recent shifts the portfolio concerned with shale gas development was incorporated into that of BEIS, with DECC that was once responsible becoming defunct. In the same manner as DECC, BEIS works with the OGA and others on the development of on and offshore resources; the OGA holding responsibility for auctioning Petroleum Exploration and Development Licences (PEDLs) (BEIS, 2017). PEDLs allow companies to carry out a range of exploration and development activities pertaining to both conventional and unconventional oil and gas resources, although they will also need to be granted relevant environmental permits from the Environment Agency to undertake these activities (Davey, 2012; DECC, 2014; HSE, 2015). Yet, while it is in their remit to provide licences to companies, whether any form of drilling can take place on the licenced sites is the decision of local planning authorities, not the OGA, BEIS or the Environment Agency (DECC, 2014; HSE, 2015).

The areas identified in the 2013 BGS/DECC study are not the only ones identified in the UK with interest also being shown elsewhere, including in Wales and Northern Ireland. In both of these countries applications to begin exploration of shale gas potential were submitted to the relevant local authorities. However, no drilling took place for various reasons including, for instance, complications arising as part of the planning process in Northern Ireland for a site in Belcoo, County Fermanagh, where one exploratory borehole was proposed (Henderson, 2017; Tamboran Resources, 2014). Moreover, like Scotland, Wales passed a moratorium on fracking-related activities in 2015, halting any planned industry development. In the same year, Northern Ireland's executive also expressed a reluctance to allow fracking to take place in the country, instigating a ban until concerns around the risks associated with the practice can be allayed sufficiently (Williamson, 2015). As a result, England, and the north specifically, remains the focal point for the development of the industry and, subsequently, of protests.

Figure 2.1: Shale Gas Study Areas (OGA, 2017).[9]

Figure 2.2: Prospective Shale Gas Development Areas (OGA, 2017).

Local Context [10]

To elaborate on the decisions that specifically permit fracking to take place, in Lancashire Cuadrilla submitted planning applications to begin exploratory drilling of shale gas reserves at both their Preston New Road (PNR) and Roseacre Wood sites for consideration by the county council in 2014 (see Cuadrilla, 2014a, 2014b). What Cuadrilla proposed was for both exploration sites to comprise of up to four individual wells, each to be hydraulically fractured with the intention of assessing whether natural gas from shale may be commercially viable in the area (Cuadrilla, 2014a, 2014b). At PNR, surface operations would extend over approximately seven hectares of land, with the wells being drilled to a depth of around 3500 metres and horizontal drilling expected to take place at depths between 1500 and 3500 metres depending on local geology, and extending up to 2000 metres in length; hydraulic fracturing would then take place and the flow of gas tested (Cuadrilla, 2014a). In the case of Roseacre Wood, these figures are slightly lower overall (Cuadrilla, 2014b). Should production prove to be viable, further planning permission would be sought to conduct further activities at the sites (Cuadrilla, 2014a). If not, the wells would be plugged and abandoned, with the sites being restored to how they were prior to well construction; namely back to agricultural land (Cuadrilla, 2014a, 2014b). These exploratory works are predicted to last for just under six years (Cuadrilla, 2014a, 2014b).

Prior to well pad construction and in line with regulations, sizable monitoring works would be built around the site to measure seismicity and the quality of groundwater both before exploratory drilling takes place, establishing local baselines for each, as well as during and after any operation (Cuadrilla, 2014c, 2014d; DECC, 2013b). These ancillary projects help demonstrate the intensive nature of shale gas development.

Upon consideration by Lancashire County Council's (LCC) Development Control Committee in mid-2015, the decision was made that planning permission for exploration works on both sites be refused (LCC, 2017).[11] The committee reached its decision to reject these applications on the basis of, for PNR, concerns around how any development may result in the industrialisation of the landscape and increased noise levels, impacting negatively on local residents, with this remaining true for this site's monitoring plans (LCC, 2015a, 2015b). For Roseacre Wood, LCC held that the volume of HGV traffic necessary for the exploration

works to take place would overburden the local road network and affect other road users to an unacceptable degree (LCC, 2015c, 2015d).

In response, Cuadrilla lodged appeals against the refusal of planning permission for both sites. On the basis that these developments and the planning decisions in turn are deemed to be of importance which stems beyond the local level, the Secretary of State for Communities and Local Government chose to determine the appeals as permitted under the Town and Country Planning Act 1990 (DCLG, 2016; see Town and Country Planning Act, 1990).[12] As such, the appeal for the exploration works at PNR was allowed and planning permission granted in October 2016 (DCLG, 2016). No final decision was made for exploration at Roseacre Wood, with time given for the submission of further evidence regarding the issues of site traffic and highway safety, as these concerns were shared by the Secretary of State (DCLG, 2016). With this, the Secretary of State is minded to grant the appeal should satisfactory evidence allaying existing concerns be presented (DCLG, 2016), a revised proposal since being submitted by the company at the end of 2017 for consideration at another inquiry held in April 2018 (Cuadrilla, 2017a; Hayhurst, 2018a).

Meanwhile in May 2016, North Yorkshire County Council granted planning permission for Third Energy to conduct hydraulic fracturing at their site – KM8 – near Kirby Misperton (North Yorkshire County Council, 2016). With regards to the operation itself, KM8 consists of one vertical well with fracking planned at depths between 2000 and 3000 metres (Third Energy, 2015).

Interestingly, unlike others this site has been used since the mid-1980s for conventional gas exploration and production, with the well now identified for fracking drilled in 2013 as part of an expansion (Third Energy, 2015). As such, and also unlike other sites, there is more of a direct discussion around beginning production immediately following initial fracking and tests to determine the site's commercial viability (Third Energy, 2015). Based on analyses of core data collected from the site, the total life of the project if found to be commercially viable is anticipated to be around nine years (Third Energy, 2015).

At time of writing,[13] there are further movements to develop shale gas and coal-bed methane (CBM) sites across the UK. In addition to the above, for instance, two exploratory sites were granted planning permission in Nottinghamshire in

November 2016 and March 2017 respectively (IGas, 2016; Nottinghamshire County Council, 2016, 2017), with a second company, INEOS, having similar intentions in neighbouring Derbyshire and South Yorkshire (for instance, INEOS, 2017a, 2017b). Moreover, although not mapped by the BGS/DECC study referenced above, PEDL licences have also been granted in other counties, including Somerset where there are yet to be any planning applications (for a full map of recently licensed blocs, see OGA, 2017).

Finally, wells were drilled in Greater Manchester and Cheshire by IGas in 2014 to explore CBM and shale formations (without fracking treatments). These sites are currently inactive with collected samples from the Cheshire site undergoing evaluation to determine the commercial viability of the underlying gas-bearing coal seams and shale rock layers. Analysis of core samples collected from Greater Manchester has already been completed. The results from these analyses will be used to inform IGas' future operations in the North West, providing a greater picture of gas potential in the region, with any new activities potentially involving the use of fracking for further exploration (IGas, 2017a, b).

Summary: Fracking and the UK

The process of hydraulic fracturing is just one element in the development of shale gas, but it is one which may give cause for concern through water contamination and other issues which remain subject to debate within the more technical and scientific literature. It is the opportunities presented by shale gas and CBM however that are the focus for the UK Government, highlighting the possibilities for the economy, energy security and emission reductions. As such and in line with central government's agenda, prospective shale gas areas have been identified and planning permission granted for numerous exploratory drill sites, some of which include wells designated for fracking. With this context now established, consideration should be turned to understanding opposition to fracking; namely to anti-fracking campaigns and the insights that can be gained from the existing literature.

Chapter Three: Literature Review

While campaigns against the development of shale gas in the UK have emerged along with the industry, they have also been witnessed across Europe and America in recent years with these contexts becoming the focus for various research projects. As such, this chapter seeks to provide an up-to-date review of the scholarship concerned with anti-fracking campaigns in both the UK and elsewhere. In so doing, it will analyse the understandings of these campaigns produced by the literature with regards to their composition, the key issues they raise and their activities. Moreover, it will seek to provide a deeper understanding of these areas by drawing upon a wider literature to supplement that with a focus on fracking. Specifically, studies examining opposition to wind energy siting and the UK anti-roads protests will be incorporated into the discussion.

First of all, with regards to the anti-fracking campaign scholarship in general, the papers reviewed here were found to be published largely within the last five years, demonstrating the contemporary nature of the issue. In addition to this, studies drew on a range of cases including from the United States, the Netherlands, Romania and the United Kingdom. With regards to the specific focus of each paper, research has been conducted into: the use of Twitter as a platform for activists to build a collective identity internationally (Hopke, 2015); the discourses promoted by UK-based pro- and anti-fracking coalitions (Bomberg, 2015); as well as general public perceptions of fracking (Howell, 2018) and the influence of protest on this (O'Hara et al. 2013). That concerned with the UK context, such as research by Bomberg (2015) and Szolucha (2016), provides insights into the discourse used in the fracking debate as well as the attitudes of local residents and protectors. As of yet, there is not much explicitly focused upon why people choose to protest, nor on the various features of existing anti-fracking campaigns. With these foci in mind, what can the literature tell us about the campaigns themselves?

Who Campaigns?

Through examining some of the literature on social movements, it is not uncommon to find understandings of those who campaign on environmental issues to be based around their being part of a 'new' middle-class comprised broadly of well-educated professionals (Cotgrove and Duff, 1980; Eckersley, 1989; Rootes, 1992). In efforts to account for this, scholars have drawn attention to why this societal group may have a greater concern for environmental issues and a greater propensity to protest about them. Notably, Cotgrove and Duff (1980) discuss the ways in which the particular occupations of this 'environmentalist' section of the middle-class influences their views about society. Specifically, through survey data which collected responses from environmentalists, identified through environmental group membership such as to Friends of the Earth (FoE), as well as members of the general public in Bath and Swindon in the UK, the authors found that while awareness of environmental issues such as pollution or resource shortages was similar across the observed groups, the values associated with how these issues are understood were seen to vary significantly.

To elaborate, those identified as environmentalists were found to attribute a greater urgency to environmental issues while also expressing a greater scepticism towards science, technology and industrial actors. Deeper than this, many were seen to oppose the dominant values and ideologies present within modern society which emphasise material factors such as the economy over post-material aspects which stress the importance of society, participation and the like. In this, they may be seen to fall more on the left of the political spectrum. From this basis and through identifying those who are in the service sector incorporating health, education and the arts, the authors suggest that these occupations which are based on the provision of non-material, non-economic and non-market services and values places their class interests in opposition to those of wider society which are based on more economic and material concerns.

In a slightly later paper, Eckersley (1989) has a similar purpose, discussing at length the suggestions made by other scholars, including that related to the increasing concern for post-materialist quality of life issues of which environmental problems and their knock-on effects for health and wellbeing, for instance, come to the fore. In Eckersley's case, the author is keen to emphasise

the role that education within a particular generational context plays in informing behaviour, with this more radical, environmentally-conscious middle-class benefitting from a greater understanding of environmental issues and the wide-ranging effects they can exhibit.

In sum, this new middle class which has been found to be dominant in the environmental movement could be typified according to their more professional, potentially socially-productive occupation, a high level of educational attainment and worldviews that emphasise post-material values in contradiction to those commonly promoted by an economic, market-oriented society. But, how do the particular characteristics of these atypical 'environmentalists' relate to the research that has been done on anti-fracking campaigns?

While studies concerned with anti-fracking protectors do give indications as to generic occupations or particular group memberships, such as to religious organisations, little would seem to discuss the specifics of those involved, including educational attainment and employment status. To an extent, however, it is possible to see research in which the commonly discussed demographic features of the 'environmentalist' would seem to remain prevalent. For instance, in her study of anti-fracking protectors in the Barnett Shale area of Texas – a place which has seen significant fracking activity in recent years – and through drawing on data collected through 20 in-depth interviews with key, publicly-identifiable protectors alongside attendance at town hall meetings, Gullion (2015) identifies that fracking-related concerns and opposition is notably witnessed among those who have relative financial security (Gullion, 2015; Obach, 2015). It is in this context however that the author also talks of 'reluctant activists' (2015:110). Specifically, Gullion defines these activists as those who are part of a white, well-educated middle class – in other words, similar to the group commonly cited as being more likely to be concerned with environmental issues – but who may consider themselves to be more conservative, or at least not to be 'environmentalists', with no prior engagement in any form of protest. Despite this, and for whatever reason, they campaign against fracking in their communities (Gullion, 2015).

This is a general observation shared by Obach (2015) in his discussion of the anti-fracking campaign seen in New York state. Not only was there a strong presence of environmental groups and local communities – who remain largely

undefined – protesting against fracking and its potential impact on water supplies in the state, but political and economic elites also opposed shale gas development including numerous businesses and a former mayor of New York City. This again reinforces the idea that anti-fracking campaigns are comprised, at least in part, by those on a more stable economic grounding and who may be considered to belong to the middle-classes, but again does not identify these individuals as being concerned with post-material values as a result of either their occupation, income or education. That said, in the case of Obach there is rather questionably no discernible methodology nor engagement with scholarship or other sources within the article. As such, it is not clear where the information the author presents was gained or how the arguments were subsequently developed.

While these shortfalls exist, Obach's general observation about the involvement of business (or 'material') interests in opposition to fracking can be corroborated as entrepreneurs are also among those found to oppose fracking in a study conducted by Rasch and Köhne (2016) in the Netherlands. The authors' interest was centred on how people understand and relate to energy issues, discussing this with regards to notions of citizenship and fracking. With this focus and through combining a year-long participant observation in addition to a series of 32 unstructured and semi-structured interviews with local campaigners and politicians, the authors identified entrepreneurs as having economic interests that may be negatively impacted by the presence of fracking in their local area (see also Eckersley, 1989). For instance, the presence of fracking may damage their unique product image or 'brand' where it is tied to the quality of the surrounding natural environment (also Szolucha, 2016). Besides this group, local politicians and residents near proposed drilling sites who again do not necessarily consider themselves environmentalists and may fall into Gullion's category of 'reluctant activists' were also found to raise concerns or grievances about the development of the shale gas industry (Rasch and Köhne, 2016).

Similarities are shared between the types of participants in the Dutch experience and that of a large protest held in West Sussex in 2013. Opposed to the decision to permit drilling to take place in Balcombe,[14] a wide range of actors including 'farmers, environmentalists, church groups, Members of Parliament (MPs) and local residents' turned out (Bomberg, 2015:4). Opposition like that shown in Balcombe was further found to extend beyond political divides and party

affiliation, as it has done in France (Keeler, 2016). Further still, and although a greater elaboration is not presented, in their study of Romanian anti-fracking campaigns Vesalon and Creţan (2015) found the conservative Orthodox Church to be involved with attempts to mobilise local populations against the industry. From the detail provided by the scholarship to date, it would seem far from clear whether anti-fracking campaigns have a narrowly defined membership constrained only to those who fit previously common understandings of participants, or whether they enjoy involvement from a wider cross-section of society as well.

In summary, it has been common for studies of social movements to highlight key demographic features broadly shared by participants, namely that they tend to be part of an educated, professional middle-class, potentially concerned more with post-material values and of a more broadly left-wing political persuasion (Cotgrove and Duff, 1980; Eckersley, 1989). Regarding anti-fracking campaigns, this understanding would seem to have some degree of continued significance. However, while there is support for this common conception, those participating also seem to have a focus on material concerns and have demonstrated, to an extent, a lack of willingness to protest against environmental issues in general, as demonstrated by findings of limited or no campaigning experience. This suggests that those individuals studied in previous research would appear to lack some of the key characteristics and the radical streak associated with them by certain scholars (as notable from the work of Gullion, 2015).

Motivational Factors

The concept of NIMBY ('not in my backyard') can and has been evoked as a means to explain why people protest against developments in their local area. Within this, people are understood to acknowledge the general benefits of a technology or facility, but would prefer the physical siting to occur away from where they live. It is, simply, about wanting the benefits of a development without the burden of associated costs. In other words, the concept of NIMBYism portrays locals as acting according to their own rational self-interest which informs how they perceive proposed developments. Protests against siting are, therefore, not about the development *per se* but about the costs that such a development in

their area would impose on them, without similar concern for others who may have to bear costs (Wolsink, 1994, 2006).

Drawing on anti-roads scholarship, while it can be argued that local groups opposed road-building primarily from NIMBY concerns, opposing the route the road would take and the subsequent impacts upon their own 'backyard' rather than the road itself (North, 1998; Robinson, 1999), some authors have suggested that this was not the whole case. Upon examining local opposition to the construction of the M77 in Scotland, Robinson (1999) finds that while initially NIMBY, through interaction with the more radical 'eco-protestors' and participation in direct action, including by establishing their own protest camp, residents became more aware about the wider implications the road would have upon the environment. As a result, some locals began to question why the road was needed and began to think about alternative solutions such as increased funding for public transport. While the locals did not begin to ascribe to the counter-cultural lifestyle promoted by the eco-protestors (North, 1998), Robinson argues that there was a shift from a narrow NIMBY standpoint to one which began to incorporate aspects of the eco-protestors' NOPE ('not on Planet Earth') attitudes. In other words, local groups may not always be persistently or wholly NIMBY in their outlook.

In not too dissimilar a manner, Vesalon and Creţan (2015) found that anti-fracking campaigns in Romania may not fully reflect the NIMBY perspective either. For instance, while local campaign groups did oppose fracking in their area due to concerns around the potential impacts upon their water supplies, health and property values, they also began to demonstrate opposition to the privatisation of natural resources amongst other things. Through this, Romanian protectors incorporated a wider, non-location specific argument into their protests. As a result, the authors suggest that while it may be suited to explaining opposition elsewhere, the Romanian case does not fit the NIMBY label. Although, with regards to the wider literature specifically focused on anti-fracking groups, not much discussion exists around potential NIMBYism.

The NIMBY label is not without its critics, however. One such criticism comes from the work of Wolsink (1994, 2006) in which he argues that the term fails to capture the complexities behind local opposition to facility siting. Instead, the use of NIMBY is understood to represent a dismissal of locals' concerns on the basis

that their opposition stems primarily if not exclusively from self-interest. The argument proposed by the author is that while residents may well oppose developments that occur in their own areas, they may also oppose that specific type of development (drilling for shale gas, the use of waste incinerators and so on) in general no matter where it is sited due to concerns around subsequent environmental impacts, for instance. In this sense, they can appear more as NIABYs – not in *anyone's* backyard (Wolsink, 1994; also Neville and Weinthal, 2016). Moreover, even though communities may accept the benefits that can be generated from developments, like with renewable energy, their opposition may be born out of the deeper significance that the local landscape holds for them and for the values that are imbued within the area, and not solely out of a rational calculation of costs and benefits (Wolsink, 2006; see below).

Some of these critiques are reflected in a study of attitudes towards offshore oil drilling in California which drew on extensive survey data collected in two different years. Michaud et al. (2008) find that NIMBYism, measured according to proximity to developments, was not a significant factor and that opposition was more grounded in wider environmental concerns exhibited by individuals sharing some of the common features of environmentalists, defined above.[15] On this basis, the authors offer a tentative suggestion that NIMBYism better reflects changes in political activism rather than in opinion, with local siting mobilising those who already hold negative views towards a particular technology or process.

Finally, in a study of fracking, associated risks and public perceptions in the US and UK, as examined through a series of one-day deliberative workshops with a range of tasks and stimuli, Partridge et al. (2017) found that the majority of participants expressed concerns that go beyond their own respective immediacies to explicitly incorporate the potentially negative impacts on the lives of future generations, including through climate change and continued reliance on an unsustainable fossil fuel-based energy system. As such, these workshop participants would also seem not to fit the NIMBY label.

In sum, what can be argued from such a critique of the NIMBY label is that local groups who oppose certain developments in their area may do so out of a range of wider and perhaps deeper concerns or perspectives, and such reasons warrant greater consideration. Building from this understanding, an attempt will now be

made to examine some of these reasons through the insights presented by both the fracking and wind energy-related scholarship.

Health and Wellbeing

First of all, as demonstrated by some of the literature presented in Chapter Two, fracking has been associated with increased levels of methane in domestic water supplies. Linked to this, residents in (proposed) development areas have been found to express concern regarding this and related pollution stemming from the industry's practices, with their and their family's health and wellbeing forming a key issue and reason for opposing development. Amongst studies of communities situated near shale gas development sites, it is possible to find instances where residents have reported a range of health implications, from skin and respiratory conditions such as rashes and asthma, to headaches, nosebleeds and, in some cases, cancer (Eaton and Kinchy, 2016; Gullion, 2015; Rabinowitz et al. 2015; Sangaramoorthy et al. 2016).

Drawing on qualitative methodologies, research by both Sangaramoorthy et al. (2016), which had more of an explicit focus on health, and Willow et al. (2014) find that residents who live close to frack sites in West Virginia and Ohio, US, respectively report these kinds of health impacts. For interviewed residents in Ohio, complaints of headaches and nausea were made, the symptoms following soon after the commencement of fracking nearby (Willow et al. 2014). For Willow et al. in their study of activist, NGO and government perspectives on energy development based on a two-year long participant observation and series of 19 open-ended interviews, concerns around family wellbeing was found to be prevalent among grassroots activists. In the neighbouring state, residents participating in Sangaramoorthy et al.'s two focus groups discussed how they, or at least people they know who live in close proximity to shale gas wells, have begun experiencing sore throats and rashes amongst other ailments (see also Rabinowitz et al. 2015).

Meanwhile, in the town of Flower Mound in Texas, US, where shale gas is being extracted, the Department of State Health Services conducted a statistical investigation into local cancer rates, finding notably higher levels of breast cancer within the local population when compared to elsewhere (Gullion, 2015). This was

reiterated by a local activist interviewed by Gullion (2015) who highlighted not only the high number of breast cancer cases in the town, but the notable occurrences of leukaemia as well. While acknowledging difficulties in understanding exactly what health impacts, if any, are attributable to the development of shale gas, these studies would indicate that some degree of correlation may exist. Either way, it is clear that such a connection has been introduced as part of the anti-fracking discourse employed by opponents of the industry (Gullion, 2015).

In addition to this, given residents' uncertainties about the industry and how it may affect their lives, including in terms of noise and health, studies have shown that one of the most notable impacts of shale gas development, whether current or proposed, are the subsequently high levels of stress and anxiety people experience (Sangaramoorthy et al. 2016; Willow et al. 2014). With a lack of information about the actual health implications of fracking and with a debate present in the technical literature, making a direct connection between reported impacts and proximity to developments is difficult to establish (Finkel and Hays, 2013; Short et al. 2014). Therefore, the high levels of stress and anxiety people have experienced are perhaps the clearest health impact attributable to fracking presented in the scholarship.

Although developments can potentially affect people's health in these ways, such impacts can further influence how the wider environment is understood. This is expressed by Willow et al. who claim that 'anti-fracking activists now look upon a landscape they once appreciated for recreational and [a]esthetic reasons as a harbinger of illness, traumatic stress, and anxiety' (2014:62). What this quote encapsulates is the idea of aesthetics and connections to the (natural) environment which can change as a result of unwanted development, further linking to arguments about emotional and/or physical displacement. These are further aspects which may generate opposition to development.

Aesthetics and Place Connections

Within the scholarship, studies have suggested that cost-benefit analysis is important in informing people's decisions as to whether or not they protest against a particular local development. As such, depending on how the land is viewed and engaged with, development may actually be welcomed. For instance, farmers may hold a more utilitarian understanding of the environment and see energy development as furthering the ways in which they use the land and its resources (Petrova, 2013; Willow et al. 2014). In this way, such development can also be seen positively as providing an economic opportunity which can supplement agricultural incomes, create growth and/or provide employment, lessening people's motivation to protest against perceived grievances in different socioeconomic contexts (Eaton and Kinchy, 2016; Petrova, 2013; on fracking see Szolucha, 2016; Whitmarsh et al. 2015).

This does not mean those who view developments positively are not concerned about negative consequences, but that they may see the costs as being necessary trade-offs. This is what Eaton and Kinchy (2016) found from interviews with residents in shale gas development areas in Saskatchewan, Canada, and Pennsylvania, US, arguing that because of conflicting views about the industry's presence in their communities many remain 'ambivalent' and do not tend to openly raise their grievances. Moreover, it should be noted that perceptions of development are not static but can change over time, as shown by the 'u-curve' identified in wind energy research in which support can be high initially, reduce when actual siting occurs, and then increase again after experience living next to the development (see Petrova, 2013).

Such reasoning may be extended to a consideration of aesthetics also. To elaborate, due to the construction of well pads that can extend over two hectares of land (DECC, 2013a), vertical drill rigs and specially created access roads for site traffic required for shale gas exploration and production, the environment necessarily changes (Hays et al. 2015; Holloway and Rudd, 2013; Short et al. 2014). This resultant physical change to the visual aesthetic of the landscape could arguably play a role in influencing individuals to oppose development. While this is not elaborated on by fracking-based literature, it is possible to draw on scholarship concerned with wind energy to better understand this perspective. Specifically, this standpoint is related to the way in which energy developments,

based on their characteristics of size, colour and so on, do not 'fit' within the landscape according to an understanding of its idealised, picturesque form, the permanency of which may be seen to be interrupted by newly constructed turbines (Brittan, 2001; Pasqualetti, 2000; Nohl, 2001). With this view, these developments are opposed, put simply, due to them being 'ugly' and unnatural (Brittan, 2001:171).

However, literature on opposition to wind energy begins to suggest that there is more than just an appreciation of the picturesque element of landscapes that influences how people respond to local developments. For Brittan (2001), dislike of wind turbines comes more from a deeper understanding of landscapes and wildlife that stems from knowledge about the interconnections that have developed between the two. There is, as Brittan puts it, a 'harmony' that can be seen in the natural environment, but it is one that developments may disrupt. Further, whereas the natural environment can be engaged with in a variety of ways, turbines are conceptualised as 'devices' which by their nature are disengaging (except visually) and serve only a functional purpose (Brittan, 2001; also Nohl, 2001).

The work of Nettleton (2015) helps to clarify the ways in which landscapes may be engaged with beyond the visual. In her study of fell runners and aesthetics in the English Lake District, Nettleton argues that the manner in which runners move through the landscape gives them a particular understanding of the environment. This understanding differs from the more detached connection gained through a visual appreciation of the picturesque, instead being more immersive with engagement extending to the body as a whole through their specific use of movement. The author argues that such engagement grants the runners a 'unifying experience' in which they become part of the landscape rather than just observers of it (Nettleton, 2015:770).

What Nettleton contributes to is the particular conceptualisation of the aesthetic proposed by Olcese and Savage (2015). As will be elaborated upon in the following chapter, this 'social aesthetic' emphasises people's everyday embeddedness and interactions with the place in which they live, as well as the particular meanings and values that come to be attributed to these landscapes and to the self through this process of engagement.

This reinforces Brittan's (2001) point that aesthetics is not solely about the visual and, by extension, demonstrates how individuals can have greater connections to their local environment. The relationship between people and the environment can be further conceptualised through the ideas of place attachment and place identity. While different definitions have been attributed to these terms (Manzo, 2003), in general they build on the notion of 'place' as being about not only the physical elements of a location, but also of the emotional, social and/or symbolic meanings attributed to it by people which can help develop a particular sense of identity (Devine-Wright, 2009). In an attempt to understand how these factors influence responses to place change, Devine-Wright (2009) returns to the NIMBY literature arguing that there are greater psychological motivations behind locals' 'place-protective' actions.

Specifically, Devine-Wright links these concepts to that of place disruption, when change threatens place attachment and identity. What this discussion entails is mention of the ways in which disruption can emphasise the latent linkages between person and place, potentially resulting in emotional reactions including feelings of anxiety and loss from both actual and proposed developments (also Groves, 2015).[16] As introduced above, it is these kinds of feelings that have been found among those living in communities in and around shale gas development areas. Moreover, disruption is further held to have the ability to lead to displacement and detachment from local areas (Devine-Wright, 2009). This is again something that was expressed by the interviewees in Willow et al.'s (2014) study, with individuals demonstrating how such displacement can be emotional and/or physical as the connections they feel they have with the surrounding environment, along with its particular characteristics of rurality and quietness, is weakened by the industry's (forthcoming) presence (see also Sangaramoorthy et al. 2016).

Furthermore, regardless of whether they support the industry or not, agricultural landowners in part of Pennsylvania have discussed the ways in which the industry's presence has made significant changes to their connections to the land and their family heritage in the area, the latter found to form a 'genealogical landscape' key to locals' identities (Perry, 2012:86). More than this, Perry (2012) discovered that the rapid change brought about by shale gas developments emphasised the importance of the landscape and these familial histories within it

to residents, subsequently contributing to deep feelings of loss. These negative feelings, taken alongside the increased division and bullying within communities which stemmed from differing standpoints on fracking, are argued by the author to represent an instance of 'collective trauma', understood along the lines of Erikson who defined it as 'a blow to the basic tissues of social life that damages the bonds attaching people together and impairs the prevailing sense of communality' (Erikson cited in Perry, 2012:89).

In this, an individual's propensity to protest against developments locally may extend beyond a rational, cost-benefit analysis approach, instead being rooted in something deeper such as their emotional attachments to place and a particular embodied aesthetic which informs and influences their everyday life within their communities, and which could be understood to be under threat from planned developments. This perspective is further developed in Chapter Four as a cornerstone of the theoretical basis from which this research begins.

Democracy

It is not just the (potential) outcomes of development that can result in opposition, but also the decision-making process involved (Devine-Wright, 2009; Petrova, 2013). In this way, procedure becomes another area of contention. Broadly, this relates to the extent to which the public and local communities are informed about and allowed to participate in development decisions. This is encapsulated by the 'bad governance' frame identified by Bomberg (2015:11) in her study of pro- and anti-fracking discourses in the UK. This frame widens the debate around fracking to incorporate criticism of the policy and/or planning process with the view that it lacks transparency and accountability to those who will ultimately be affected, an issue further examined by Whitton et al. (2017) who highlight the need for greater participatory decision-making around fracking in the UK and US as a way to ensure procedural fairness and justice.

This chimes with Ohioan's experiences with shale gas development where residents reportedly encountered difficulties in accessing information about plans to frack in their local area and what the process involves (Willow et al. 2014). Some locals were also found to hold the development of the industry with the associated environmental and health impacts it brings as infringing on their rights,

not least to live in a clean environment (Willow et al. 2014; see also Sangaramoorthy et al. 2016; Short et al. 2014). Others further made the criticism that politicians had been 'bought out' by the industry to support its interests over those of the communities they represent (Willow et al. 2014:60; also Sangaramoorthy et al. 2016). Based on these findings, Willow et al. identify ideas around 'disempowerment' as a key theme emerging from their research, leading them to conclude that 'Many grassroots activists…now see the environment as a site of disempowerment, injustice, and violation' as a result of development-related procedures (2014:62).

It also relates to the experiences of the anti-roads protests in the UK, as analysed by North (1998), where campaigners had engaged in planning processes and public inquiries about roadbuilding in their area for 20 years to no avail. As such, once these democratic channels were closed and road construction began despite extensive opposition having been expressed, many of those opposed to the road began a direct action campaign as a means to continue their objection.

In 2011, opposition to fracking in France highlighted the lack of public consultation in the granting of exploration licences the year before, as such consultation was not legally required for exploration-stage development (Keeler, 2016). Adding to protectors' procedural argument is that the quietness with which the government made the decision to grant licences was in contradiction to existing legislation and programmes aimed at ensuring the public is consulted on decisions which could affect the environment. In this way, a degree of hypocrisy on the part of the government was perceived (Keeler, 2016).

Most recently, through interviews with residents and councillors alongside personal experience of planning meetings about fracking-related decisions in Lancashire, Short and Szolucha (2017) witnessed a bias towards the gas industry. This is documented by a lack of consideration being given to evidence against fracking and by councillors being informed that refusal of planning applications would result in them breaking the law and being liable for any legal fees brought about by subsequent appeals from the industry. This bias, as well as the interference from the central government which is keen to push fracking, were among the issues raised by interviewees, many expressing feelings of powerlessness, anger, fear and betrayal as a result of the planning process.

What the above discussion demonstrates is that there exists a diverse range of reasons behind why individuals may oppose shale gas and other developments in their local area and beyond. Such reasons include concerns around health, aesthetics, place attachment, identity and subsequent disruption, as well as issues regarding the wider decision-making processes involved, thereby extending beyond the narrow assumptions that lie behind the NIMBY label. Yet, while it is important to understand who is involved in campaigning and why they may choose to participate, it is just as necessary to understand how they campaign.

How Do They Campaign?

While campaign repertoires are frequently only listed in the scholarship, providing little or no elaboration as to what the specific outcomes of activities were, they are found to be quite diverse. Amongst the activities covered, organising petitions, writing open letters, as well as engaging with local officials seem to be quite common (Gullion, 2015; Neville and Weinthal, 2016; Obach, 2015; Vesalon and Creţan, 2015). In addition, distributing information to the public about the issues associated with fracking is another activity campaigns are involved in. This is held to be particularly true by Rasch and Köhne who claim that 'knowledge construction and dissemination plays a key role' in campaigns (2016:114), this being achieved through holding and/or partaking in local meetings (Gullion, 2015; Smith and Ferguson, 2013), as well as through advertising new academic publications about shale gas on social media platforms (Rasch and Köhne, 2016). Through engagement with communities in this way, Rasch and Köhne hold these activities to help broaden support for anti-fracking campaigns by not only raising awareness of the issues around fracking, but also by presenting the campaign itself as not being about left-wing activism as it may be perceived, something that not all who are involved would like to be associated with (see, for instance, Gullion, 2015 and the above discussion of who campaigns).

To expand on the use of social media, a study into the use of Twitter during the 2013 Global Frackdown day of action provided insights into how it is used by protectors (Hopke, 2015). To elaborate, Global Frackdown is an annual day of action aimed at demonstrating opposition to fracking and building links between

campaigns which sees events take place on the international level, with actions reportedly occurring across more than 20 countries when it was first held in 2012 (FoE, 2013; Food and Water Watch, 2017). In this context, it was found that anti-fracking groups tweeted to update others of events taking place in real-time as part of the day of action. Moreover, rather than aiming to communicate with a wider audience, Hopke (2015) further found that the use of Twitter was more about building links between campaign groups, showing support, highlighting issues with specific people (like tweeting the US President's official Twitter account) and strengthening a sense of collective identity. Interestingly, through five interviews with those involved in organising transnational movements and/or European anti-fracking groups, the author found that other online methods of communication such as subscription email lists are the preferred means for building campaigns in the longer term (Hopke, 2015).

Another way to communicate and raise awareness of the risks associated with fracking, this time with the public, has been to hold screenings of the oft-cited documentary film *Gasland* which conveys to its viewers the galvanising imagery of individuals living close to fracking operations setting their tap water alight, amongst other things (Mazur, 2016; Vesalon and Creţan, 2015).[17] This film was found by Rasch and Köhne (2016) to be an important source of information about shale gas development for many people in the Netherlands. Further, in a study concerned with how cultural artefacts such as film influence discourse and mobilisation, Vasi et al. (2015) use the frequency of mentions of terms including 'Gasland' and 'fracking', as recorded by Google Trends, Lexis Nexis and Twitter activity between 2009 and 2013, to suggest that interest in fracking peaked around the time of *Gasland's* release in 2010, supporting other scholars' claims regarding the impact and influence of the film's particular imagery. The authors also find that, on the local-level, screenings of *Gasland* coincided with a notable increase of anti-fracking events in that locality, although this mobilising influence occurred only in the short-term (Vasi et al. 2015). That said, it is unlikely that the film on its own was responsible for periods of campaign prominence and latency, with much work on the diverse range of factors that can influence (de)mobilisation having been undertaken by scholars of social movements, as will be considered in the next chapter.

Besides the above, some instances of direct action have also been observed in the literature. This includes demonstrations held outside official buildings such as Parliament or embassies in the UK (Bomberg, 2015; Vesalon and Creţan, 2015) as well as attempts to disrupt fracking operations by standing in front of site traffic (Gullion, 2015). In addition, a camp comprised of tents and barricades was established near a site in Pungeşti, Romania, in 2013 following the granting of a licence for exploratory drilling (Vesalon and Creţan, 2015). Here, over 500 local residents partook in order to prevent Chevron, the energy company licensed to drill, from transporting its equipment to the site. In this case, the police frequently intervened and, in the end, the company was able to move its drilling equipment to the site gradually despite the camp's presence (Vesalon and Creţan, 2015).

Scholarship on the UK Context

While the literature cited above provides insights into anti-fracking campaigns and sentiments in different contexts, it does little to create an understanding of fracking and protest in the United Kingdom. As such, scholarship specifically focused on the UK will now be considered and will therefore help to better situate this study within the existing body of research.

Proponents of fracking, such as central government and the industry itself, promote shale gas as an opportunity for the economy and improved energy security, while also assisting with the transition to renewable energy sources (Chapter Two). These standpoints have been established through the work of Bomberg (2015) and Cotton et al. (2014) in their respective studies of the discourses surrounding fracking in the UK (similarly, Jones et al. 2013; Neil et al. 2016; Williams et al. 2017; also Howell, 2018; Whitmarsh et al. 2015 on survey analysis of general UK public perceptions). By employing similar methodologies broadly involving an analysis of news articles and how fracking is portrayed by government, NGOs and the industry, both projects shared similar findings as to the perspectives that form anti-fracking discourse in the UK.

What these scholars find is that understandings of risk are one of the key areas of contention. Far from being a safe and well-regulated practice, fracking is argued to pose threats to water, air and health through contamination and emissions. These emissions are further held to form a second core issue area

relating to fossil fuel usage and the contribution fugitive methane emissions from shale gas development will have towards climate change. As fracking centres on fossil fuel extraction, concerns around the potential for shale gas to divert investment away from renewables as part of a continuing reliance on fossil fuels are also found to be common. This is understood to counter the proponent argument which promotes shale gas as a bridge or transition fuel facilitative of a shift to alternative, cleaner energy sources. The final area found relates to the previous discussion of procedure with a lack of transparency and community participation in decision-making processes identified as another issue surrounding fracking. Such arguments from both proponents and opponents are not unique to the UK but can be commonly found across the fracking-related scholarship.

Moving beyond discourse-oriented studies, there are recent publications that have a more specific focus on residents in Lancashire and the concerns that exist around fracking in the county. One of these, based on contributions to the public inquiry into Cuadrilla's planning appeals, examines the existence of social, legal and political licences for the company's operations in Lancashire, concluding that, for many of the aforementioned concerns, a social licence to frack does not exist and nor does a political licence from local authorities. Given national government's support for fracking, Cuadrilla is deemed to hold a political licence on this level, as well as a legal licence based on granted PEDL and environmental licences and (eventual) planning permission for their PNR site (Bradshaw and Waite, 2017).

In addition, and as discussed above, Short and Szolucha (2017) focus upon the planning process involved in the decisions for Cuadrilla's PNR and Roseacre Wood sites as well as the resulting harm that has been caused to participating residents. Specifically, on examining the process the authors found there to be clear bias within the Planning Officer's report on the impacts of the proposed developments in favour of the industry. This was accompanied by legal and political pressures exerted upon LCC's planning committee through, as previously mentioned, central government's commitment to the industry's development and advice to councillors that a refusal of planning permission would have consequences.

It is based on this understanding of the process that residents have expressed feelings of powerlessness as their concerns are not addressed through formal channels, leading them to experience an 'emotional rollercoaster' involving stress, anger and depression (Short and Szolucha, 2017:6). Following Perry (2012), Short and Szolucha (2017) go onto claim that these experiences of the planning process have resulted in residents' collective trauma as their lives and communities are disrupted through development.

These insights were gained from first-hand experience of planning meetings and an analysis of planning documentation, as well as from semi-structured interviews with local residents and councillors involved in the process. This data, at least in part, was drawn from another study conducted by Szolucha (2016) examining the social and psychological impacts of fracking in Lancashire, arguing the need for a greater consideration of these factors in decision-making through social impact assessments.

To elaborate, this research was based on a 12-month participant observation involving attendance at planning meetings, inquiry hearings and anti-fracking group meetings. Further to this, a series of 28 semi-structured interviews was conducted with local residents and councillors, some of whom were active within anti-fracking groups. These interviewees were identified through snowball sampling. The report itself centres on six main interconnected themes: health and wellbeing; community impacts; policing and intimidation; democracy; community-industry relations; and gender (Szolucha, 2016).

Much of what Szolucha finds is in keeping with the general literature discussed above. For instance, regarding health many interviewees report experiencing significantly high levels of stress and anxiety through their involvement in anti-fracking campaigns and/or the planning process. There is a feeling among residents that the industry's presence and the subsequent demands on their time 'has taken over their lives' (2016:33). In some cases, locals' mental wellbeing has put undue strain on their familial and neighbourly relationships as well. This strain is further related to the differing perspectives held by individuals regarding Cuadrilla's operations in the area, creating divisions within the community which has resulted in some instances of verbal confrontation, property damage and theft (Szolucha, 2016; see also Perry, 2012 on bullying in Pennsylvania).

This division is used to highlight how fracking and its changes to landscape is also an issue of belonging. To elaborate, in Lancashire residents were found to value the landscape more as they became involved in the planning process to oppose Cuadrilla (Szolucha, 2016). For these locals, the proposed developments are seen as being invasive both visually and in terms of the associated risks (on health and area character due to water, noise and light pollution specifically). What Szolucha goes on to suggest is that the disruption development will have upon the area will contribute to people's alienation and departure from the county. Such damage to individual's connections to the area and the emotional consequences of this are further held by the author to be potentially exacerbated by the greater attachment realised through involvement in the planning process, linking back to Devine-Wright (2009).

In addition to enhancing people's sense of belonging to the area, residents in Lancashire also discussed how their involvement in the planning process has further changed their view of democracy in the UK. Despite the lack of social licence and the county council's refusal of planning permission, central government's intervention through the appeals process is seen to undermine local democracy and demonstrate the ways in which the government does not listen to or respect their concerns. Instead, it is seen to promote the industry's interests first and foremost, leading to a sense of disempowerment (Szolucha, 2016; also Bomberg, 2015).

Interestingly from a protest perspective, most of the residents Szolucha interviewed expressed a willingness to participate in or at least support direct action against fracking in the area should it continue to expand. Of those who have already joined campaigns, there is a perception that the way protests are being policed is excessive, both in terms of police presence and aggression, and is more in the industry's interest than out of a concern for protector rights. Further, the policing of protest also has a gendered element, with female protectors in Lancashire telling of how the behaviour of male police officers towards them has been sexualised (Szolucha, 2016). This manner of policing was also found at protests against exploratory drilling for CBM at Barton Moss in Salford, Greater Manchester (Gilmore et al. 2017).

It is this protector experience of policing that forms the focus for Gilmore et al.'s (2017) study examining the incorporation of revised police policy into practice.

Through 28 interviews with those involved in the Barton Moss protests and the local protection camp, alongside information from court proceedings and police FOI requests, the authors argue that the newer rights-sensitive dialogue approach to policing protest through establishing communication with protectors legitimises the older coercive policing methods taking, in this case, the form of mass arrest (for an expanded discussion see Gilmore et al. 2017).

While the interest of this paper is on police tactics, it does give some insight into the perceptions and actions of protectors at the site. In particular, it discusses the community-organised and non-hierarchical protection camp which was in place for the entire period of drilling activities (November 2013 – April 2014), as well as the twice daily slow walks of site traffic four days each week. It also provides insightful protector/resident accounts of policing as disproportionate and violent, aimed at disrupting rather than facilitating protest through mass and pre-emptively targeted arrests with subsequent bail conditions excluding individuals from the area around the drill site. In addition, interviewees discussed the way in which police behaviour was intimidating and contributed to increased levels of stress and anxiety which, for some, put strain on their finances and relationships (Gilmore et al. 2017). This again reflects the findings of non-UK specific research.

What Szolucha (2016) and Gilmore et al. (2017) both demonstrate is that the presence and policing of fracking in the UK, along with the associated individual and community impacts discussed, has created an 'atmosphere of conflict, distrust and intimidation' (Szolucha, 2016:76). These studies also introduce some of the attitudes held by local residents towards nearby gas developments, some of whom have direct experience of anti-fracking campaigns. However, given their respective foci, neither study provides a more detailed account of why individuals are motivated to participate in protest, nor do they examine the range of activities held by anti-fracking groups. There are, therefore, clear gaps within the existing literature to which this research can speak.

Summary: Opposition to Fracking Across Contexts

A great amount of diversity within many aspects of anti-fracking campaigns in the US and Europe is apparent from the literature. Inter-connected concerns ranging from health and identity to the undermining of democracy have helped to galvanise individuals and communities to openly oppose fracking in their areas. These campaigns have attempted to engage with local residents and decision-makers through various meetings and petitions, whilst also seeking to inform others of the potential impacts of fracking. Further to this, demonstrations have been held with some taking to direct action to voice their concerns, establishing camps to disrupt drilling operations and raise awareness.

What this chapter also demonstrates however is the current and somewhat limited extent and depth of research into anti-fracking campaigns specifically, including their organisational features, the stage of the planning process at which they emerge and who becomes involved. Moreover, the question as to how the issues, individuals and campaign methods discussed in the wider literature are reflected in the UK context remains largely open. Although the studies of Szolucha (2016), Gilmore et al. (2017) and others go some way to address this, it is argued here that by examining protector motivations and campaigns this research can contribute meaningfully to the burgeoning body of literature on the anti-fracking movement in the United Kingdom. In so doing, and through the place-based approach adopted in this research, it may also contribute to various facets of social movement theory, as will now be introduced.

Chapter Four: Social Movement Theory and Aesthetics

A social movement is defined by Diani as a 'network of informal interactions between a plurality of individuals, groups and/or organizations, engaged in a political or cultural conflict, on the basis of shared collective identity' (1992:13; also Diani and Bison, 2004) – features which will be considered below – and they have enjoyed much focus from scholars both empirically and theoretically. As such, a sizable body of research which aims to develop social movement theory exists with the purpose of providing a means to produce insights into various aspects of movements, including how and why they emerge, what organisational forms and strategies they adopt, as well as what factors contribute to their survival or decline over time, and it is this literature that forms the focus for this chapter. Specifically, the study of social movements has been dominated by three broad strands of thought, these being: resource mobilisation (RM), which emphasises the role of organisational structures and resources behind protest; political opportunity structures (POS), which highlights the importance of the wider political context in influencing when and how protest is conducted; and new social movements (NSM), which theorises about the role of collective identity.

This chapter intends to introduce the key aspects of these approaches, discussing their respective contributions to the understanding of protest and movements. In so doing, the limitations of each will also be detailed alongside the particular approach taken by this research. Specifically, while the insights that can be gained through resource mobilisation, political opportunity and new social movement approaches will be applied, to address the limitations each demonstrates regarding the understandings that are produced, this chapter is particularly interested in developing a more localised conception of POS whilst also drawing upon another subdiscipline of sociology, namely that concerned with aesthetics. As such, a case for the inclusion of the 'social aesthetic' and 'local state' in efforts to understand why and how people participate in movements will be presented for application in later chapters.

Resource Mobilisation

Early scholars of social movements emphasised grievances and the relative deprivation between societal groups in their explanations of why mobilisation occurs (Abeles, 1976; McPhail, 1971). However, following critiques of these understandings and in response to the emergence of 'new' social movements, characterised by a concern for wider, non-economic issues such as the environment in the 1960s (Johnston, 2014; Rootes, 1992), renewed efforts to understand movements were made, the first considered here being resource mobilisation.

RM approaches centre around the internal characteristics of movements and the important roles that group resources, broadly defined, play in movement emergence and participation (Kitschelt, 1986). These resources can include money, personnel and particular skills or expertise, but has also been widened to incorporate a consideration of legitimacy and networks amongst other features (Crossley, 2002; Edwards and McCarthy, 2007; Saunders, 2013). Within these perspectives, social movements are understood to require some degree of organisation in order to gain and effectively utilise resources to achieve their aims, hence the literature's focus on social movement organisations (SMOs) (Crossley, 2002; Edwards and McCarthy, 2007; McCarthy and Zald, 1977). Accordingly, SMOs seek to collect resources to sustain their existence and, therefore, attempt to influence others to participate in their group. It has been suggested that their efforts target 'adherents' who are sympathetic to movement goals but do not currently provide support to the SMO, attempting to influence them into becoming 'constituents' or, put differently, those who provide resources (Crossley, 2002; McCarthy and Zald, 1977). In attempting to do so, they must compete or cooperate with other organisations who also seek to gain resources from the same pool of potential constituents (Crossley, 2002; Saunders, 2013).

This requirement to receive the support of these individuals further influences the particular organisational form adopted by SMOs and the means by which they attempt to access resources. For instance, McCarthy and Zald (1977) offer the hypothesis that SMOs may rely and invest more on media advertising to disseminate information about movement goals and successes where their constituents hold only loose ties to the organisation. These 'isolated' constituents therefore represent a less stable flow of resources compared to those who are

more closely connected to the SMO through existing networks (also Edwards and McCarthy, 2007; Jenkins, 1983). The importance of networks as producing stronger ties between individuals and movements can also be understood through the wider concept of structural availability which, similarly to RM, highlights how recruitment potential and access to resources can be heavily influenced through the use of the (informal) networks individuals are embedded within (for instance, Klandermans and Oegema, 1987; Saunders et al. 2012; Schussman and Soule, 2005).

While remaining key to the RM approach, the stress placed on resources is also the focus for criticism with scholars highlighting how the concept remains poorly defined within the literature, rendering it a catchall phrase which can lack the ability to provide valuable insights into movement organisation and activities (Saunders, 2013; Soule et al. 1999). Beyond this malleability, a perceived overemphasis on organisations and formal structures has also been raised by critics who question the central role of organisational structure to movement actors.

Such a contrary view can be found in the work of Flesher Fominaya (2010) which, being based on a three-year-long participant observation and 32 interviews with campaigners, examined anti-globalisation groups in Madrid. From this study the author highlights how these 'autonomous' groups, characterised by a non-institutional, participatory outlook and form, emerge and develop in the absence of formal structure. In this, particular attention is drawn to the 'assemblies' in which activists of different persuasions, opinions and wants are brought together, providing a horizontal or non-hierarchical space which allows them to interact, address differences and make decisions regarding group goals and strategies. These critiques have provided the basis of calls for a greater consideration of more cultural or agential factors such as emotions and ideology to be incorporated into the study of movements (Ferree and Miller, 1985; Jasper, 2010), as will be elaborated on below.

This focus on SMOs and their attempts to spur participation however leads onto a second key point, namely that RM approaches conceptualise individuals as rational actors who engage in a process of cost-benefit analysis before committing to any form of participation in a social movement (Saunders, 2013, amongst others), and this can further be related to ideas around biographic

availability. This concept, found within the wider social movement theory literature, draws attention to demographic features such as income, employment and familial status which can impose additional costs and, therefore, constraints upon participation, reducing the likelihood of their involvement (Saunders et al. 2012; Schussman and Soule, 2005).

Based on this understanding, some scholars discuss how participation can be gained through SMO use of incentives as a way to increase the potential benefits individuals could garner through involvement. Specifically, these incentives may take the form of material gains such as through financial offers, or non-material, contributing to a particular identity or sense of being and solidarity (Jenkins, 1983; Klandermans and Oegema, 1987; Saunders, 2013). In this way, the issue of freeriding where individuals stand to benefit from others' participation but bear none of the costs of involvement themselves can begin to be addressed (Cohen, 1985; Jenkins, 1983; Saunders, 2013). This line of argumentation has also been subject to critique with the conception that individuals are predominantly rational actors who base their decision-making according to a cost-benefit analysis held not to give an accurate account of the factors that can influence individual behaviours which can extend to more subjective and agency-related motivations such as feelings and emotion (Saunders, 2013; Saunders et al. 2012).

To provide an example of how this perspective has been applied, Soule et al. (1999) draw upon some of the key aspects of RM in their study of the women's movement in the US to test its explanatory value. Specifically, the authors consulted documents pertaining to relevant hearings and votes within Congress between 1956 and 1979 in an effort to understand the relationship linking movements to social and political change. In so doing, they find that, although not always significant, in general the number of women's SMOs increases instances of collective action, leading them to suggest that organised resources do exert some degree of influence on whether mobilisation is successful. Further to this, the changes brought about by the gradual incorporation of women into the labour force and the corresponding sense of empowerment and increased access to resources was found to be the most notable influence on Congressional activity regarding women's issues, again lending some support to the stress placed upon resource access by RM scholars.

Overall, resource mobilisation perspectives argue that mobilisation is dependent not only on the availability of resources such as money and people, but also requires a degree of organisation to access and make use of these resources, hence the literature's focus on SMOs. In attempts to access the resources necessary for their continued existence and efforts to attain defined goals within a competitive environment, these SMOs adapt their particular organisational form and strategies to target specific groups of adherents and constituents, and may try to appeal to them through providing incentives for their participation on the understanding that individuals are rational actors or, alternatively, may make appeals to emotion through what Jasper and Poulsen (1995; also Jasper, 1998) term 'moral shocks'.

These shocks involve the use of particular images to convey certain resonant frames and meanings which are evocative of strong emotions such as outrage. As such, the authors suggest that these can help movements recruit from beyond their existing networks, as can be seen in the case of animal rights where imagery of innocent, suffering and humanised animals has been used and found through surveys with protest participants to have successfully influenced involvement. Here, parallels may be drawn with fracking regarding the significance attributed to the imagery conveyed by *Gasland*, introduced previously.

Political Opportunity Structures

Another key strand of social movement literature is based upon political opportunity structures which proposes that movements can be understood by looking at the external environments that provide the opportunities and threats around which they mobilise and operate, shifting the focus away from internal movement factors (Tarrow, 1998; Tilly, 2006). These structures have been broadly defined as being 'comprised of specific configurations of resources, institutional arrangements and historical precedents for social mobilisation, which facilitate the development of protest movements in some instances and constrain them in others' (Kitschelt, 1986:58). In this, scholars have turned attention to factors such as the presence of divisions and movement allies amongst elites, a state's propensity to repress, as well as its policy-making capacity and degree of centralisation (for instance, Tarrow, 1998; Tilly, 2006).

Representing the early development of POS, a study conducted by Eisinger (1973) into black protest in US cities demonstrates how some of these structural factors and political opportunities can feed into an analysis of movements. More specifically, a key contribution of this study pertains to the role of 'open' and 'closed' states on movements. It is argued that open systems, characterised by greater movement access to government institutions which are responsive to their concerns, encourage participation or, in extreme cases, could allay the need for protest as the concerns and interests promoted by movements are already incorporated into the polity through formal and informal channels of access. On the other hand, closed systems represent a lack of government responsivity and a greater propensity for state institutions to repress movements, thus making protest unappealing to potential participants as well as ineffective. Eisinger therefore concludes that movements and protest are facilitated in systems with a combination of open and closed features where there exists some degree of institutional access and chance of success, with the costs of raising issues with the polity remaining acceptable with regards to any repressive tendencies (also Johnston, 2014).

Following in this vein, scholars have attempted to define the 'structures' which influence whether a polity is open or closed, turning attention to the extent of centralisation and the overall separation of power. Within this, open polities have been defined as those that provide more points of access to movement actors through a greater degree of decentralisation (Kriesi, 2007; Van der Heijden, 1999). This has also been argued with regards to the number of political parties within an electoral system, with higher numbers being able to articulate a more diverse range of interests than would be the case in more restrictive political systems where a limited number of political parties dominate (Kitschelt, 1986; Kriesi, 2007). From this basis, the literature has expanded to incorporate a discussion of weak and strong states, introducing a consideration of a state's input and output structures which determine their responsiveness to other actors' participation and their capacity to implement a policy programme into analyses (see Kitschelt, 1986). With this, weak states are characterised as those open to movement input but lacking capacity to implement policy, while strong states demonstrate the strength needed to implement policy whilst remaining closed to others' input, and this is influenced by wider institutional structures such as the

presence of elite divisions within the polity (Kriesi, 2007; Kriesi et al. 1992; Van der Heijden, 1999).

The particular form a polity takes in turn influences the strategies they adopt with regards to movement demands. Specifically, in their study of mobilisation in Europe which was based on protest event data collected from national newspapers covering a fourteen-year period, Kriesi and colleagues (1992) broadly label these strategies as being either integrative, that is facilitative of movement participation, or exclusive, involving a more confrontational and/or repressive approach to movement actors (also Van der Heijden, 1999). Combining these with input and output structures, the authors further attempt to categorise the contexts in which movements may operate. In this, the authors define four broad types, including: 'full exclusion', in which a strong and closed polity means movements have little or no access and may be repressed; 'full procedural integration' where a weak and open state provides formal and informal opportunities for movements to participate within policy-making decisions; 'formalistic inclusion' typified by a weak yet closed state, providing movements with a degree of formal access whilst retaining the possibility of repression; and, finally, 'informal co-optation' which is defined as involving a strong and open state where movement actors enjoy greater informal access to the polity, but may still experience repression on occasion (Kriesi et al. 1992).[18] For POS scholars, it is these kinds of state strategies and the formal political structures behind them which inform movement repertoires (see Kitschelt, 1986; Van der Heijden, 1999). For instance, it has been argued that where structures are open and, therefore, where movements have greater access to the polity, assimilative strategies including petitions, voting and legal action are encouraged. When the opposite is true and POS are more closed, confrontational strategies involving direct action may be more likely occur (Kitschelt, 1986; Saunders, 2013).[19]

In sum, from a political opportunity perspective it is the institutional structure of a polity with regards to its degree of centralisation and the separation of powers between the respective branches of the state, for instance, which forms the basis for the opportunities and threats encountered by movement actors. To adopt Kitschelt's language, these features of the state shape the input and output structures which influence the extent to which movement actors are incorporated into policy-making processes and the ability of a polity to implement its decisions.

Accordingly, movement strategies for raising their claims against the state are developed in line with the particulars of the structural context in which they exist.

To illustrate one application of POS, in his study of 'British exceptionalism' with regards to new social movements, Rootes (1992) discussed the ways in which the formal political structure that predominates in the UK constrains the environmental movement. Specifically, it is argued that while Britain shares some of the key features associated with 'new politics' in other Western states, such as a similar demographic of movement participants (i.e. broadly middle-class), a greater inclination to participate in politics and concern for a more diverse range of issues extending beyond economic factors, the kinds of new social movements and radical environmental protest seen elsewhere are absent in Britain as a result of the particular institutions that exist.

In his discussion, the differences held to contribute towards the identified exceptionalism are: the electoral system, which lends itself to two-party dominance and gives little room for others such as the Green Party to achieve significant electoral gains; the institutionalised position of the existing environmental movement as allowed through formal consultation processes, this position with the polity potentially being lost should movement groups adopt a more radical approach; and, finally, the accommodation the Labour Party can give to the wider range of issues coming to the forefront alongside its greater chance of electoral success as one of the two main political parties in the country. Put differently, the ways in which the existing environmental movement was accommodated by both the government and Labour, taken alongside the particulars of the First Past the Post electoral system – in other words, the form of opportunity structures – influenced the absence of a more radical movement repertoire and limited the traction the Green Party could gain among the electorate. In this case, however, the British environmental movement changed around the time of this paper's publication with the emergence of the radical Earth First! network and the anti-roads protests in which direct action methods were used, bringing ideas of exceptionalism into question.

How environmental movement activities relate to the particulars of the polity has also been examined for community-based protest in the Greek context. Specifically, by drawing upon content analysis data collected from a national centre-left newspaper and supplemented by ecology magazines, Kousis (2007)

attempts to understand protests in Crete under both left- and right-wing governments in the period between the 1970s and 1990s. Among the findings, what the author argues is that instances of elite instability, as brought about by elections, increased the amount of community-led protests. Beyond this, the author finds evidence that, at least to an extent, levels of protest peak under right-wing governments as opposed to those of the left-wing PASOK party.

This variation in protest under different governments has been suggested by Kriesi et al. (1992) to reflect the nature of political allies and their influence on movements which are broadly understood to find greater (but not exclusive) support among the 'left' of a population. In this, left-wing parties are understood to offer a greater chance of favourable reforms whilst also reducing the support they give to assist with protest mobilisation when in office, reducing both the need and the availability of external resources for movements. In other words, Kousis finds some support for POS assertions around the influential role that elite allies and divisions play in protest occurrence.

However, POS approaches have been criticised on the basis of the particular assumptions that this use of 'structure' can result in. Namely, with a focus on how institutional structures facilitate or constrain the occurrence and form of mobilisation, analyses may not consider or be able to account for the significant variation that can be found both within and between movements existing in the same structural context, thereby placing limitations upon the depth of insight that could be gained from such an approach (Saunders, 2013). In addition, the assumption that movements specifically target the state and are therefore bound by how that polity acts towards them is also problematic as other political and corporate actors can be the focus of movement efforts (Crossley, 2002; Saunders, 2013).[20]

Moreover, POS scholars have been criticised for their emphasis upon structural factors over internal movement and/or agency-related aspects, as well as for the ways in which 'structure' and 'opportunities' are themselves ill-defined, with this malleability limiting the value of the approach as key terms are stretched to include a myriad of factors (Soule et al. 1999; also Kriesi, 2007). To elaborate, the label 'structure' has been attributed to more permanent features of a polity, such as configurations of power, but also to what are arguably non-structural and ephemeral aspects as well, including elite alignments and their overall position

towards movements (Goodwin and Jasper, 1999; Saunders, 2013; Tarrow, 1998).

In offering these critiques, scholars such as Goodwin and Jasper (1999; also Jasper, 2010) have attempted to better define the role that agency plays in movements and protest vis-à-vis structure, highlighting factors such as individuals' emotions, identity and ideology and how these feed into people's understandings of the world around them, influencing their behaviour accordingly. In turn, however, scholars have also sought to critique these understandings with authors such as Meyer making the arguably keen point that 'The wisdom, creativity, and outcomes of activists' choices – their *agency* – can only be understood and evaluated by looking at the political context and the rules of the game in which those choices are made – that is, *structure*' (2004:128, original emphasis). Suh (2001) puts it another way, this time with regards to framing (see below), suggesting that for framing to occur there must first be something to frame (structure), subjective understandings of which can then lead to perceived opportunities being present for movements to exploit (cf. Goodwin and Jasper, 1999). In this sense, while agency is indeed something that is important to consider, it is not – and cannot be – completely devoid of structural influences.

Specifically for this research however, the above literature is found wanting regarding a more localised conception of POS. Such an understanding could help draw attention toward what Magnusson (1985) termed the 'local state', namely to the government agencies that are both physically situated within a local area and concerned explicitly with local issues, thereby incorporating both local authorities and national government bodies which share this distinctly local presence and focus. Varying across contexts, these local states are held to form some of the spaces in which confrontation can emerge, particularly around the relationship between the local and national levels and where the boundaries for each are drawn. In short, the local state is related to, yet distinct from, the national level which forms the focus for many POS scholars, with Magnusson helping to emphasise the importance of the local level and relevant institutions and processes.

This is held to provide a good basis for understanding the factors that could influence local POS in the UK context around fracking, with particular attention drawn to the key planning processes involved which sees local authorities of

different political persuasions holding consultations with the public on recent planning applications (a period of visibly open opportunity structures) before making a final decision on whether that application should be granted and developments allowed to take place (returning to a relatively closed POS).

The work of North (1998) regarding the anti-roads protests helps to highlight the importance of a localised POS in the UK, noting that after years of engagement in planning processes when consultations were open to the public, the direct action campaign began once these channels had been exhausted and the opposed developments started, marking a shift to a more closed opportunity structure and influencing protest form accordingly. Similar findings around the adoption of more visible strategies and collaboration between residents' and radical groups following the (perceived) closing of local POS and the imminency of development in the UK are also shared by Saunders (2007a), this time with regards to the networks involved in opposing the construction of a cinema multiplex in London. As such, it is argued here that a focus on the POS provided by the local state could hold interesting insights into movement emergence and activity in the broader context of the UK where local authorities are notable actors, including around fracking.

Framing

What has not yet been discussed, but which has been incorporated into both RM and POS studies in efforts to introduce non-structural features into these approaches, is the concept of framing. Framing can be argued to form a pivotal aspect in how movements manage to successfully influence participation by defining grievances and goals in such a way that resonates more poignantly with people's experiences, while also helping to define the target(s) of movement activity through developing an idea of 'us' and 'them' (Snow et al. 1986; Tarrow, 1998).

Within this, scholars have attempted to identify the particular framing processes that may be available to movements as they try to expand participation. This is the preoccupation for Snow and colleagues (1986) who discuss different forms of frame alignment, the process whereby linkages between movement aims and wider societal interests and values are constructed, identifying four types which

cover, amongst other features, the (re)emphasis of particular values and beliefs as well as the extension of frames to better reflect the more diverse range of interests held by potential participants. In so doing, the authors highlight the ways in which frames contribute to how events and issues are given meaning, helping to inform actions and, in this way, are a crucial aspect of movement strategies regarding participation.[21]

It is also the focus for Diani (1996) in his study of POS and the Northern League, a populist group in Italy, which emphasises the importance of a movement's frame alignment with the 'master frame'. These master frames represent the predominant understanding of the specific political context in which actors find themselves and must therefore be drawn upon by movements should they wish to successfully mobilise. On this basis, one of the theoretical arguments of this paper is that framing and the claims that may resonate more effectively are context dependent and therefore relate closely to the specific opportunity structures that exist at any given time, as understood through the overarching master frame.

Besides influencing participation, Suh (2001) has also examined how framing affects perceptions of movement success and failure with regards to POS in the Korean context. Specifically, with a focus on how changing opportunity structures influenced hospital union activities and by examining archival sources alongside just under 50 interviews with union leaders, the author identifies instances of misframing through processes of 'pseudosuccess' and 'pseudofailure'. It is argued that both of these forms are conducive to continued mobilisation, with the latter referring to instances where responsibility for failure is understood to lie with other actors such as government when it stemmed from the movement itself, and the former being where success is portrayed as coming about due to movement activities when it resulted from other factors. Put differently, while being important for initial mobilisation, (mis)framing also influences how the outcomes of campaign activities are perceived and, in turn, can help sustain a movement through promoting the potential for future successes or the need for continued action in light of failures.

New Social Movements

The final strand of social movement theory considered here is that of new social movements. Related to structure-based critiques of RM and POS approaches, NSM attempts to emphasise the role of non-structural factors such as shared identity and solidarity. For Melucci (1980), new social movements are characterised by claims upon the right to define and be recognised by their own identities and ways of life in a context where these are encroached upon by modern production processes, extending to patterns of consumption, information and social relations. In this, what new social movements seek is a greater autonomy from the state rather than power over it, with developing a sense of collective identity and solidarity forming key goals. As part of this, these movements further aim to be non-hierarchical in their organisation and action, placing an emphasis on direct participation.

Particularly important for NSM scholars therefore is the idea of (collective) identity, with new social movements demonstrating a reflexivity and active engagement around its formation which was not seen with the labour and economy-oriented movements studied in the past (Cohen, 1985). Whilst it has been defined and understood in various ways, in general collective identity can be taken to denote an affective sense of connectedness to others in a group which informs an idea of 'we' and, as a process, is open to redefinition over time (Diani and Bison, 2004; Saunders, 2013). As such, collective identity is argued to be a significant component for movement actors, helping to promote solidarity between group members and facilitate collective action. However, it has been argued that strong identity and solidarity may hinder rather than aid inter-group cooperation in a movement with boundary work, the process by which groups define themselves against others, informing particular notions of 'us' and 'them' which can exclude those who do not ascribe to the same strategies, values or beliefs (Diani and Bison, 2004; Polletta and Jasper, 2001; Saunders, 2013).

Collective identity with the ties and solidarity it creates have also been argued to be able to sustain movements through latent periods, beyond the visible protest activities in which they are (re)affirmed, with the networks created through a campaign also potentially able to be drawn upon for later campaigns (Flesher Fominaya, 2010; Polletta and Jasper, 2001; Saunders, 2007a). However, in these latent times when group activities are not seen in the public sphere,

movements may experience a greater degree of fragmentation and factionalism due in part to differences in group identity, as demonstrated by Saunders (2007a; see also Diani, 1992; Polletta and Jasper, 2001). Hence, therefore, Saunders' (2013) later claim that collective identity may be thought of more as a group-level process rather than as something that exists across a movement, with the solidarity it can produce strengthening the sense of belonging and commitment to members of a particular (type of) group to the exclusion of others (cf. Flesher Fominaya, 2010).

Towards a Consideration of the Social Aesthetic

The examples discussed so far in this chapter show that there exists much diversity and debate within the social movement theory literature, with a plethora of different yet interlinked factors stressed as being crucial to movement form and the strategies they adopt. Echoing the scholars who attempt to emphasise agency-related factors such as emotions behind social movement participation, this research has a particular interest in moving beyond a heavy focus on structures through a consideration of aesthetics. Specifically, it seeks to incorporate an understanding of what Olcese and Savage (2015) call the 'social aesthetic' into its analysis.

As first introduced in Chapter Three, Olcese and Savage offer an initial definition of the social aesthetic in their abstract, defining it as 'the embedded and embodied process of meaning making which, by acknowledging the physical/corporeal boundaries and qualities of the inhabited world, also allows imagination to travel across other spaces and times' (2015:720). Within this, emphasis is placed upon the ways individuals engage, identify and understand where they live through their everyday embeddedness within the area. Through this, a particular knowledge about the area and the position of the self within it is produced, informing identities, the values imbued within the landscape and people's relationship to it. In other words, this everyday experience and the memories it builds allows people to experience a particular, more embodied and immersed aesthetic which helps inform how the area, the self and the people who inhabit it at any time are understood. As such, and as is core to Olcese and

Savage's conceptualisation, the aesthetic becomes central to how the social world is constructed and engaged with.

In this way and as should become clear below, this concept follows the work of others, including geographers, who attempt to decentre humans in how they are understood to relate to and engage with nature, arguing against a binary human-nonhuman divide.[22] This is demonstrated by Bennett (discussed through Khan, 2009) who introduces the idea of 'vital materiality' in which objects are seen as alive and as co-constituting the assemblages within which the human and nonhuman engage and interact to produce certain affects or effects. In other words, there is an attempt to move beyond a human-nature (or subject-object) dualism by placing a greater emphasis on the role that landscapes and the objects within them play in their own right, as co-constituting particular meanings and ways of being.

People are not, therefore, detached from nature in either being or through cognition, the latter forming a key element to other understandings of aesthetics. Instead, there is a deeper relation between the two and this has further been picked up by the work of Pink (2009) who, in discussing an approach to research which emphasises the importance of the senses, memory and imagination to how knowing of places and of the self within them is constructed, uses the term 'emplacement' to emphasise how such knowledge is produced through the relation between the mind, body and the various sensory and material elements of the surrounding environment, such a focus on sensory experience behind how understandings are formed also being stressed by Jackson (2016) as 'aesthesis'.[23]

To elaborate on the social aesthetic, it is the embodied aspect which is demonstrated by Nettleton's (2015) study of fell runners in the English Lake District introduced earlier. By focusing upon the ways in which the runners move through and engage with the physical landscape, responding to the particulars of the terrain, Nettleton contributes to an understanding of how deep and valued connections to places can be gained through embodiment within them. For the runners, this embodiment produced through their movement within the Lakes creates a sense of being with the landscape and a particular knowledge of it which others who focus only on the visual, picturesque elements do not gain.[24]

The importance of the physical aspects of the landscape in producing an embodied aesthetic and a sense of place and self can further be discussed by extending the discussion to include a consideration of the materiality of objects and the connections that people form with them. Through taking this approach, Benzecry (2015) examines how people connect to cultural objects, namely opera and football jerseys, and respond to changes in their form. In so doing, the author discusses the ways in which people can gain particular emotional attachments to objects at any point in time, producing a degree of stabilisation in the relationship between and identity of the object and the self. Through this relationship, specific meanings are attributed to the object and the self, validating certain identities and actions.

Beyond this, Benzecry had a more specific interest in understanding how people respond to 'destabilisation' or disruption in the meanings and identities bound up with objects when they undergo change, such as through the loss of high-end performers or venues in opera, or the introduction of a different jersey pattern for future seasons. In this, Benzecry discusses how, in an attempt to cope with destabilisation, individuals proceed through a series of restabilising stages to retain or regain the original significance and value of the object in question. This includes initial efforts to continue as though destabilisation has not occurred before trying to attach the particular meanings and understandings imbued within the object prior to destabilisation to its new form. After this, what the author terms a 'partial object' (2015:780) is created which provides some of the identity afforded by its previous form, while also opening up possibilities for new understandings and attachments to be built, thereby also allowing objects to hold different meanings to different people at different times.

From this, however, it should also be noted that the meanings produced, while felt individually, can be shared collectively, as demonstrated by the notion of affective atmospheres which help create particular, enveloping feelings and feed into how objects are understood through a sensed experience (Anderson, 2009), thereby sharing similarities with the work of Pink and Jackson above. These affects, as feelings and emotions, exist in everyday places and actions and help to provide an understanding of them (Thrift, 2004).[25] On this basis and to take an example, the galvanising imagery of *Gasland* arguably forms an 'affective appeal' in which particular emotions and ways of understanding fracking are purposively

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produced and may be shared between those watching through the atmosphere it helps create in that moment, these individuals potentially feeling a collective want to take action against the industry as a result (for instance, Vasi et al. 2015).

What Benzecry contributes to is a greater knowledge of how the materiality and physical form of objects allow individuals to ascribe certain meanings and interpretations to them, further producing a sense of self with corresponding ideas of what it is to be a true fan of opera or of a specific football team, and what everyday behaviours are supported by and reinforce these ideas and attachments. Benzecry also demonstrates the ways in which changes to the physical, material form of these objects poses difficulties for those who are involved with them through processes of de- and re-stabilisation as their connections to these objects are changed. What this shows is the context-specific nature of the understandings and attachments which inform certain ideas about the object and self, and may result in some form of loss as change occurs.

Other scholars' work can further be drawn upon to help illustrate some of these core ideas, including that of Sagoff (2008) on the philosophy of environmentalism and the ways in which 'nature' and 'the environment' are understood. Specifically, Sagoff turns attention to the importance of memory in the attachments, knowledge and means of engagement with specific places. To do this, the author refers to the literary work of Mark Twain on steamer pilots working along the Mississippi River in the US to illustrate the point that:

> The painter and the poet also describe the river, but the beauty they see is lost on the pilot. The pilot may ignore the magnificence of the landscape; his attention is fixed on the minute tell-tale particulars to which he responds. Tourists on board also see the river in their own way – as a spectacle. They have no memories to bring back to it; they have not learned it by heart (Sagoff, 2008:166)

Put differently, and similarly to Nettleton, Sagoff here discusses how the ways in which a landscape is engaged with informs how it is understood and connected to. Artists and tourists focus on the picturesque whereas the steamer pilots hold a different understanding based on their everyday engagement and embeddedness within the area, forming a connection which extends beyond the visual sense and draws upon the memories created by the routine of their work and life along the course of the river. In this, the ways in which they interact with

the landscape give it a meaning particular to them and allows them to experience it in a way that those who are not embedded within the area are unable to through a more embodied aesthetic.

In addition, while not focused on developing an understanding of the aesthetic as intertwined with the social as Olcese and Savage attempt, Mangione (2016) also lends support to the conception of the aesthetic as something that is embodied and material in an interesting way. This is achieved through her study of how aesthetic experiences are constructed for disabled and, in particular, visually-impaired visitors to an art museum and botanical garden in the US. In both observed institutions, the collections on display for visitors centred predominantly on the visual sense as the mediator through which understandings of the beauty or interpretations of the meaning of items and arrangements can be reached. While this remains the case, Mangione examines the ways in which staff in these two institutions have attempted to create an aesthetic experience which extends beyond the visual to emphasise the use of the other senses such as touch and smell to inform aesthetic judgements and, therefore, to understand the beauty or meaning of objects in a different way. In this light, the author raises the point that in emphasising one or more of the senses over the others, staff 'make particular types of sensory knowledge possible by facilitating certain interactions while limiting others' (Mangione, 2016:46).

Put differently, it is the materiality of the objects like in Benzecry, and the physical input like Olcese and Savage's landscape and Sagoff's place which informs how the items and their significance can be understood and feeds into interpretation based on subjective values and the imagination. In this way, through the aesthetic experience and the judgements that result, individuals begin to construct an understanding or knowledge about that object. Put in terms of the 'social' aesthetic, it is this interaction between individual imagination and values on one level with the physical, material input of the landscape on another that contributes towards how that landscape and the position of the self within it is understood and imbued with certain values or beliefs. Hence, therefore, the ways in which the aesthetic is intertwined with the social.

In this, it could be expected that the introduction of a practice such as fracking poses a threat to how the landscape is experienced and identified with, perhaps resulting in what Devine-Wright (2009) discussed as place disruption, introduced

previously, where the emotional bonds attaching people with their surrounding area are made explicit and damaged as a result of significant change within the landscape. The social aesthetic may, therefore, be expected to contribute to people's decision, or at least their propensity, to participate in protest.

Summary: Proposing an Aesthetic Turn

There is a wealth of insights that have been produced through the application of various elements of social movement theory, drawing attention to the importance of the resources held by individuals and groups which can influence mobilisation, further linking into the particular demographic features of (potential) participants, as well as by highlighting the influence that existing institutional structures can exert upon both the general propensity to protest and the specific repertoires employed by groups to raise their claims. RM and POS approaches have, however, not gone without critique with scholars arguing for greater consideration to be given to the role of agency, including emotions. While both of these strands of thought, alongside NSM, will be used to feed into this research on anti-fracking campaigns, this study has a particular interest in building upon the work of other scholars towards a place and agency-based analysis of movements.

Accordingly, the ideas surrounding the social aesthetic are introduced and developed. In this, the mobilising influences that may come through protectors' everyday embeddedness and interactions with the area in which they live will be examined, along with the particular meanings and values that may come to be attributed to these landscapes and to the self within them through this process of engagement. Moreover, as part of this place-based approach, the social aesthetic will work in concert with a more localised conception of POS which helps to understand the county-specific contexts in which many anti-fracking groups operate. The means used to investigate these themes will now be considered.

Chapter Five: Methodology

In recent years, the UK has seen over 200 anti-fracking groups emerge (see below), each engaging in a variety of events and demonstrations across different counties. In order to better capture this diversity and to further help by guiding case selection, a protest event analysis (PEA) has been conducted and it is the purpose of this chapter to consider the procedure involved in greater depth. In addition to this, a series of nine semi-structured interviews with those involved in campaigning was conducted and is also considered below. Data from both methods will be presented and discussed in the following chapters. Before this, attention will be turned to the question which guides this study and the approach taken to answer it.

Guiding Question

The question set out by this research – namely, *to what extent do place-based approaches complement traditional social movement theories in understanding the motivations behind participation in anti-fracking campaigns*? – is asked to explore ideas around place attachments and aesthetics, whilst also contributing to a wider knowledge about who is participating and how they are involved. As such, and based on the aforementioned limitations currently found within the anti-fracking scholarship, this question is empirically valuable as it provides a means to begin addressing some of the current gaps in the literature. Theoretically it also holds significance, drawing attention to some of the characteristics that social movement scholars argue to be important for campaigns, especially with regards to political opportunity structures on the local level, as discussed in the previous chapter. Beyond this, it also allows the exploration of protector identities and place attachments through a consideration of the social aesthetic, an approach which bears particular interest to this research.

Protest Event Analysis

Following Doherty et al. (2007) and others, this research adopts a protest event analysis approach as a way to begin addressing this question and the related themes. PEA is a form of content analysis that can be used to identify and examine variations in protest over time and across different spatial scales according to event frequency and form (Olzak, 1989). With this, the possibility to collect further information about the size, duration and claims of protest events is also open to researchers (Koopmans and Rucht, 2002; Soule, 2013).[26] While the presentation of data is often confined to trend lines plotted according to event frequency or the number of participants over time, and is therefore limited in terms of what it can unveil with regards to what motivates people to participate and how each event was received by the state or wider public (Koopmans and Rucht, 2002), it is the wider information collected through PEA which can go some way to providing elucidation to these particular aspects of protest. These trend lines can still, however, provide a basis from which patterns of mobilisation and the factors that may influence them can be examined. Specifically, this can be achieved through noting the ebbs and flows in event frequency at particular points situated within the wider context (Fillieule and Jiménez, 2003). In this way, the possibility of drawing on theories of social movements as a way to better understand such variation in mobilisation over time also becomes available.

It is in these ways that Rootes (2003) and colleagues use PEA to understand environmental protest across various European states, with the specifics of their method detailed in the appendices by Fillieule and Jiménez. For Rootes, his contribution comes in examining the British context, drawing upon information reported in *The Guardian* newspaper to record the instances, forms and claims of protest for the period between 1988 and 1997. In so doing, the most prominent protest forms, groups and issue-foci are identified alongside peak years for protest event occurrence and participation. Rootes then attempts to gain an understanding of why this may be the case through the lens of political opportunity structures, noting expanding and contracting possibilities for successfully raising environmental concerns over time. Through this perspective, the legitimacy Thatcher gave to environmental issues during her premiership in the 1980s, followed by a failure to meet expectations in addressing these issues

and a perceived unresponsiveness from government are highlighted as being among the key influencers of activity in this period.

In a not too dissimilar manner, protest event data has been drawn upon to test theories around what influences police presence and action at protests (Earl et al. 2003). For this study, the authors collected data from editions of the *New York Times* for the period between 1968 and 1973 with a particular focus on reported protests in New York state. Based on this information, the authors attempt to test the common explanations for both police presence and action at protests which are presented in the literature, namely that which emphasises 'threat' (as relates to protest size, radical claims and confrontational protest forms) and that which focuses on 'weakness' (about a lack of resources held by participants to raise police-related grievances, amongst other features). In so doing, they are able categorise different police tactics according to the event data and breakdown the percentage of protests for which these varying approaches have been used, alongside providing the number of events where the police were absent. From this, they find that protest features related to threat are on the whole more significant than weakness-based explanations of the policing of protest. That said, they also find that neither of the common explanations offered by the literature fully or accurately account for the range of factors that influence police actions. From this study, therefore, Earl et al. (2003) are able to illustrate the need for greater theorising around understanding why police take certain actions in response to protest, further challenging the common perception that excessive violence towards protestors was the predominant approach adopted by police during the observed period in New York state.

Beyond theory testing and application, PEA has also been used as a step towards addressing more empirical gaps within the literature. Specifically, the protest data presented by Doherty et al. (2007) represents their contribution to the existing scholarship by shedding light upon the actions of environmental direct action groups in Manchester, Oxford and Bangor, Wales. For this study, protest event data was collected from activist media sources such as Earth First! Action Updates. From this, the authors were able to chart variation in protest frequency and type through the 1990s and into the millennium, providing further insight into the claims and targets of these protests as well as examining the differences between direct action networks in the three case areas. It also allowed the

scholars to consider wider contextual factors behind protest frequencies, suggesting that the observed decline in the number of protests being held from 2001 may be related to changes in activists' personal relations, their individual familial contexts and/or 'burnout' stemming from frequent participation in protest over time as opposed to factors such as repression or institutionalisation, as proffered by political opportunity scholars. These studies are demonstrative of the kinds of insights into protest and related theories that can be produced through PEA.

Of course, such an approach is not without limitations. To elaborate, one of the core issues relates to the sources consulted and the biases inherent in each, particularly as it is not uncommon for researchers employing a content analysis method to draw upon media reports to inform their study (McCarthy et al. 1996; Olzak, 1989; Soule, 2013). Specifically, two main forms of bias are discussed within the literature, these being selection and description bias.

Firstly, with regards to the latter, description bias can affect how events are presented (Earl et al. 2004; Fillieule and Jiménez, 2003). Put simply, this form of bias can occur as a result of the journalists' interpretive spin on a story, or via the omission of certain facts (Earl et al. 2004; Koopmans and Rucht, 2002). To illustrate, one such fact that may not always be reported is the size of any given demonstration for which, even when reported, exact figures might vary between sources or may instead be indicated through generic adjectives such as 'small' or 'large' (Biggs, 2016; Olzak, 1989). The particulars of this could be related to who the journalists are, the format of the paper and/or general editorial policy, amongst other factors (Earl et al. 2004; Fillieule and Jiménez, 2003; McCarthy et al. 1996).

Organisational features of respective news outlets can also be related to the other form of bias – selection bias – which seems to be more prominent in discussions of the difficulties posed by drawing upon media sources for data collection. For example, where the outlet is based geographically may influence which events are reported with those that occur in the same region or in larger cities and the capital more likely to gain coverage than those elsewhere in a country (Fillieule and Jiménez, 2003; Olzak, 1989). In general, the key concern with selection bias is the ways in which it can result in the underreporting of certain protests which further raises questions regarding the extent to which protest activities are fully

reflected (Biggs, 2016; Koopmans and Rucht, 2002). In attempts to understand and account for selection bias, the point has been raised that the use of multiple sources could allow a greater coverage of events and, where the same event is reported in different sources, provide comparable accounts to gain a more accurate picture of protest and the biases present in respective media outlets (Earl et al. 2004; Koopmans and Rucht, 2002; Soule, 2013). Put differently, as no complete objective record exists, efforts to identify and account for bias within parts of the literature has relied upon comparison across different sources.

This is demonstrated by Fillieule and Jiménez (2003) who, alongside their colleagues, attempt to compare the coverage of environmental protest events in national newspapers against other, 'triangulating' sources – that is, those that provide information on the same event that can confirm or contradict another's reporting (Soule, 2013) – including local newspapers and interviews with relevant journalists. In so doing, the authors are able to confirm some of what others have argued regarding selection bias in media sources. For instance, the authors find that protests with a greater number of participants and/or those involving a degree of violence are more likely to be reported than small-scale events (see also Earl et al, 2004; Olzak, 1989). This can further be related to how the perceived 'novelty' of protest actions can be a factor influencing media coverage. With this, repetitive protests of a similar form are understood to be of less interest to journalists as opposed to those that show some degree of originality or risk to participants (Doherty, 1999; Doherty et al. 2007; Fillieule and Jiménez, 2003).

Similar was also found by McCarthy et al. (1996) who use multiple media sources in conjunction with police records as a means to assess selection bias. More specifically, their main focus was upon the media reporting of demonstrations that occurred in Washington, D.C. in 1982 and 1991. Based on their analysis, McCarthy et al.'s study particularly stresses the importance of demonstration size and the role of the issue attention cycle in influencing the coverage of protest. With the issue attention cycle (see Downs, 1972), the observation made by McCarthy and others is that protests focused on an issue that has become prominent in the media may potentially receive more attention than would be the case in periods where its issue focus and associated claims are not in the public limelight or, therefore, high on the media agenda (also Earl et al. 2004).

Taking the above into account, it is clear that source biases and the impact they can have upon the (non-)reporting of protest must be considered by researchers engaged in content analysis. That said, the news media is not the only source of information that can or has been used, as Doherty et al.'s study demonstrates, with the authors stating that they 'do not claim that activist media are always and necessarily superior to newspapers, nor that they escape problems of selectivity, only that for the subject we studied they were the most comprehensive and reliable sources available' (2007:809). The same line of reasoning is adopted in this research and its approach to source selection, as elaborated upon below.

Bias and source selection are, however, not the only notable challenges with content analyses, but the manner in which the information gathered is understood by the researcher poses further questions, some of which have been highlighted by Biggs (2016). Specifically, what events are included and how reported protest events of different sizes and intensities are coded is asked.

This question is one addressed by many who adopt such an approach to understanding protest and coding decisions should ultimately relate to the question(s) posed by each respective study. As such, and with a general interest on 'collective action', broad similarities exist in the literature alongside some slight variation of detail. To elaborate, certain authors have put forward a basic definition of collective action, with events requiring more than one participant and some degree of claim-making to be included in the final data set (McCarthy et al. 1996; Olzak, 1989). On this basis, other scholars have further defined events of interest according to the specifics of the actors involved (i.e. non-state) and where the protest has taken place (i.e. in public space) (see Earl et al. 2003; Fillieule and Jiménez, 2003).

While the events of interest are broadly defined, questions of how to manage remaining variation still exist. Beyond grouping protests into specific action categories depending on protest type, consideration must also be given to issues of geographic coverage and time. Put differently, decisions have to be made about whether multiple events on the same day and in the same location count as one instance of protest, and if those on the same day but in different areas are multiple instances of protest or not. Moreover, the point at which an event is deemed to have finished and another begun also needs defining, especially in cases where the same event is recurrent on multiple consecutive days.

To give specific examples from the literature, regarding the latter issue some have decided that events end with either the dispersion of participants or when the central claim being made changes, and that for a second event to be counted another event in the same place with the same claim and protest form must begin after 24 hours has elapsed since the end of the previous event (Fillieule and Jiménez, 2003; or more broadly as 'non-continuous', as in McCarthy et al. 1996). Further, with an understanding that events involving multiple actions on the same day with the same intention but in different locations requires some degree of networking between groups, Doherty et al. (2007) count these as representing one combined instance of protest. Each of these more local actions, whether conducted by the same or different groups, would have been counted as a series of individual events under the definition used by Fillieule and Jiménez (2003).

This issue, alongside that of underreporting, feeds into Biggs' (2016) overall argument that rather than counting the frequency of protest, researchers using PEA may benefit from placing a greater emphasis on recording events based on the number of participants. Moreover, focusing only on the larger demonstrations is also advocated on the grounds that these are the events most likely to be reported and a better measure by which to understand the degree of mobilisation within a population, particularly given that other events may only be carried out by the same small group of people.

With due consideration given to the range of issue that scholars have identified through their own experiences, but also of the contributions made by their studies, the procedure followed for this research will now be detailed.

Procedure

For the purpose of this research, PEA was used to understand the range of campaign activities adopted and feed into case selection with a view to produce an in-depth qualitative analysis. Specifically, the data collected was used to identify cases which showed particular characteristics in terms of the extent of action, based on the frequency, size and form of protest, in relation to the stage of the planning process reached. By stage of the planning process, areas where planning permission has been granted are understood to be of a relatively advanced stage and were distinguished from other areas in which PEDL licences

were offered, granted and where planning decisions were pending, these other counties defined by the absence of approved sites. The overarching aim was to determine which areas in the UK show the most marked variation in terms of stages of the planning process vis-à-vis extent of action with a view to taking the chosen cases forward to give a variety of contexts to study. As such, and in line with the interest in aesthetics, the physical characteristics of each area were also considered.

With regards to how the method was applied, two event calendars listing forthcoming campaign actions by month were consulted. These are provided by Frack Off, a national anti-fracking network group boasting around 288 local affiliated groups (Frack Off, 2015a), and Drill or Drop, an independent online media outlet which focuses on the oil and gas industry as well as associated protests in the UK (Drill or Drop, 2017). Drawing on Doherty et al. (2007) and their use of activist sources, these two websites were chosen because, unlike with local and mainstream media outlets, both are directly focused on fracking in the UK and are therefore deemed to provide more specific information about campaign activities. In this way, it is suggested that recorded protest events are more broadly reflective of actual campaign activities than would be found with general media sources, with greater coverage of smaller, localised actions in addition to larger, headline-grabbing protests.

While differences do exist within the literature, for the purpose of this research 'protest events' are understood to involve one or more participants with clear claim-making against fracking in the UK, regardless of any specific issue focus such as on climate change contributions through fugitive emissions or the potential threat of water contamination and seismicity. Furthermore, actions of whichever form that extended over multiple days whether continuous or not were counted as one instance of protest, a decision based on how they were reported in the consulted sources as the same event. Those that were held in different areas on the same day as part of a nationwide day of action were counted as separate events.

To explain these choices, having a lower prerequisite regarding the number of participants allows for those events where the purpose is not always to achieve 'collective' action (the focus for Earl et al. 2003; Rootes, 2003). This then includes instances of direct action – such as lorry surfing[27] – carried out by a single person

to disrupt site traffic at the PNR site in Lancashire where individual residents have also pursued litigation against the granting of planning permission for the site (see below). These events, while not large in terms of attendance, can still be large in impact and contribute to the wider campaign against fracking. While multiple local events which form part of a wider action can be counted as one event due to the need for some degree of networking within and between groups to organise and coordinate efforts, as Doherty et al. (2007) argue, this was seen as an inappropriate manner in which to code these events. Specifically, this decision was taken based on scale with the focus for data collection being on the county-level as part of case selection and the overarching interest in different place-based campaigns and local POS, something that would be lost through aggregation to the national level.

Finally, relating to Biggs' (2016) emphasis on accounting for size, such definitional work was found to be difficult on the basis of limitations to the reporting of size in the consulted sources. Moreover, it was seen as an inappropriate measure given this research's greater focus upon a wider range of events than a more exclusive focus on the larger and, therefore, arguably more reported demonstrations as the means to understand the full repertoires employed and favoured by different campaigns. While this remains true, the size of certain protest events was recorded where known.

The time period examined extended from October 2011, both the earliest available date and the year the first UK test fracks for shale gas occurred in Lancashire,[28] to 19th May 2017, the latest date available when the event calendars were being consulted.

While these two event calendars are held to represent the best available sources of information about the range of anti-fracking campaign activities across the UK, there still remain some notable shortfalls. Chief among these is that, in the case of conventional actions (defined below), there is often little information that can confirm whether the listed events took place and what level of attendance they enjoyed. This is a point furthered by a lack of discernible triangulating sources with the most effective found being campaign websites and social media. What this in turn demonstrates, however, is the issue of media bias discussed above with little or no reporting of most of the anti-fracking campaign activities witnessed, further supporting the decision to use more campaign-centric sources

as a more complete – but still not perfect – record on which to base the PEA and subsequent case selection.

These websites and social media pages were found to report on and share what other groups are doing, providing information about fracking locally and nationally, as well as about the risks that are associated with the industry. To these ends, Facebook seems to be largely used to promote and report protests that have or will be held either by the campaign whose page it is or by another group. For these actions, it is quite common for them to have their own event page set up. In addition to this, Facebook's live video streaming feature has been used by participants to show what is going on in terms of protest and site development in real-time, this being particularly true for the PNR site (see Preston New Road Video and Livestream Page, 2017). Regarding the use of Twitter, this again seems to be more about communicating ongoing protest actions held by different groups with a variety of hashtags being utilised.[29]

Although information is present on these sources, the coverage of events both in terms of those that are discussed and the details given were found to be incomplete in many instances. More than this, the vast number of campaign groups makes a comprehensive review of their online presence particularly difficult with the 288 groups listed as being associated with Frack Off joined by the national and local branches of organisations such as FoE, Greenpeace, Campaign Against Climate Change and the Green Party. As mentioned above, in addition to groups having their own accounts, individual protest events can also have their own social media pages resulting in a larger and more diffuse set of potential sources of information. It should be noted that details about some protests were found through local online news outlets, as discovered through general web searches for events. Although these themselves may be subject to the range of biases discussed above and are in general not considered to necessarily provide a better source of information than campaign webpages, they were a useful source for supplementary material in a number of cases.

To further illustrate these points, this time with regards to the demonstrations, direct action and protection camps listed on Frack Off and/or Drill or Drop, further information confirming that events definitely took place and providing insights into the extent of attendance as well as of which groups were involved was found by consulting these campaign groups' online presence and, on occasion, local

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media reports. In so doing, 67 percent (n=115) of listed events of this nature were confirmed to have taken place (for full event count figures, see below).

While further information could not be found for some of the listed events, creating uncertainty as to whether they occurred, these are included in the analyses presented here on the basis that, although they cannot easily be proven to have taken place, there is also a lack of evidence to suggest that they definitely were not held, including on specific Facebook event pages. In this way, protest events with continuing uncertainty are understood to represent intended actions which still provide key insights into specific place-based campaigns and their respective approaches to protest, including forms and targets which can extend to communities, developers and local government. Again, the lack of triangulating sources makes creating absolute certainty around the details of certain events difficult, with events reported in newspapers and other sources not reflecting the full range of actions undertaken by campaigns to the same extent as the event calendars. Events known definitely not to have taken place were excluded from the analysis, as based on them being listed as cancelled or postponed by consulted sources.

As a final point, neither website was unsusceptible to underreporting of certain protest events. Specifically, by examining the wider campaign webpages and social media, it was found that instances of direct action and protection camps are more common than the extent to which they are listed on the two event calendars used. While the reasons for this remain unknown it is suggested, albeit tentatively, that while planned beforehand campaigns are not inclined to widely share their intention to engage in direct action and will not therefore have it listed on event calendars in advance, preferring instead to use other online platforms to inform of their actions when they occur. With protection camps, while they are an intensive form of action, their day-to-day running is perhaps not viewed as requiring listing unlike the demonstrations planned and conducted by or in association with their residents. Further information would be needed in order to explain this underreporting more accurately. As a note, while a greater number of direct action and protection camp events are known to have taken place, those not listed by Frack Off and Drill or Drop were omitted from the PEA for methodological reasons, but were factored in to assist with case selection as further specifics of certain areas' campaign contexts.

With the above in mind, reported events were organised on the county-level by year and were first coded according to the general type of activity they represented, resulting in seven groupings, namely: (1) procedural activities (litigation, petitions and planning objections); (2) awareness raising (public information events, film screenings); (3) demonstrations (marches and rallies); (4) direct action; (5) protection camps; (6) direct action workshops or related training events; and (7) other.[30] Following this, defined categories were then aggregated into 'conventional' and 'non-conventional' action codes. Here, events marked as 'other' and training workshops were excluded on the basis that they do not represent protest actions, as defined earlier.

Conventional actions are understood to include procedural and awareness raising activities whereas non-conventional denotes events that take the form of demonstrations, direct action and protection camps. This language of conventional and non-conventional actions has been adopted from previous studies of environmental protest, including that which employs a PEA approach (for instance, Earl et al. 2003; Koopmans and Rucht, 2002; Rootes, 2003).

In doing the above, a total protest event count of 1006 across 69 counties was gained, conventional actions accounting for 83 percent (n=834) and non-conventional for the remaining 17 percent (n=172) (see Figure 6.1). These counties represent the whole of the UK, covering England, Scotland, Wales and Northern Ireland. There was a further 31 events listed from unspecified locations with four of these being non-conventional in nature. As it remains unclear as to where these additional events were to take place, they have not been included in the following analysis.

From this data set, the most significant variation according to the stage reached within the planning process vis-à-vis the extent of protest action was found amongst Lancashire, South Yorkshire, Greater Manchester, Gloucestershire and, as a supplementary case, North Yorkshire. The broad categorisation used is illustrated by Table 5.1 with further details about the development contexts, frequency and form of protest events as well as other notable features of each case area provided in the following chapter.

Table 5.1: Selected cases according to stage of planning process and extent of action.

		Stage of Planning Process	
		More Advanced	Less Advanced
Extent of Action	More Advanced	Lancashire North Yorkshire	South Yorkshire
	Less Advanced	Greater Manchester	Gloucestershire

Interviews

A semi-structured interview method can provide a means to gain in-depth insights into the views, beliefs and feelings of individuals who have experiences and/or knowledge of interest to a research project, allowing them to express themselves in their own words through open-ended questions (Blee and Taylor, 2002; Leech, 2002). The particular, open form the questions take permit and encourage interviewees to discuss what they think is important to mention and further allows the researcher to explore new, possibly unthought-of avenues of questioning as they are opened up by the interviewee, potentially providing a richer insight into the topic or issue being studied (Berry, 2002; Blee and Taylor, 2002; Leech, 2002). Hence, therefore, why such a method was chosen for this project with its interest in gaining first-hand accounts from those involved in anti-fracking campaigns and the relationship participants feel they have with their local area.

Contacted via email where possible, or through Facebook when not, community-based campaign groups in each of the final case areas were approached for interview recruitment. Of the 15 groups contacted, five replied positively giving a response rate of 33 percent. For other comparable studies of movement organisations that alternatively adopt a survey method, the average expected response rate is around 50 percent (see Saunders, 2007b, who received a 32 percent response rate when researching London-based environmental networks). As such, while remaining fairly low the rate enjoyed by this study is in line with other movement-oriented projects.

Overall, a total of nine telephone interviews with organisers and more general participants were held (see Appendix One), each living in the specific areas which have been, are, or potentially will be directly affected by fracking. Again, while remaining low due to limits in snowball sampling, this number of interviewees is still in-keeping with other studies, including Saunders (2012) whose research into the Climate Camp in Britain also drew on insights from nine individuals, and Hopke (2015) who examined the Global Frackdown protests with five interviews. Given this low sample however, the interest of this research is not to generalise findings from the data set, but rather present and analyse the insights into protest motivations gained from those spoken to which may be indicative of broader perspectives and experiences.

For this study, interviewees were from a range of professional backgrounds in both the public and, to a lesser extent, private sectors, many now further involved in the voluntary sector. They were aged between 35 and 70, most with families and, except two individuals who were originally from where they currently live, had moved to the area between five and 40 years ago for either employment and/or to live in the countryside. Three were female, the remainder male and six have some prior experience campaigning, be it on local community issues such as library closures and renewable energy schemes, or from involvement in trade unions, the Campaign for Nuclear Disarmament and similar. When mentioned, most stated that they did not affiliate to any particular political party, but those who did indicated support for (but not necessarily membership of) Labour or the Greens. Further, although some noted how they follow and/or have worked with other campaign groups, only two interviewees were members of such a group and in both cases this was FoE. On average, the interviews lasted 40 minutes to one hour and began by checking interviewees' understanding of the consent and information form forwarded in advance of the interview (Appendix Two).[31]

As mentioned above, the interview schedule designed for these interviews utilised open-ended semi-structured questions in order to gain deeper insights into protectors' thoughts, beliefs and opinions (see Appendix Three). More specifically, questions were grouped according to their general theme or focus and broadly aimed at collecting information about the who, why, where and how of campaigning in each of the respective case areas. First of all, interviewees were asked about the ways in which they feel about, are involved in and value

their local community and the surrounding area, with understanding their everyday engagement with place constituting an important aspect of the social aesthetic. Preceded by questions about how the interviewee views fracking and the approach adopted by local and national government (i.e. POS), the schedule turns attention to campaign participation, covering the history of each interviewee's involvement in campaigning both against fracking and any prior experiences, including how they came to participate and in what ways they have done so, amongst other things.

As will be noticeable from Appendix Three, the wording of the main questions is intentionally biographical to give the interviewee as much room to discuss their own experiences and feelings as possible, avoiding the possibility of trying to force certain topics, answers and categorisation. This was particularly important regarding how individual's feel about and sensorily engage with their local area as, learning from Nettleton (2015; also Pink, 2009), it can be particularly difficult for interviewees to put the ways in which they identify with and are attached to the surrounding landscape into words and so questions with a broader focus and greater degree of openness were thought to be more effective – and perhaps more interesting. Following the first few interviews, additional questions were included in the schedule to help better draw out interviewees' everyday experiences of place. Except on one occasion where question delivery was not clear, something resolved promptly by rewording, no difficulties with question comprehension were encountered.

With permission, all interviews were recorded via Dictaphone and transcribed by hand by the researcher, these transcripts being accompanied by additional notes made throughout the interview about its content. This data, discussed in Chapter Seven, was analysed via a deductive thematic analysis guided by the theoretical framework of the previous chapter and following the process outlined by Braun and Clarke (2006; also Vaismoradi et al. 2016). As such, each individual transcript was coded to draw out the points raised in a general sense before being recoded and grouped in relation to the broad theoretical perspectives guiding this research. Following this, these codes from each interview were further refined and later brought in relation to each other under the theoretical categories. It is from this that themes, understood as representing and organising distinct sets of ideas or observable patterns in the data (Braun and Clarke, 2006), began to be

developed and revised into a thematic map until it was deemed that the key insights from across the interviews were well represented by the list of themes presented in Chapter Seven. As a final note, the importance of each theme does not necessarily relate to the frequency of its occurrence, but rather to how it relates to any given research question and, in a deductive approach like that here, the theory being used (Braun and Clarke, 2006).[32]

Summary: Investigating Anti-Fracking Campaigns

In summary, the PEA undertaken using the two chosen sources has allowed for the selection of cases which demonstrated the most marked variation in terms of stage of the planning process and the frequency and form of protest events witnessed. In addition, by providing a greater understanding of campaign activities, the PEA has also helped situate these five cases within the wider national context. The interviews that have followed gave insights into how people in these case areas perceive not only fracking and the approaches adopted by different levels of government, but also how they view and value the places where they live and what actions they have been involved in as a means to oppose fracking.

Before this interview data is discussed in-depth and brought in relation to the theoretical perspective outlined previously, the next chapter will provide a greater context to the selected cases of Lancashire, South Yorkshire, Greater Manchester, Gloucestershire and North Yorkshire, as can be gained from examining the protest event data.

Chapter Six: Preliminary Data

As introduced earlier, a protest event analysis was conducted with information drawn from two fracking-specific sources. With the procedure and definitions involved already detailed, it is the purpose of this chapter to present some of the findings gained. Specifically, attention will be turned to providing an account of the five selected cases for this research – Lancashire, South Yorkshire, Greater Manchester, Gloucestershire and North Yorkshire – focusing on the types of protest events and campaign groups witnessed in each area. Based on this information, the selection of cases and the significant variations between them are illustrated and explained. Before this discussion, however, some of the general themes from the compiled data set will be considered.

General Findings

Figure 6.1 presents the total number of recorded protest events by year:

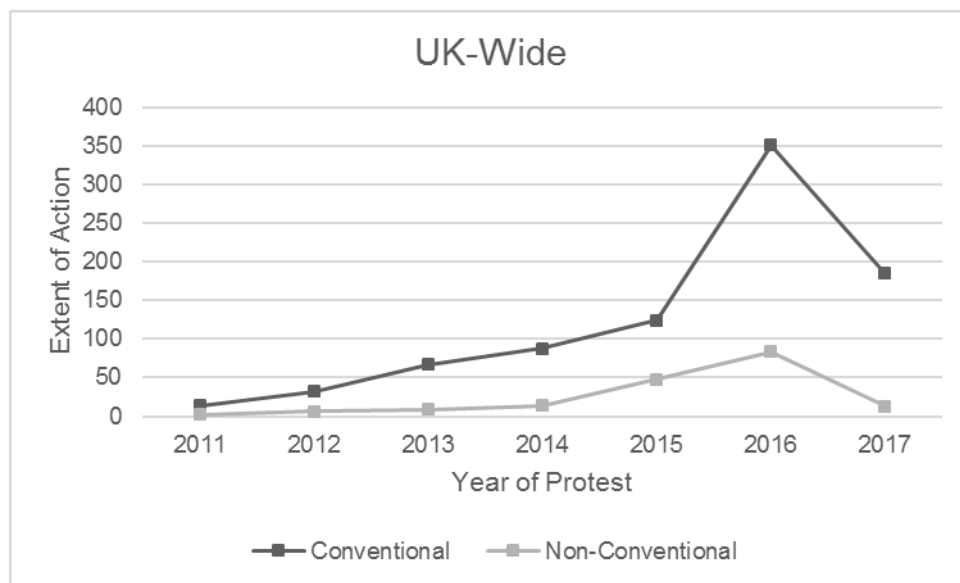**Figure 6.1**: Form and frequency of anti-fracking protest events across the UK by year (n=1006).

One of the most notable features presented by the data is that of a peak in conventional and non-conventional action in 2016. It is believed that this reflects the stage of development and, perhaps, the subsequent increase in awareness of fracking following the 14th onshore PEDL licensing round which saw licences

for oil and gas exploration awarded across the UK in December 2015 (see OGA, 2017). Once licences have been granted, the companies that hold them are allowed to apply for planning permission and any needed permits with a view to start surveying and drilling of the licence area (Chapter Two). In some areas, most notably Lancashire and North Yorkshire, planning applications were submitted and granted in 2016.

It should also be noted that while the extent of action shown in the presented figures falls after 2016, data collected after this year only covers the period up to May 2017 and thereby does not reflect the total actions listed in the months since. Accordingly, the decline in 2017 is not reflected in actual terms with the 198 protest events recorded from 1st January to 19th May equating to around 45 percent of actions listed for the entirety of the previous year. It would be suggested therefore that based on observed trends the end total for protest events in 2017 would be similar to if not higher than that for 2016.

It is clear that the majority events across the entire period are conventional in nature, although the general year-by-year trend is reflected, to a lesser extent, by non-conventional actions. Many of the conventional actions take the form of awareness raising events, particularly as film screenings hosted by local anti-fracking groups. This is of greater interest when related to the insights provided by the existing literature on anti-fracking campaigns where screenings of the film *Gasland*, which shows the impacts fracking in the US has had on locals' health and water supplies, are commonly understood to have been a significant and influential source of information for many individuals (for instance, Rasch and Köhne, 2016; Vasi et al. 2015).[33]

Regarding those who are behind these actions, some of the community and county-wide anti-fracking groups affiliated to Frack Off were particularly prominent both within their own localities as well as in other counties through involvement in the full range of protest event types listed previously. This will be demonstrated in the following discussion on final case selection. Beyond these groups which draw specifically from local communities, more well-known and established environmental organisations such as FoE and Greenpeace have also been involved in conventional and non-conventional actions, as has the Green Party (for example, Collins, 2015; Greenpeace, 2017; High Court, 2016). Trade unions have also become involved on occasion. While these nation-wide groups

may be seen as more institutionalised organisations, campaigns against fracking in some areas have also seen the involvement of members from radical environmental direct action networks such as Reclaim the Power and Rising Tide (see Reclaim the Power, 2013a; Rising Tide, 2012) which, as will be mentioned below, have both been involved in opposing Cuadrilla's fracking plans in Lancashire. Finally, in addition to those who participate directly in demonstrations and direct action, groups such as Green and Black Cross as well as Seeds for Change have been holding various legal and media workshops to aid groups in their campaigning.

Overall, significant variation was found between counties where events have been listed in terms of development stages reached, with the data set including areas where planning permission for exploratory work and fracking has been granted to those where no PEDL licences exist. Given the clear extent of anti-fracking activities across the UK as illustrated by this data, the gap identified in the social science literature on fracking in the country becomes even more clear.

Case Selection

Of the 69 counties identified, the five that were chosen based on the previously detailed procedure were Lancashire, South Yorkshire, Greater Manchester, Gloucestershire and North Yorkshire. These areas were not, however, chosen solely on stage of development against the frequency, size and type of actions (see Table 6.1), but also through a consideration of other variables of interest, including place characteristics, the extent of campaign engagement with local communities and/or government, as well as the extent to which groups from outside the counties have become involved in protest actions against local developments. In addition, a consideration was also given to the accessibility and potential quality of data that each county could provide with, for instance, areas without a clear and contactable campaign group or with only one event recorded for the entire period examined put to one side. The counties that were chosen and the specifics of each one will now be discussed.

Table 6.1: Breakdown of event type and count for selected cases, according to Frack Off and Drill or Drop.

Action Type	Lancashire	South Yorkshire	Greater Manchester	Gloucestershire	North Yorkshire
Procedural	6	0	0	0	3
Awareness raising	94	95	26	18	68
Demonstration	21	5	12	6	15
Direct action	1	0	0	0	0
Protection camp	0	0	0	0	0
Training events	14	4	9	0	4
Other	19	4	1	1	9
	(n=155)	(n=108)	(n=48)	(n=25)	(n=99)

Lancashire

First of all, in the northwest of England, Lancashire is a county that can be defined by its largely rural landscape with its borders further incorporating most of the Forest of Bowland, a designated Area of Outstanding Natural Beauty (AONB). This generally rural characteristic is reflected in the Fylde Borough where developments are currently centred. Lying between the coastal town of Blackpool to the west and Preston, a city to the east, part of the borough is situated along the northern edge of the River Ribble which continues inland beyond Lancashire and into the Yorkshire Dales. To date, the county has witnessed the most advanced stages of development in the UK with it including the first site for test fracks in 2011 and currently being where further such exploratory work is planned for 2018. Based on its previous experience of fracking when operations at Cuadrilla's Preese Hall site resulted in two tremors, it is perhaps unsurprising to find that protest events have been occurring since 2011 with, overall, a steady increase in the following years up until the next licensing round and the common 2016 peak as new licences were granted and planning applications submitted (see Figure 6.2; Cuadrilla, 2014a, 2014b).
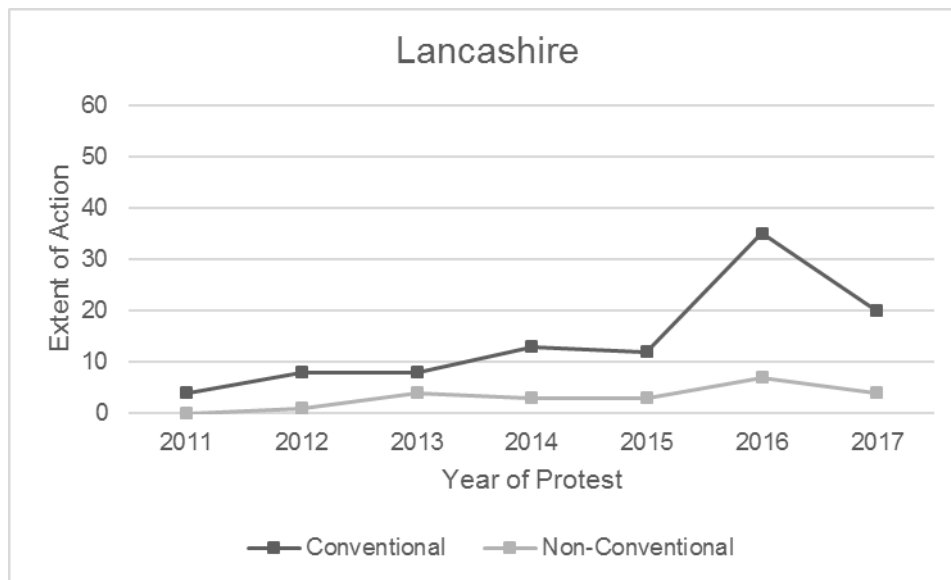
Figure 6.2: Form and frequency of anti-fracking protest events in Lancashire by year (n=122).[34]

Since work began in January 2017, Cuadrilla's site at Preston New Road in the Fylde Borough has been constructed and the drill rig delivered to the site on 27th July so that the planned borehole can be drilled and fracked in the coming months to test gas flow and commercial viability (Cuadrilla, 2017c). The company also has a further site planned in the same borough in the Roseacre area, although the final planning decision is still pending. Not only is the stage of development of interest, but also the planning process involved as unlike in areas such as North Yorkshire and Nottinghamshire where the local authority granted permission for developments to take place, LCC rejected both of the main site applications submitted by Cuadrilla (Chapter Two). Instead, following an appeal by the company, it was central government which decided to determine whether planning permission should be granted or not.

Upon overruling the original decision of LCC in 2016 by allowing the PNR site to go ahead and stating that it is 'minded to grant permission' for the second site at Roseacre (DCLG, 2016:19), it was possible to see instances where Bomberg's (2015) 'bad governance' discourse was appearing among anti-fracking groups, some of whom had been engaging with the council throughout the planning process. In this, DCLG's decision was perceived as a clear undermining of (local) democracy in an area where no social licence for shale developments exists, a viewpoint that can be seen by a short press release issued by the local anti-

fracking Preston New Road Action Group, provocatively entitled 'local democracy is dead' (PNRAG, 2016; also PNRAG, 2017).

Since then the county has seen increasingly frequent protests of various forms, both reported and absent in the PEA sources. In terms of recorded events, there were two requests for judicial review brought against the DCLG following their granting of permission to the PNR site on appeal, one by the Preston New Road Action Group and the other by an individual Fylde resident and protector. Both cases challenged the DCLG's decision regarding the PNR site on different grounds with the one resident highlighting the climate change contribution that methane emissions from fracking could have in the wider context of emission reduction targets and international agreements. The other challenge focused on a more procedural aspect of the decision by challenging the manner in which DCLG's decision runs counter to Lancashire's Minerals and Waste Local Plan and their Landscape Strategy, as well as Fylde's Local Plan with respect to noise and the disruption of the proposed development upon a 'valued' countryside. FoE were also represented at the hearings, drawing on experts to question the suitability of fracking in terms of both the UK's emission targets under the Paris Agreement and the impact the industry could have upon the health of local residents, bringing into question whether the precautionary principle was adhered to by both the Inspector recommending the appeal and the Communities Secretary (High Court, 2017).

Both cases were held together between the 15th and 17th March 2017 with the High Court passing down its final judgement a month later on 12th April. The decision made by the Court was that while many of the issues raised are arguable, there remains shortfalls in the cases brought against the DCLG and, therefore, the claims made for judicial review should be dismissed (see High Court, 2017).

Since this judgement, the parties involved have been granted permission to take their case to the Court of Appeal (Hayhurst, 2017a; PNRAG, 2017). Moreover, another local resident also planned to bring a legal challenge against the DCLG's decision to give Cuadrilla more time to provide evidence regarding traffic management plans for its Roseacre Wood site, the issue which led both LCC and DCLG to refuse planning permission. This case was however refused a hearing

by the High Court following the decision reached in the previous two cases (Hayhurst, 2017b).

In addition to ongoing attempts to have a daily presence outside the PNR site gates, there have been many recorded demonstrations held in Lancashire since 2013, a number of which boasted attendance in the hundreds. While local anti-fracking groups such as Frack Free Lancashire have been central to demonstrations, some have been supported by wider groups including national and local branches of FoE, the Green Party and Greenpeace (Collins, 2015). Throughout the planning process there were demonstrations that specifically targeted LCC to show the extent of public opposition to fracking as councillors sat in County Hall to debate the company's planning applications to frack in the county (Collins, 2015; Lancashire Evening Post, 2015). Following the council's decision not to grant planning permission in mid-2016, demonstrations then began to target the company and the site itself as the appeal was brought against the council and the DCLG granted permission for the PNR site to go ahead (for instance, Hayhurst, 2016a). Opposition, however, has not only been in the form of litigation and demonstrations.

The one recorded instance of direct action was Reclaim the Power's 'Break the Chain' fortnight of action against Cuadrilla and their Lancashire development which ran from 27th March to 10th April 2017 (Reclaim the Power, 2017a). The intention of this campaign was to target those firms which supply or otherwise support Cuadrilla and the fracking industry in general. As such, while listed as Lancashire-based the individual protest events which formed Break the Chain (and were not listed individually) occurred both within and outside the county. For instance, the first action undertaken by volunteers from Bristol Rising Tide – part of the aforementioned climate change activist network – involved them suspending themselves from the height restriction bars at the entrance to a Lancashire quarry that was supplying material for the construction of the PNR site, forcing the quarry to halt work for the eleven hours the action lasted (Reclaim the Power, 2017b). Using arm tubes to make themselves difficult to move, two Lancashire protectors blocked the entrance to another contractor's depot in Bolton, Greater Manchester, for seven hours (Reclaim the Power, 2017c). Individuals also blockaded the gates to another depot belonging to a drilling firm in Derbyshire through lock-ons and a tripod, with one participant further climbing

on top of a drill rig sitting in the firm's yard (Reclaim the Power, 2017a). Similarly, three protectors locked themselves onto metal bars fixed across the entrance to the offices of the London-based PR firm contracted by various oil and gas companies involved in fracking. One of those involved was locked onto the front door itself with a metal hook fed through the letterbox and attached to her neck. This particular protest lasted for over five hours (Reclaim the Power, 2017a).

In addition to these events, there were also various demonstrations and performances outside other companies associated with Cuadrilla or fracking in general, including outside branches of Barclays as the bank has significant investments in Third Energy, the company with permission to frack in North Yorkshire (Bosworth, 2015; Reclaim the Power, 2017a). Due to Cuadrilla's progress and the prospect of drilling taking place at the PNR site, Reclaim the Power were again involved for a month of action throughout July 2017 to further support the rolling resistance that has been occurring since planning permission was approved (see Reclaim the Power, 2017d).

Among those unrecorded are some of the specific actions that have taken place as part of the ongoing attempts to have a daily presence at the PNR site.[35] For instance, an individual managed to climb onto a tipper truck that was delivering aggregate supplies to the PNR site and remained in place for 24 hours until he was removed by police on 12th April 2017 (Preston New Road Video and Livestream Page, 2017). Further lorry surfing also began on 25th July 2017 along the Preston New Road with a number of individuals partaking, one of whom remained in place for, in the end, just over 80 hours (Reclaim the Power, 2017e; also Hayhurst, 2017c, 2017d). There have also been various lock-ons across the site entrance to disrupt work, including one carried out by Greenpeace on 3rd May 2017 and another on 27th July 2017 in which four individuals used concrete and metal arm tubes to lock themselves into two cars which they parked across the site entrance (Greenpeace, 2017; Reclaim the Power, 2017f).

While these events occurred relatively recently, there have been earlier instances of direct action which have also gone unrecorded with a small group of activists gaining access to one of Cuadrilla's previous sites in Lancashire in late 2011. After gaining entry, some of those involved attached themselves to various pieces of site equipment. Three of those who gained entry to the site on the second occasion and disrupted work for 13 hours were members of Bristol Rising Tide,

and it was members of Frack Off who preceded them with a similar action a month earlier (Bristol Rising Tide, 2012).

There have also been numerous protection camps along the Preston New Road, two of the earliest existing in August 2014. One of these, which occupied the land earmarked for development between the 7th and 16th August, was established by around 25 local residents, including the Lancashire 'Nanas', a group of older residents who are active in anti-fracking campaigns across the country, to demonstrate ongoing opposition to fracking in Lancashire to the county council and help raise awareness of Cuadrilla's plans amongst other locals (Rothery, 2014, 2016). This coincided with the delivery of a reported 5000 letters of objection to LCC with thousands more said to have still been awaiting delivery (Rothery, 2014). Unfortunately, unlike with some other local authority planning portals, that used by LCC does not provide any information about the number of planning objections received, nor details about the grounds behind their submission.

The other camp began in the same area a week later and was organised by Reclaim the Power in an effort to support the local campaign against fracking. As part of their six-day camp, various activities including campaigning workshops and legal training events were held (Reclaim the Power, 2014). Two further camps along the Preston New Road were established in the first months of 2017 and have provided a base from which protectors can easily reach Cuadrilla's site, as used (and recommended) by Reclaim the Power (2017d) during their month of action through July 2017.

With regards to the influence such activities have had upon Cuadrilla's development, it has been reported that some of the firms supplying equipment and material have revoked their contracts with the company in light of protest actions carried out against them and the subsequent impact they have had on the businesses and their other customers (see Hayhurst, 2017d, 2017e). In this light and from a campaign perspective, it could be argued that the non-conventional actions held against Cuadrilla's supply chain have seen relative success.

To consider what anti-fracking specific groups exist within the county, there are active community-based groups like Residents Action on Fylde Fracking, the

Preston New Road Action Group and the Roseacre Awareness Group. In 2014, these and many others came together to form Frack Free Lancashire which has since become a prominent actor both within and outside the county.

In short, it is clear that events recorded as part of the PEA provide only a small window into the vast array of actions that have occurred and are ongoing within the county. Taking the above into consideration, Lancashire represents a case which has both the highest stage of development and the greatest extent of protest events seen anywhere in the UK to date. Beyond this, the county also boasts a significant and continued presence of anti-fracking and direct action groups from outside Lancashire alongside the numerous community and county-based anti-fracking groups who have themselves been involved in conventional and non-conventional actions. Local groups have also participated in a variety of events in other areas where fracking is a (perceived) threat. It is for these reasons that Lancashire is understood to be of particular interest to research into fracking and has subsequently been chosen as a case in this work.

South Yorkshire

Also in the north of England, South Yorkshire represents an area with a mixed landscape combining large urban centres such as Sheffield, Rotherham, Doncaster and Barnsley with the Peak District, part of which falling within the western edge of the county. South Yorkshire provides an interesting case in part due to the early start of campaigns against fracking in the county. As can be seen from Figure 6.3, there was a sharp and significant increase in the number of events in 2016 with those reported rising to 58, up from only six the year before. While the above suggestion is that 2016 represents a peak year in anti-fracking campaigns across the UK due to the recent granting of PEDL licences, no planning application had been made in South Yorkshire for the period covered by the PEA. That said, an application was expected prior to submission with the licensee, INEOS, advertising plans in advance of a formal application to Rotherham Metropolitan Borough Council. This application was made on 30th May 2017 with the consultation stage ending a month later on 21st July.
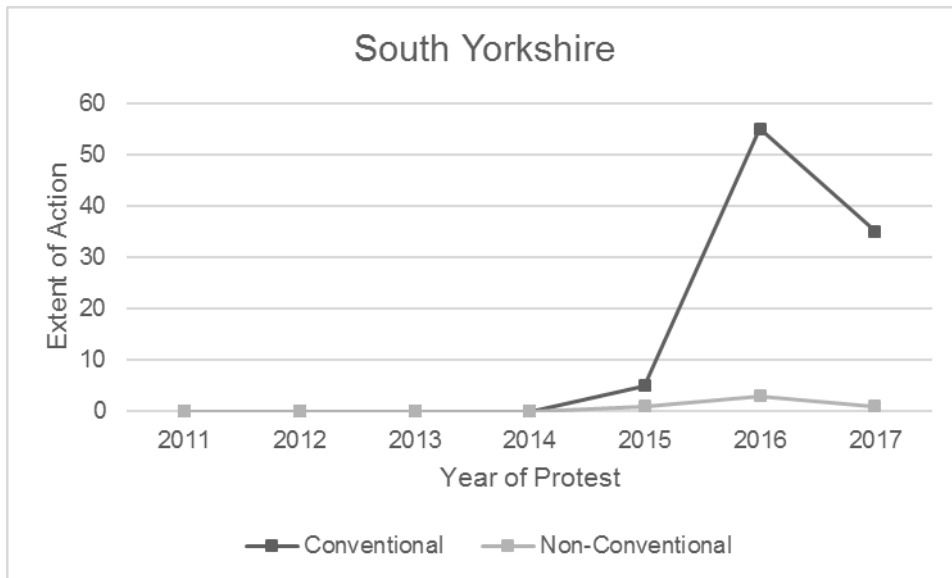
Figure 6.3: Form and frequency of anti-fracking protest events in South Yorkshire by year (n=100).

What INEOS are proposing near the village of Harthill in Rotherham is one vertical well to conduct exploratory work through the collection of core samples for the evaluation of shale gas and commercial potential. Within their planning statement, INEOS are clear that this work will not involve fracking treatments at any stage of the development (INEOS, 2017c, 2017a). That said, it could reasonably be asserted that should test results be positive the company may look to extend its exploratory operation in the county, potentially with a view to starting production, and that this may involve fracking as is currently the case in Lancashire. In August 2017, INEOS also announced interest in another potential shale gas exploration site near the village of Woodsetts, just south of Rotherham and east of Harthill (INEOS, 2017d).

As illustrated by Table 6.1 and Figure 6.3, there is a clear emphasis upon conventional actions with only a low number of small-scale demonstrations having been held within the county. It is particularly interesting that of the awareness raising presentation events recorded by the two consulted sources, a significant number are targeted specifically at local parish and town councillors across the county. What this suggests is that those in the campaign are keen to engage not only with other residents but also with local representatives who play a role in the planning process. With this seemingly being the case, it perhaps goes some way to explaining why it is that the county, despite a clear and active

anti-fracking campaign, has to date experienced a minimal amount of non-conventional actions.

Moreover, there appears to be only a limited degree of involvement from external groups and of local groups participating in events outside of the county, resulting in what remains a very localised campaign confined largely within the communities and borders of South Yorkshire. With regards to the campaign groups specifically concerned with fracking, there are community-based groups such as No Fracking in Barnsley, Rotherham Against Fracking and Woodsetts Against Fracking alongside the county-wide group, Frack Free South Yorkshire, which is the prominent holder of the aforementioned awareness raising presentation events.

In summary, while the industry is only at an early stage of development in South Yorkshire, this has not translated into a low number of protest events with the total number of conventional awareness raising events being around the same for that in Lancashire, where not only is the industry developing at a faster rate but events have been held over a longer period than they have been in South Yorkshire. It will be interesting to see if local campaign groups begin engaging in a greater number of non-conventional actions and how groups external to the county respond in light of the recent planning application, especially should permission be granted by the local authority responsible.

Greater Manchester

Situated in northwest England and neighbouring Lancashire, Greater Manchester can be defined as a conurbation incorporating the City of Manchester as well as the outlying towns of Salford, Bolton, Rochdale, Stockport and Wigan, with many of these communities' history linked to the textile industry which once dominated the area. As part of the most recent onshore licensing round, some of these areas of Greater Manchester were open for award and have since been granted with no current planning applications for fracking-related developments having been submitted. However, Greater Manchester has previous experience of this industry from the 13th licensing round with an exploratory borehole targeting CBM at a site in Barton Moss, Salford. This site was drilled in 2014 by IGas after receiving planning permission from the local authority in 2010 (IGas, 2017a).

While fracking was not intended or used at this site, core samples were taken with a view to assessing the commercial viability of the area's resources and used to inform the development of fracking treatments to further explore and develop gas-bearing rock formations in Greater Manchester, as discussed on the company's website (IGas, 2017a). As also indicated on the company's website, the test results from the collected samples would seem to be positive in terms of the area's CBM and shale gas potential. Similarly to Barton Moss, a further CBM exploration site in Davyhulme, Trafford, was granted planning permission from the local council in 2015 (Cox, 2015; Trafford Council, 2015).

As exploratory drilling of this kind has only recently been granted permission in Nottinghamshire, or remains at an early stage of the planning process as seen in Derbyshire and South Yorkshire, Greater Manchester is understood to represent a case where a relatively high stage of development has been seen. Yet, despite this, the frequency of protest events has remained low throughout, as is shown by Figure 6.4.

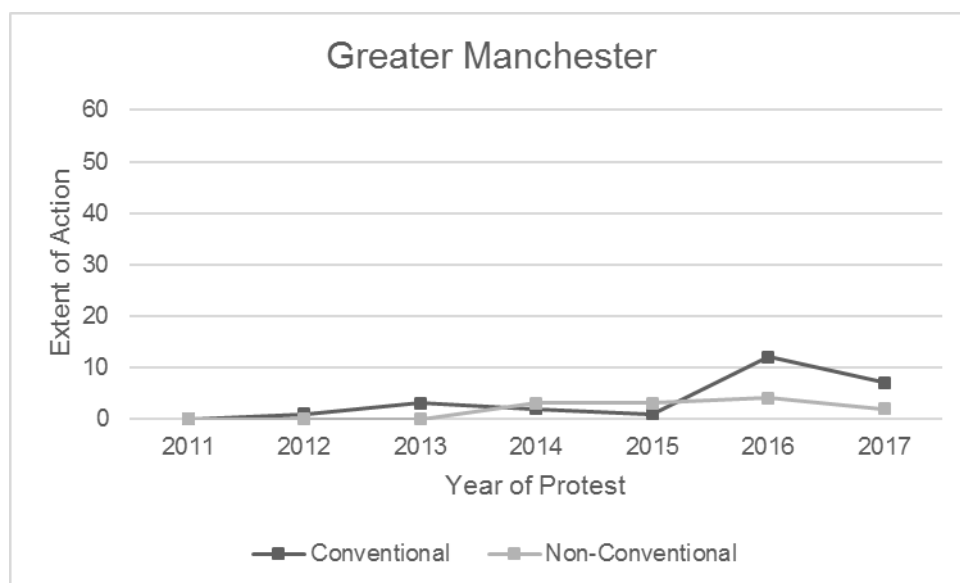**Figure 6.4**: Form and frequency of anti-fracking protest events in Greater Manchester by year (n=38).

While the overall extent of action has remained low, of the demonstrations that are listed by the consulted sources some, but not all, have involved a variety of actors from both within and outside the county and boasted attendance figures in the hundreds. In January 2014, two such events occurred against the

developments at the Barton Moss site and to support those who had been involved in a protection camp since November the year before. Interestingly, however, this camp, whose residents included both locals and others and which was dismantled following the completion of work at the site in April 2014, was not specifically listed by the consulted sources and so was not recorded on methodological grounds. This is also the camp which forms the part of Gilmore et al.'s (2017) study of the policing of protest, discussed in Chapter Three. Another unreported camp centred on the Trafford site and was in place for 18 days in 2014 (Scheerhout, 2014).

Other unlisted events include two blockades held within the same week in December 2013 (16th and 20th respectively) aimed at disrupting site traffic to and from Barton Moss. Specifically, individuals from across the UK placed a seventeen-metre-long wind turbine blade across the site entrance (Reclaim the Power, 2013b), followed a few days later by the placing of a coach across the entrance onto which five individuals locked themselves (Frack Free Greater Manchester, 2013). More recently, there has been a spillover of protests from neighbouring Lancashire with lock-ons and other protests being held outside the depots of firms contracted by Cuadrilla to aid in the construction of their PNR site. This occurred as part of the Break the Chain fortnight of action and has also involved local anti-fracking groups such as Bolton Against Fracking who have attempted to block movement to and from a local civil engineering firm (for instance, Holland, 2017).

As just indicated, there are anti-fracking-specific groups existing on the community-level such as Bolton Against Fracking alongside Frack Free Greater Manchester, a prominent county-wide group. Other groups do exist and have been prominent in the area, including the local FoE branch. It was also Manchester-based Greenpeace members who participated in the lock-on at the PNR site mentioned above in May 2017 (Greenpeace, 2017).

To provide an overview of Greater Manchester as a case, it represents an area with a clear disparity between the stage of development and the extent of protest actions that have taken place. This becomes increasingly interesting when compared to South Yorkshire where the opposite is true, or to Lancashire where protest events are frequent and where there has been a greater involvement of different groups from outside of the county, although it is Greater Manchester

where scholars have previously uncovered strong direct action networks (for instance, Doherty et al. 2007).

Gloucestershire

Unlike the other case areas in the North, Gloucestershire is a county in southwest England neighbouring both Bristol and the Midlands, further extending around the Severn Estuary which flows into the Bristol Channel to create a shared land border with Wales. Gloucestershire boasts a largely rural character with both the Cotswolds AONB, which encompasses much of the county, and the notable Forest of Dean in the west. Out of the cases discussed here, this is the county with the lowest stage of development as, while licences were open for award under the 14th licensing round, none were granted. While this is the case, anti-fracking groups do exist and have been involved in a small number of protest events since 2014.
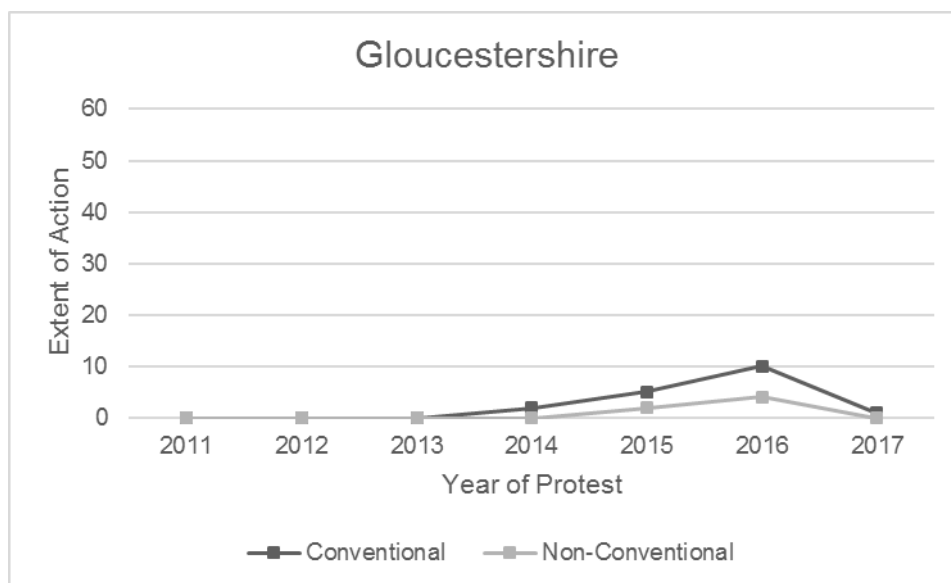
Figure 6.5: Form and frequency of anti-fracking protest events in Gloucestershire by year (n=24).

While there are a number of anti-fracking groups in the area, including two near the Cotswolds, the group with the most amount of mentions in the consulted event calendars is Frack Off Our Forest who are concerned about the potential of fracking occurring within the Forest of Dean. It is this group that has been behind the six listed non-conventional actions seen in the area, four of which targeted

local authorities and Gloucestershire County Council specifically to show the extent of opposition to fracking in the county. Although uncertainty around details remains for many of these actions, one of the demonstrations outside the county council offices that is known to have taken place boasted an attendance of around 60 individuals (see Frack Off Our Forest, 2015).

There does not seem to have been much external involvement within Gloucestershire and little wider engagement from groups based within the county. Equally, based on information collected through a wider reading of recorded events, there does not seem to be a great deal of networking between the various groups within Gloucestershire. If this is indeed that case then it demonstrates another difference with campaigns in other counties, prominently Lancashire but also Wiltshire, a county with a context comparable to Gloucestershire's, where community-based groups across the areas have joined together to form a wider, county-level campaign group by the name of Keep Wiltshire Frack Free.

If Lancashire represents a case where it is possible to see a significant stage of development met with an equally significant extent of protest events, then Gloucestershire represents the opposite. It is for this reason that this county has been selected as the fourth case in this research.

North Yorkshire

Finally, given the similarity it shares with Lancashire as one of the most prominent areas for the industry (Chapter Two), North Yorkshire was chosen as a supplementary case. This county, lying in northeast England, comprises a heritage coast alongside multiple national parks and AONBs, two of these situated close to the KM8 wellsite. While prominent, as of February 2018 the company involved announced it was putting its plans to frack on hold due to delays in receiving final permission from the government pending a financial resilience review and began to remove some equipment off-site (Clark, 2018; Third Energy, 2018). In response, it was also announced that the local protection camp, unrecorded by the PEA but which had been in place for just over a year, was going to be dismantled (Hayhurst, 2018b).

Established around the time of the High Court's (2016) ruling on a request for judicial review of the county council's planning decision, as brought about by FoE and Frack Free Ryedale[36] – a key resident-led anti-fracking campaign group in the county – this camp has been associated with other protests in the area. These protests included three individuals gaining access to the site in October 2017 before scaling the rig which stood in place and remaining overnight, as well as numerous demonstrations at the site gates that also saw the participation of one of the Green Party's leaders (Hayhurst, 2018b). Other protests, as charted by Figure 6.6, include demonstrations outside the local MP's constituency surgery and a hall where another fracking company, INEOS, were giving a presentation to councillors, as well as outside the district council offices as the planning committee held a meeting, each event boasting a fair attendance (see respectively, Hayhurst, 2016b; Mackie, 2016; Minster FM, 2016).
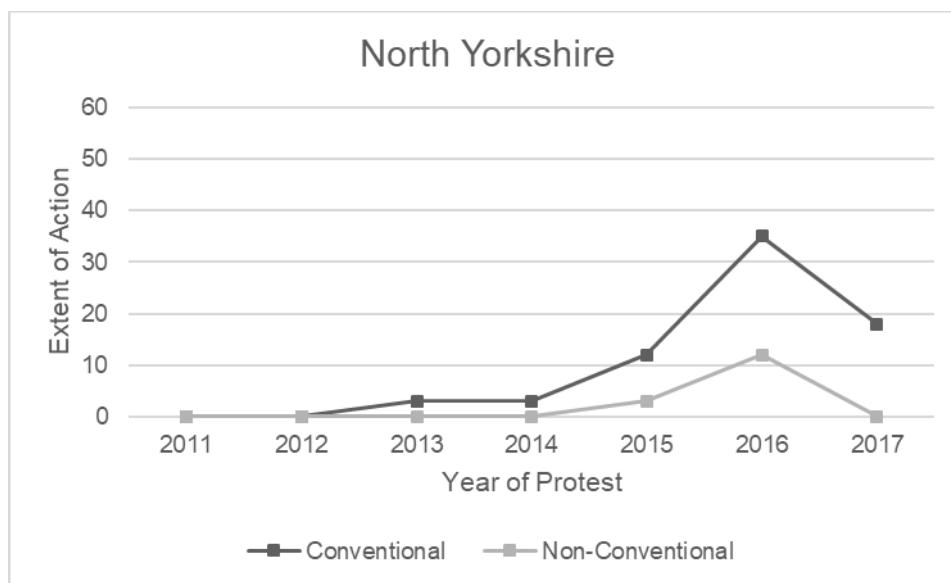

Figure 6.6: Form and frequency of anti-fracking protest events in North Yorkshire by year (n=86).

Summary: Variety in Place-Based Campaigns
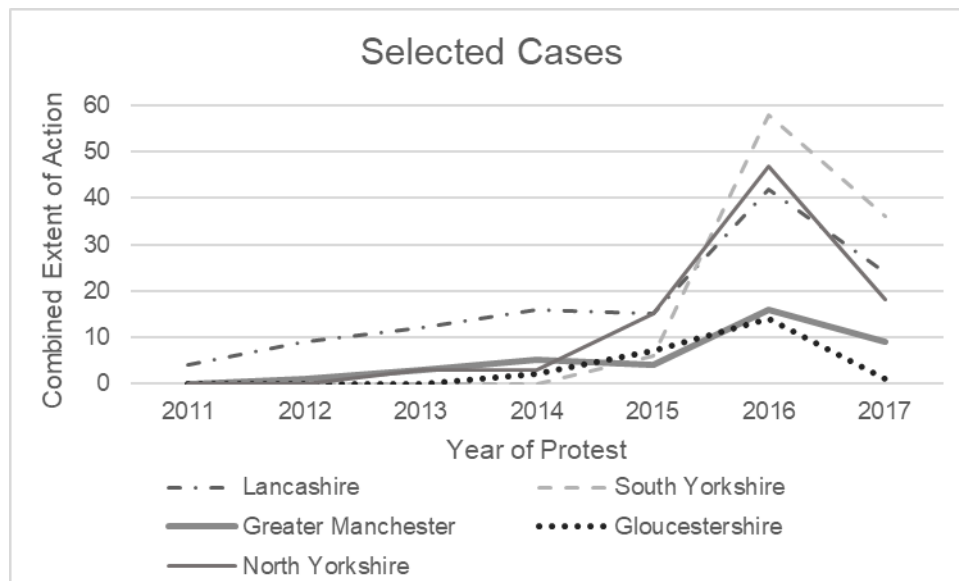
Figure 6.7: Frequency of conventional and non-conventional anti-fracking protest events (combined) across all selected cases by year (n=383).

As discussed in the previous chapter, a PEA approach has been adopted by many scholars examining protest, including that concerned with the environment, for various purposes such as theory testing or to address perceived gaps in the literature. Following these studies, this research has sought to use this method to gain insights into anti-fracking protests across the UK and, through consulting event calendars specific to the fracking issue, has collected information about 1006 protest events held between 2011 and 2017, 383 of which falling within the selected cases. As such, it begins to fill the gap regarding the literature's account of anti-fracking protest activities noted in Chapter Three.

This information, which provides a window into recent events, has been used to inform case selection with the areas presented here demonstrating key differences in terms of development stage and the extent of protest actions that have taken place in both conventional and non-conventional forms. Beyond this, they also hold further interest through notable variations in place characteristics, how campaigns have engaged with local government and the extent of external involvement from other anti-fracking groups based in different counties, national environmental organisations such as FoE and Greenpeace, as well as direct

action groups like Reclaim the Power. As such, it is held that these five counties offer the potential to gain key insights into how these different characteristics influence the way in which individuals partake in and perceive both place-based campaigns and the wider fracking debate, helping to address the research question which guides this study. With this in mind, the next two chapters will turn attention to providing an account of the collected interview data and the insights it allows before some concluding remarks from this study are offered.

Chapter Seven: Identified Themes

As noted in the methodology, a thematic analysis of the interview data was conducted in order to draw out the key ideas present across the data set. Guided by theory, it is the purpose of this chapter to provide an introduction to the themes identified, illustrated through quotes that best reflect the ideas within and across the data. Initially, those themes related to aspects of RM, framing and NSM will be considered before greater attention is given to the two more prominent (and connected) theoretical perspectives in this research, POS and place. The first of these will now be discussed.

RM

As examined previously, resource mobilisation approaches emphasise the importance of resources and organisational structures which can gain access to and utilise these effectively for social movement activities. Further, this structure can be influenced by which resources and resource pools a movement group seeks and whether there are other groups targeting the same resources with whom competition or collaboration may be necessary (McCarthy and Zald, 1977). As such, according to these key aspects of theory three themes have been drawn from the data, these being: *Informal Organisation*; *Older Demographic*; and *Collaboration*.

Informal Organisation

As noted, a formal organisational structure is held to be an important feature of social movements for RM scholars, providing the means by which groups can target and use resources effectively. However, when discussed with those in South and North Yorkshire, it was mentioned that while the local campaigns do have some organisation through specialised subgroups which focus on different areas, such as media and PR or the planning process, there is not a formal membership nor a formal leadership either locally or across the movement as a whole. Instead, it was understood that people contribute when and what they can based on their own abilities:

> My role is public speaking, interviews with the press and other media in general and, in a way, that's my forte and so that's what I do. I mean, everybody does something different. It doesn't matter if your forte is baking buns, then you bake buns. If your forte is, sort of, negotiating and talking with the police, then you talk to the police. Everybody has their particular skill and everybody is crucial to the success of the whole operation (Participant, North Yorkshire, 12/03/18)

This was especially the case in Gloucestershire where one of those involved in coordination discussed how, instead of attempting to hold structured group meetings and similar events, individuals from across the different communities that surround the Forest of Dean organised and partook in their own activities and were encouraged to do so. As they put it:

> It was a very ad hoc group anyway; we've never had any membership scheme or anything like that, it's just been like, well, if you take part, you're part of it, you know. We didn't have a chairman or a secretary or anything like that, we just kind of had a few of us coordinate it. We encouraged people to do their own thing in different villages because it's quite a spread-out area (Organiser, Gloucestershire, 06/12/17)

> Yeah, it's kind of like encouraging satellite organisations so, in other words, if a bunch of people in one village felt strongly about it they could do their own thing. Hopefully feed in to what we did, but we never had any disputes with any groups or anything like that. Different people did their own thing. But we would have central focuses in that, if we had a demo, we'd obviously try and get everyone out (Organiser, Gloucestershire, 06/12/17)

In other words, while there are those who help organise and coordinate local campaigns alongside some delegation of tasks to subgroups, the overarching membership and activity structures are, for the most part, informal in nature.

Older Demographic

Of those who are involved, older residents including retirees were mentioned by some as a key campaign demographic, with little youth involvement by comparison:

> There is a sort of retirement community here; a lot of people have come up to North Yorkshire after their working lives to invest. I mean, I mention that because it's interesting in the anti-fracking demographic that so many are quite wealthy retirees that have moved away for the country lifestyle and are now having to fight for that reluctantly; very, very reluctantly (Participant, North Yorkshire, 19/03/18)

As part of this, interviewees also discussed how many of those involved lack prior campaign experience, are not involved in groups such as FoE or Greenpeace and live, in some instances, within largely conservative communities, both big and small 'c' (see also Chapter Five on interviewee demographics). The implications of these features, including the reportedly older demographic, for how anti-fracking campaigns and RM perspectives are understood will be considered in greater depth in the following chapter.

Collaboration

Although overlapping membership to other groups is not seen among the interviewees (Chapter Five), another key aspect related to RM is how anti-fracking campaigns have collaborated with each other as well as with national organisations, including FoE and the more radical direct action group Reclaim the Power. In this, local campaigns have worked with and received support from national groups in respect of legal challenges, petitioning, marches and direct action, some of which was mentioned in the previous chapter. Beyond this, while campaigns have remained largely local, when asked about the involvement of those from outside the county they were discussed positively as being welcomed and encouraged by the majority within the local campaign and community, including in North Yorkshire where those not from the immediate area helped establish the protection camp:

> And the protest camp has been supported by local people; local people have provided them with blankets, they've given some of them the option of staying with them when the weather gets really bad, they've given food and brought them water and stuff like that. It's not an unpopular camp (Participant, North Yorkshire, 09/03/18)

> I want to make it very clear that although there are people coming in from outside, there's been people greeting them from inside. It's been a real, you know, working together. So, people have come in from outside, we've invited them in and we need them, but hopefully we've supported them from within the community as well (Participant, North Yorkshire, 19/03/18)

As a result, and as will be elaborated on in the next section, there is a general sense of solidarity among some of the protectors regardless of individual backgrounds and affiliations.

Framing and NSM

As themes related to framing and NSM were not explicitly drawn out through interviews, here they are considered together. While identity-formation in itself does not form a core goal for the campaigns, as would be emphasised by NSM scholars (Melucci, 1980), there were still some interesting points around protector self-identification and how they are portrayed.

'Protectors'

First of all, many of those spoken to did not have any particular concerns around the labels that may be applied to those involved in campaigns, such as 'protestor' and 'activist', and would not necessarily ascribe to them. Nevertheless, 'protectors' did emerge through interviews as one of the preferred ways of self-identification by those involved, as noted by a 'community activist':

> So, I'd say we were acting as water protectors or air protectors or environmental protectors, but also community protectors. So, I think 'protectors' is a fair way of describing people because that is their motivation; it's not anything else, really (Organiser, Gloucestershire, 06/12/17)

The main concern in this area was about how labels such as activist can hold negative connotations which help depict protectors as irrational, confrontational and violent individuals, as can be used by pro-frackers and may deter others from becoming involved in anti-fracking groups even if they too oppose fracking. As one individual put it:

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I prefer to think of us as protectors rather than protestors or activists. It's semantics, really. It's just a case that a lot of the people will read the press and get the impression that we're all professional, hardened trouble-makers with a massive criminal record and a huge history of causing trouble wherever we go. That's nonsense…So, yeah, I mean we try and be careful of the language because it's got connotations. At the end of the day, we are not trouble-makers, we're not criminals, we're sensible people who really, this is a last resort for us (Organiser, Lancashire, 12/12/17)

Solidarity

While distinct identity-formation does not appear to form a significant aspect of anti-fracking campaigns, fracking is discussed as a unifying issue which has drawn communities and individuals from a range of backgrounds and group affiliations together with one commonly shared goal to obstruct fracking. In this sense, there would seem to be clear ideas of solidarity between protectors in one county with their counterparts in another and vice versa, with some groups supporting the work of others through participating in demonstrations as well as sharing information and/or campaign materials:

So, I think the important thing is that obviously people are concerned about their immediate environment and their neighbours and their friends and their children, but this is a much, much wider issue. So, I go over to Yorkshire whenever I can to help them and provide moral support for them, and we get people coming from all over the country and indeed from abroad. They come and support us as well because all of them recognise that this is much more than fracking in Lancashire (Organiser, Lancashire, 12/12/17)

Consequently, there are aspects here of an 'us' and 'them' distinction between protectors and the industry alongside national government (see also POS below). However, one of those spoken to in South Yorkshire mentioned how, while fracking has had a unifying effect locally, they would rather not have the involvement of professional protestors from outside the area as seen in, for instance, North Yorkshire and Lancashire. This is based in part on the local campaign's preference for the conventional actions predominant in the PEA data presented earlier, as well as the limited experience of and inclination to protest held by many involved in the group. As they put it:

And that's one of the concerns about the village as should the drilling start then we will get the, I suppose, the professional protestors which ideally – I mean we wouldn't stop them obviously – but ideally we don't want that. That kind of shows that, you know, that's not something that we really get involved in normally, but obviously this has brought the village together even more (Participant, South Yorkshire, 05/12/17)

As it was not of explicit interest in the interview schedule, only slight insights into these themes can be gained. However, for many it would seem that while campaigns have remained mostly local-led, there is a sense of solidarity with others opposing the industry in the UK and abroad, with a degree of protest involvement in other areas. And while in areas where the campaigns are no longer prominent, given a lower immediate threat, some of those involved do try to maintain an awareness of protest in other counties locally, such as in Gloucestershire and Greater Manchester. Whether this would remain the case under a more latent period for anti-fracking campaigns as a whole or if this would be marked by a greater division between groups in different areas with identities and solidarity being stronger within rather than between campaigns remains to be seen (see Flesher Fominaya, 2010; Saunders, 2013).

POS

With a keen focus on the environment within which movement groups emerge and operate, political opportunity structures draw attention to the importance of the state, including a government's receptiveness to protest and the presence of elite allies for campaigns. It is these features of the polity which are understood to influence the way protest is conducted (Kitschelt, 1986). In addition, beyond the national level this research has a further interest in understanding the role of such structures within local levels of government, as conceptualised through the idea of the local state. Themes of this nature are, therefore, organised here under the following headings of 'national government', 'local state' and 'planning process' respectively.

National Government

Misleading and Contradictory

To begin with a consideration of the national level, a theme across all but one interview is that national government are misleading in the reasons behind their ongoing support for fracking, questioning, for instance, the notion that energy security is a pressing issue for the UK:

> So, to tell us that we have a threatened energy supply is absolute nonsense and this is the message that's coming both from the industry and from the government. But, when you start looking at the government's statistics, they're not talking about their own statistics, they're talking about something that suits the industry. So, yeah, to go back to your original question, the government attitude toward this is very, very confusing and very inconsistent and quite frankly, in many instances, it's totally irresponsible (Participant, North Yorkshire, 12/03/18)

More than this, the government's approach is further seen to run counter to commitments made under the Paris Agreement regarding efforts to address climate change through emission reductions, shale gas being a fossil fuel and potent GHG. In the same vein, their decision to overturn LCC's rejection of planning permission for the PNR site is seen as running counter to their promotion of localism in which decisions that affect one area are made in that locality, not at the national level (see planning below).

Collusion with Industry

Part of the perceived reasoning behind the government's approach has to do with their relationship with the oil and gas industry, with the idea of collusion between the two actors being prominent across many of those spoken to:

And really, they're looking a bit foolish to my mind, but they are absolutely insistent that we need to exploit this resource, but we don't. There's no danger of the lights going out, we have a secure system already and this government has repeatedly not only encouraged and subsidised the oil and gas industry, but they've actually been active in trying to disable the renewables industry by reducing tariffs. So, they really are, I mean, they're in the pockets unfortunately of oil and gas lobbyists who have got very powerful, got lots of money to throw around on PR and lobbying (Organiser, Lancashire, 12/12/17)

Furthermore, related to this was the perspective that money must be a key factor in why fracking has remained on the agenda despite widespread public opposition:

But it just seems absolutely ridiculous, and I personally think there's lots of money in this. I do think the whole thing's a bit corrupt because, you know, people, the general public have told us, we've gone and surveyed people that they don't want it and, you know, it still seems to be on the government agenda. So, I just think it's, yeah, there's something going on, money's invested and, yeah, they're just going to try to keep pushing ahead (Participant, Gloucestershire, 22/01/18)

I feel that this government are being given something, they're getting some benefit themselves out of this in some way, shape or form without actually considering the effects that that's going to have on the people of England. And at the moment I think the only way it's going to stop in England is if we have a change of government (Participant, South Yorkshire, 05/12/17)

As such, not only is national government seen by many as being hypocritical with its support for fracking vis-à-vis the rhetoric employed around climate change, localism and energy security, but it is also seen by some as being motivated by personal gain and profit, not by concern for the wellbeing of communities:

I think the thing that is perhaps the most disheartening is I feel that we're being, we are guinea pigs and the people who allegedly – and this is a very allegedly – are looking after our interests, which is probably this government God help us, are not looking at the evidence (Participant, South Yorkshire, 27/02/18)

Isolated in Stance

By continuing with their position, national government is also seen as becoming isolated in its support for fracking, emphasis being drawn to the bans and moratoria in place across many European countries, including the devolved nations. This remains the case in Parliament also, where the other major political parties have included a cessation of fracking across the UK in their manifestos in recent years. Interestingly regarding POS, when this latter point is raised these other national parties were not necessarily discussed as 'allies' to be engaged with in themselves, but rather as supporting local authorities to shift towards a more open anti-fracking stance, these then becoming the potential allies for campaigns.

While this remains the case, two interviewees also took the opinion that the government may no longer be as interested in pushing fracking through as it once was, in part due to the extent of opposition it has received and the delays that have resulted. However, the government is also seen as being too weak or too invested to perform a U-turn on this policy:

> I can't work out why they won't stop apart from they're just too deep in, they haven't got what it takes to turn around to the industry and say we need to stop. So, I feel that it's sort of falling forwards, but I don't even think the government are supporting it anymore in my opinion. I think they just don't have what it takes to stop it (Participant, North Yorkshire, 19/03/18)

As such, in addition to presenting itself as closed, the national-level opportunity structures are also seen by some to be weak regarding what policies they can successfully push through and, as indicated in the last quote, withdraw support from.

Heavy-Handed Policing

A final theme brought up, unprompted, by multiple protectors when asked if there was anything not discussed that they would like to add was that of policing. Specifically, this concerned the ways in which, in line with the government's agenda, the police have assumed a role as extra security for the industry, facilitating their activities rather than that of protectors. Moreover, the manner in

which the police have conducted themselves in this is of particular concern, interviewees highlighting how their approach has been heavy-handed, resulting in injury and arrest on unsubstantiated grounds with many of the charges brought against protectors being dropped once they reach court:

> I mean, you haven't asked me anything about the human rights aspect of this which is absolutely key…And the way to realise that is to go to an active site, is to go somewhere like Preston New Road and just see the way people are prevented from doing what within Articles 10 and 11 of the Human Rights Act they're really perfectly allowed to do. I mean, we've seen some of the most appalling police tactics, and I don't hesitate by using the word appalling because when these things go to court, on the whole they're thrown out (Participant, North Yorkshire, 12/03/18)

> And one other fact I haven't mentioned, unfortunately the police are their allies. They are basically doing all they can to stop us and to let the industry have their way. It's almost the case that the police are extra security for Cuadrilla, even though it's us who pays their wages and not Cuadrilla (Organiser, Lancashire, 12/12/17)

What this is argued to amount to is a restriction upon people's right to peacefully protest. Such experiences have been documented in the study on the policing of anti-fracking protest in the UK conducted by Gilmore and colleagues (2017; also Szolucha, 2016).

As a result of these themes, a deficit in trust would seem to exist between protectors and the government, summarised neatly in a statement made by an interviewee when asked how they feel about it:

> How do I feel about government? I think that they hold me in contempt and, frankly, the feeling's entirely mutual (Organiser, Lancashire, 12/12/17)

However, the extent to which this is reflected on the local level will now be considered.

Local State

Uncertainty

Although national government's stance on fracking is clear, a degree of uncertainty remains around what position local authorities have or will adopt. For some, such as in Greater Manchester where the campaign was most prominent around 2014, the interviewed organiser spoke of how, given uncertainty about whether they were permitted to take a stance regarding fracking should it be perceived as bias when determining planning applications, the local authority was not always receptive to the campaign's attempts to engage with them. This was held to be compounded by the limited information on fracking and associated impacts that existed at that time. Nevertheless, as access to information has increased and local government's ability to declare support or opposition clarified, the interviewee has also seen a shift towards an anti-fracking stance alongside a corresponding ease of access for protectors.

For others, like in Lancashire, this uncertainty is related more to whether the Conservatives – as a specific group within the county council and who now lead it – will uphold the council's previous decision to oppose fracking or follow national government's position, potentially lessening the ability of local protectors to engage with them as current allies, as expressed by the interviewee from this county:

> So, one of the issues about Lancashire County Council is that when they made their rather courageous decision to say no to fracking, it was a Labour-led authority. Unfortunately, it's not anymore. It's now a Tory-led local authority which will make them more inclined to approve future planning applications and less inclined to listen to local opposition. Lancashire County Council, as things stand, they are our allies because we are defending their original decision which was to say no to fracking. But whether they will continue to, in the face of growing local opposition, whether they'll continue to hang onto the Tory philosophy that there's a resource there, we must use it, or whether they will see the bigger picture remains to be seen. I'm not confident (Organiser, Lancashire, 12/12/17)

In a Difficult Situation

That said, this interviewee's counterpart in Gloucestershire discussed how some local Conservative councillors did agree with the campaign, at least quietly, despite their government's position. This organiser understanding that these councillors are in a difficult situation between adhering to the agenda outlined by government and voicing local concerns that run counter to national policy, as noted when mentioning how most abstained when the county council voted on its position regarding fracking:

> I know privately a lot of the Conservatives were anti-fracking but because it's government policy, they couldn't declare it. And obviously you have to make allowances like that, you know, because you realise that the way politics works is they have to keep things secret [laughter]. I would say the vast majority of whatever view locally were not happy about fracking. Some of them may have agreed to it elsewhere and play the NIMBY card, but that's my view and that's the way it seemed (Organiser, Gloucestershire, 06/12/17)

Such a difficulty not only extends to Conservatives, but also to local government on the whole with concerns around the financial implications of rejecting planning permission for the industry and the resultant legal fees required following any appeal of their decision, as again occurred in Lancashire. Should permission be granted, however, then the costs of policing the site would similarly pose difficulties. Here, the broader context is important to consider with public finances remaining problematic for many local authorities. As it was discussed through interview:

> The county council have been put between the two. They've got national policy which they have to adhere to, which means they have to consider fracking, but they also have massive reservations…if they were to say no, they do stand to risk a very large court case that they couldn't afford. So, how they object and limit and work with fracking is a very, very difficult path for North Yorkshire County Council…[they] are trying to walk a very difficult road between very strong national agenda…and very strong community interests and regional concerns (Participant, North Yorkshire, 19/03/18)

Largely Receptive

Although this uncertainty exists around local authorities' stances on fracking, they are, on the whole, seen to be largely open and receptive to concerns raised through campaigns, with councillors from some areas being directly involved in or at least supportive of them and their activities, and this was the final key theme identified concerning the local state in itself. Related, however, were feelings towards the planning process, as will now be introduced.

Planning Process

Skewed

Given national government's pro-fracking agenda, when asked about the planning process many discussed how it has been skewed in favour of fracking with the way the industry is treated in light of significant local objection showing clear preference, something highlighted further by a perceived inequality between how fracking and renewable energy developments are treated, the latter more likely to be halted in the event of resident objections:

> I suppose it's government trying to do what it can to get fracking to happen. So, yeah, various changes around planning policy. I mean, you know I talked before about the fact that the government can always call in and override planning decisions when they don't like them. But then you've got this odd situation with the difference between how onshore wind and fracking are treated in the planning system. Onshore wind, effectively if anyone objects it's pretty much not allowed to go through where with fracking you get lots and lots of people objecting and it still quite happily sails through the system. So, it's that equity thing, it's that local democracy thing (Organiser, Greater Manchester, 31/03/18)

Undermined

As indicated in the above quote, what this skewing of the planning process contributes to is the feeling that national government is attempting to constrain the debate on fracking within local authorities and, as a result, is curtailing local authority power over local determination regarding whether fracking is allowed to

take place or not, thereby undermining democratic processes.[37] Two organisers sum up this general opinion well when they state:

> One of our concerns here is not just about environmental issues, it's about issues pertaining to democracy. You're probably aware, but all the levels of local government here, up to and including Lancashire County Council, said no. And this government has decided that they know better. They use phrases like 'in the national interest' and they effectively just overturned all the local [authority decisions]. They're quite happy to spout about the importance of localism as long as local people decide what they [the government] want (Organiser, Lancashire, 12/12/17)

> What's egregious from the government point of view is that it talks a lot about localism and local decision-making, but then when local people decide that it's something they don't like, then they just overrule them. So, yeah, it feels that there's something more fundamentally broken in the democratic process as well as just bad decision-making (Organiser, Greater Manchester, 31/03/18)

Viable Opposition

Despite these flaws in the planning process, it was still seen by some as a viable means of continuing to oppose fracking as it does allow room for local concerns to be raised and discussed, at least to an extent. These interviewees also saw how use of the planning process has helped slow down the progress of the industry since the last PEDL licences were granted in late 2015. Again, however, uncertainty exists as to whether this will remain the case:

> At the moment the planning process is restrictive and we should applaud that, you know, we should applaud that or we wouldn't be in this situation after seven years. We still [have] not [had] one successful frack in this country (Participant, North Yorkshire, 19/03/18)

> At the moment, theoretically, the planning process does give the opportunity for local people or local authorities to voice the concern of people who are voting for them. But, the question is, is this going to change?...So, you know, at the moment, I mean, the planning system can be used to the advantage of the people who oppose fracking, but whether this will pertain in the future is anybody's guess (Participant, North Yorkshire, 12/03/18)

Consequently, given the prevalence of this uncertainty, for some there is a feeling that democratic channels no longer provide a meaningful way of opposing fracking given the closed nature of national decision-making and its impact on the local state. This was expressed by the Lancashire-based interviewee when discussing the motivations behind their participation in direct action at the PNR site alongside Reclaim the Power:

> We've followed the democratic process, we have spoken at public inquiries, we've signed petitions, we've written to councillors, we've written to our MPs, our voice just wasn't being heard. And, so, given that the arrival of the drill was very immanent at the time we took this action, we decided we had no choice; we were given no choice and that was the essence of our PR. We're decent, honourable people, but we're not going to go away. So, if you're not going to listen to our voices and take on board our concerns, we're going to have to make you take notice and that's exactly what we did (Organiser, Lancashire, 12/12/17)

Place

The final theoretical perspective pertains to place as aesthetics, how interviewees think and connect to the areas where they live and how the threat of fracking may influence protest participation. This is discussed through three themes: *Not NIMBY*; *Industrialisation*; and *Social Aesthetic.*

Not NIMBY

When asked how they first became involved in the anti-fracking campaign, the majority of interviewees discussed how it was only after they had heard of the potential for fracking to occur in their immediate area that they learnt about what it is and decided to oppose it locally. However, as part of this interviewees also conducted their own research into the industry and its associated impacts, and it is here where they further decided that they cannot support the development of this industry anywhere within the UK. This general viewpoint was taken further by two interviewees who argued that opposing fracking in one area in turn helps to stop fracking occurring in other areas, whether local or otherwise:

> Each site where there's a site battle happening or a threat of fracking,
> that could potentially be the first site where something goes ahead.
> That then means that it's effectively a bellwether or test ground for
> fracking policy nationally and if it does go ahead, it's more likely to go
> ahead in other areas…So, almost, if you want to stop fracking
> happening, which a lot of people do, then it's not just about stopping
> fracking where you are, but to stop fracking wherever it may happen
> (Organiser, Greater Manchester, 31/03/18)

Moreover, while concerns do exist around local impacts, the arguments
employed by protectors also extend to other scales and notably to the climate
change issue regarding the contribution the industry would have to national GHG
emissions, with two individuals adding that the emphasis needs to be placed
instead on working towards a shift in overall energy consumption.

In other words, while their initial awareness and concern about fracking was
based in the local, through learning more about the process many would now
seem to reject the idea of fracking anywhere in the UK for a variety of reasons
across local, national and international scales, reflecting the discourses already
identified in the UK debate by other scholars (see Bomberg, 2015; Cotton et al.
2014). Some have, therefore, participated in protest in other counties and
collaborated with non-local campaign groups to show support and solidarity. As
such, it would seem that opposition extends beyond a purely NIMBY outlook
which would suppose that protectors only take issue with the industry in their own
area but would have no such concern should it affect somewhere else. Instead,
interviewees' outlooks appear to fit more with the idea of the NIABY discussed
earlier through Wolsink (1994; also Neville and Weinthal, 2016; Robinson, 1999).

Industrialisation

Of concerns with a more local impact, the proliferation of wells required to make
fracking commercially viable and the industrialisation of the landscape that would
ensue was a prominent concern shared among all interviewees given the impacts
such industrialisation would bring to where they live. Specifically, the valued
characteristics of what are for the most part rural areas were understood to be at
threat, these being the tranquillity and low pollution levels (in terms of light, noise
and air) offered by the areas alongside their visual aesthetic and rich biodiversity,

aspects which formed part of the reason many of the interviewees and their neighbours moved to these areas, as conveyed succinctly by one individual:

> I moved here because I like peace and quiet, and I like the birds and animals, and clear sunsets and clear skies, and fresh air (Organiser, Lancashire, 12/12/17)

Beyond this, these defining characteristics also contribute to how the areas are engaged with and experienced every day, with some mentioning how they are able to walk only a short distance from their home to end up in nature and enjoy, for instance, the North Yorkshire Moors. A further illustration of this was presented by a more focused discussion of a specific place of value within the local area, namely through a description of fortnightly walks in a local National Trust-owned estate, a short drive from the interviewee's village:

> So, that's my walk and it's just, you look back across the lake towards…the footprint of the house...I mean, it does, it just lifts your spirits; it's wonderful. It's like the effect of that grip that the green and the peace and quiet has on you, it's just marvellous. I suppose people say it recharges your batteries (Participant, South Yorkshire, 27/02/18)

In these ways, fracking and the changes to place that it necessarily brings are raised as key concerns by protectors and would affect the ways in which they are able to understand, value and engage with their local area. This therefore ties in with a subtheme, *As 'Home'*, observed across just under half of all the interviews in which there was not one place of significance noted locally, but rather value was seen in a more general and holistic sense, encompassing the area as a whole. As such, this reinforces the importance of the characteristics offered by these areas where fracking is being proposed and how the industry could be seen to disrupt or detract from these.

Social Aesthetic

While place and the threats posed to its characteristics and the ways it is experienced do seem to be important factors behind opposition to fracking, whether it supports what Olcese and Savage (2015) name the 'social' aesthetic – as a connection to and understanding of place based in everyday engagement which helps inform identities – remains uncertain. However, glimpses of such a relationship between person and place was offered by the organiser in

Gloucestershire who lives and campaigns around the Forest of Dean. To elaborate, when asked about what it is like to live in the area, rather than talking of peace, quiet and other characteristics, the interviewee discussed how the Forest informs a unique sense of place and identity, acting as an 'island' that provides a feeling of separation to other areas, stating:

> The Forest, I think, naturally is kind of like an island, you know...And I think this happens to the people who move here as well, that the landscape seeps into them and they feel separate to, say, the rest of England (Organiser, Gloucestershire, 06/12/17)

Here, it is possible to see how place contributes to an identity; of what it is to be a 'Forester'. What is particularly interesting, however, is the contribution of the area's history to this. As the interviewee puts it:

> I don't know whether you've ever been to the Forest of Dean, but people are very, very proud, you know, feel it's a very precious place. And it has got centuries of tradition that goes back, you know, a long, long time of people taking direct action en masse to protect it. So, we are sort of following in a tradition (Organiser, Gloucestershire, 06/12/17)

It is in this where the most support for Olcese and Savage's notion of the social aesthetic may be seen (recalling also Benzecry, 2015) as not only does the Forest help contribute to a unique sense of identity, but it would also seem to lend some degree of support to protest behaviours by virtue of this 'tradition' of protest to protect the Forest. Therefore, this could be seen as indicating a further and perhaps deeper way in which place connections may influence protest participation.

Summary: Interviewee Perspectives

This chapter has introduced and illustrated the themes identified through the thematic analysis. In particular, while little was found which speaks directly to NSM, framing and, to an extent, RM perspectives, POS has emerged prominently from the data, tying in to some interesting place-related aspects which address the main question set out by this research. Specifically, it would appear that there is a fair amount of variation between how different levels of government are perceived, with similar feelings shared by most if not all of those spoken to. The

themes would also seem to emphasise that place and the threats to it are important concerns for protectors, although this perhaps does not fully capture the ideas of the social aesthetic. It is the purpose of the following chapter, therefore, to begin to analyse these ideas as a means to better understand the data, particularly around POS and place.

Chapter Eight: Discussion

As indicated, the analysis of these themes will centre on those aspects of theory that were more prominent within the data, notably around POS and place. Further, in so doing it shall draw upon the PEA data and literatures cited previously to aid in the analysis, including in producing a comparative account of selected cases where possible. As a result, the research question posed at the start of this study – namely, *to what extent do place-based approaches complement traditional social movement theories in understanding the motivations behind participation in anti-fracking campaigns*? – will be addressed. Before this, however, points of interest relating to RM will be discussed.

Resources and Organisation

While the interest of this chapter is on other theoretical perspectives, interviewees did provide some insights which relate to resource mobilisation. Specifically, while scholars such as McCarthy and Zald (1977; Edwards and McCarthy, 2007) emphasise the importance of SMOs with formal organisation facilitative of resource access and use, what has also been discussed through the work of Flesher Fominaya (2010) is how campaigns may lack this formal structure but instead provide a horizontal space for different activists to meet and discuss strategies and goals. It is in this latter vein that the examined anti-fracking campaigns would seem to fall with mention of how groups opted not to have defined member- or leadership schemes, amongst other features, posing further questions to the explanatory value of what is a cornerstone idea for RM perspectives.

Further, the demographic features recorded through interview (see Chapter Five) indicate that while many of those spoken to have some past experience campaigning, most are not members of national campaign groups such as FoE nor of any political party, although some declared support for Labour or the Greens; these features being shared across the case areas. With consideration given to RM suggestions that networks can aid in recruitment and resource access, it would appear that the networks these individuals are involved in, as gauged by the existence of overlapping membership, did not necessarily influence their involvement in local anti-fracking campaigns. As such, their

structural availability in this sense would not seem to have played an important part in informing their protest participation (Saunders et al. 2012; Schussman and Soule, 2005).

With regards to the other concept of biographic availability, which draws attention to the influence of personal circumstances such as work and family on participation (Saunders et al. 2012; Schussman and Soule, 2005), this can be linked to RM through the theory's understanding that potential campaigners conduct a cost-benefit analysis before committing to protest. Similarly to structural availability, however, only two interviewees mentioned the constraints of family and/or concerns around the impact participation could have on employment, although in both cases these individuals have still been involved in conventional and non-conventional actions locally. This concept would therefore also seem to have had only a limited influence on participation. That said, if older individuals are one of the key campaign demographics as noted by interviewees, then it could be suggested that they have more time available for campaign involvement than those still in full-time employment or with young families.[38] This would require further research to confirm, however, as the interview method employed by this study does not necessarily allow detailed insight into general demographics, something better suited to survey approaches.

Beyond rational decision-making, the idea of moral shocks was also introduced earlier as a more emotive means by which campaigns may target resources (Jasper and Poulsen, 1995). In addition, the film *Gasland* was mentioned as providing the galvanising imagery that could result in such a shock, with one interviewee directly noting the potential impact this film and its depiction of the industry can have (similarly to Vasi et al. 2015). However, besides this one mention and while film screenings did form a significant part of the PEA data, little more about how film and other media can or have been used in such a way to motivate campaign involvement was raised through interview. Instead, it was more common to hear about how it was interviewee's own research into fracking and its associated risks that made them decide that they could not support the industry, locally or elsewhere. In this way, while it was not necessarily through the work of campaign groups, the moral shocks caused from more general reading around the issues attributed to fracking do seem to have had a significant

effect. It could be suggested, therefore, that moral shocks would, and perhaps have, aided recruitment within the anti-fracking movement.

Continuing to take demographics into account, those involved would seem to reflect some of the ideas around the 'atypical' environmentalist proposed by Cotgrove and Duff (1980). However, while some are left-leaning, former public sector professionals and many concerned with wider, non-material environmental and climate change impacts, there is similarly only limited membership to environment-focused campaign groups. Moreover, while those spoken to have prior campaign experience, this does not extend to all those involved, with protectors being drawn from what are discussed as largely conservative villages (big and small 'c'). As such, and as raised through interview, there is some reluctance behind participation in these areas, especially around non-conventional actions. In this way, some support is found for Gullion's (2015) conception of the 'reluctant activist' as those who may share certain characteristics with the atypical environmentalist while considering themselves to be conservative and/or having no experience or interest in campaigning, but who have become involved in protest nonetheless.

Overall, therefore, while some of the identified themes do relate to the key features of RM approaches, little support is found for these perspectives with regards to the suggested importance of formal organisational structures, membership networks and rationality.

Opportunity Structures

With regards to themes related to POS, it would appear that national-level government represents what scholars have argued is a broadly 'closed' input structure characterised by policy-makers' lack of receptiveness towards protectors' concerns, this manifesting itself in limited formal and informal access points for campaigns and, with regards to the policing question, little tolerance towards outward protest. Regarding output structures, or the ability of government to implement policies (Kitschelt, 1986; Kriesi et al. 1992), it may be seen to be strong in the sense that government can and has influenced local decision-making in favour of fracking, as in Lancashire, thereby representing what Kriesi et al. (1992; Chapter Four) typify as 'full exclusion' within a system.

However, since the test fracks of 2011 and despite the continued pro-fracking agenda, no further fracking has taken place on account of protest activities. In this sense, the output structure is simultaneously relatively weak as the full and successful implementation of fracking policy remains unseen.

These structures may account for the limited engagement with the national level seen in the PEA data, with non-conventional actions being prominent where protectors target the industry and, by extension, national government. This is exemplified in Lancashire where the organiser spoken to discussed how one of the reasons behind taking direct action stemmed, at least in part, from a perceived exhaustion of democratic means by which to raise grievances, as resulted from a more closed system on the national level. Such a closure impacted upon the local state as the undermining of the local authority's decision against fracking marked a reduction in the county council's voice within the planning process and, therefore, the extent to which conventional protest forms could continue to be effective. Here, therefore, parallels may also be drawn with the work of North (1998) who found similar reasons behind the shift from conventional to direct action in the anti-roads movement. Additionally, this finding would also seem to support studies focused on democracy-related aspects of the fracking debate which highlight the feelings of disempowerment commonly gained through involvement in the planning process (Short and Szolucha, 2017; Chapter Three).

This idea around the national level being more closed and the local as being more open to dialogue with campaigns would seem to translate with the PEA data where conventional actions frequently targeted local authorities alongside the general community, as is notably the case in South Yorkshire where information events for representatives across all levels of local government were a prominent feature of the 95 conventional actions recorded in the examined time period. This again ties in with the perceptions of two local protectors who mentioned how most of those who live in their village and are involved in the campaign have no prior experience of physical protest and would prefer to avoid involvement in such activities, focusing instead on local government and the planning process as their means of objection. Moreover, even though the recorded demonstrations in Gloucestershire often centred around the county council offices, the organiser interviewed from this area discussed how these non-conventional actions were

not targeting councillors *per se*, but rather about showing the strength of feeling against fracking locally and letting the industry – the real target – know that they are not welcome.

The local state, then, could be seen as providing a more open input structure which allows and, to an extent, supports engagement with anti-fracking groups through democratic channels, the opposite to national government's structure. As seen, however, national government can and has exercised the ability to influence and determine decisions on the local level, resulting in a comparatively weak output structure for local authorities which contributes to the uncertainties that surround their position. In general, however, the data would indicate support for scholars who suggest that increasingly closed systems could influence the adoption of more confrontational, physical forms of protest, as in Lancashire, and more open structures as supporting the continued use of democratic or procedural means, like South Yorkshire (Kitschelt, 1986; Kriesi et al. 1992). This point about local vis-à-vis national decision-making leads onto the planning process, the final POS theme category discussed.

Specifically, based on the relationship observed between the two levels of government, this study proposes to understand the planning process and protectors' views of it within the broader notion of the local state. In particular, it is held to represent an area of contention between local and national authorities and where the jurisdiction of both falls in the fracking debate, each level having their own divergent interests and concerns. As illustrated in the last chapter, while the planning process is engaged with by protectors where authorities are currently involved in determining fracking applications, such as South Yorkshire, there is a widely shared feeling that it is being skewed and undermined, contributing to the weaker local-level output structures. Going forward, based on the above discussion and with the Lancashire context in mind, it could be suggested that areas like South Yorkshire which have yet to see the physical presence of the industry may witness an increase in non-conventional actions should the planning process conclude with the granting of permission by either the local authority or national government, marking a shift toward a more closed opportunity structure unresponsive and restrictive of conventional campaign methods.

Interestingly, to bring North Yorkshire into the comparison, while it shares a similar stage of development with Lancashire given the exploration site has already been constructed, in this case it was the county council which granted planning permission. However, despite this, it was in this county where two of those spoken to considered the planning process in a more positive light as a way in which opposition can be effectively raised, acknowledging still the uncertainties and difficulties stemming from the national level. Here also, it was felt that should the council be asked to determine another fracking-related planning application, they would not make the same decision as before given the strength of opposition witnessed since their original approval.

Put differently, it would seem that while the local planning process has already finished, the local authority is still seen as being largely open to the campaign and as sharing in their concerns, perhaps due to the increased awareness surrounding fracking since the first planning application, as well as the way in which protectors' experience dealing with the local state does not include national-level interference like that seen in Lancashire where the county council arguably lost voice in the matter as a result. These three cases and the pictures they present thereby demonstrate the complexities that exist around opportunity structures when observed across different scales and contexts.[39]

To summarise regarding POS, therefore, it would seem that little trust is placed in the government on the fracking issue and that, given its continued push for fracking and protector experiences of the policing of protest, opportunity structures on the national level could be conceptualised as closed with little access to government being attainable. When discussed, the clarified stances of the other national parties against fracking was considered a positive influence on local governments which, in some areas such as Greater Manchester, had previously been uncertain about whether they could adopt and express their own position on the issue. As such, local authorities are, on the whole, seen to be more receptive and supportive of campaigns and can be considered as providing a more open input structure which engages with protectors. On this basis, the PEA data shows that greater efforts to use democratic channels exist on the local level and not so much with national representatives or government. While this is the case, even when discussed positively some uncertainties around local authority stances do exist.

Further, local authority positions can result in tensions with national government policy, as has been seen in Lancashire where the county council's rejection of planning permission for Cuadrilla's PNR site was overturned by DCLG. Drawing on Magnusson's (1985) work and the idea of the local state, the planning process is seen as one area in which the boundaries between local and national levels are contested with the interference of national government leading to feelings amongst protectors that local democracy is being undermined to promote the industry over the concerns of local residents. Here, while local authorities may have open input structures, their output structures are relatively weak when oriented against the national-level agenda. The data shows, therefore, a mixed picture regarding how opportunity structures are perceived by the interviewed protectors and how they can contribute to issue perceptions, including around the undermining of democracy which has subsequently formed a key aspect of anti-fracking discourse (Bomberg, 2015). This demonstrates the benefits that can be gained by giving greater consideration to the local as well as the more commonly studied national level. As such, the introduction of the local state as part of a place-based approach has helped draw out some of the complexities that exist in how different authorities are understood and engaged with across contexts.

Place

Understanding place more narrowly as relating to aesthetics, the insights provided by interviewees across the cases would seem to resonate with the idea of place disruption discussed earlier through the work of Devine-Wright (2009; also Willow et al. 2014) in which a threat such as fracking holds the potential to damage people's connection to the places where they live and can result in a situation where individuals feel displaced from the areas they once knew. As observed in the themes, such a perspective focuses upon the valued and defining characteristics of the areas where interviewees live, particularly around the peace, quiet and rurality offered by these places. This, it is argued, demonstrates one clear way in which place has influenced individual's protest participation against fracking in the UK as the industry would necessarily alter or industrialise the surrounding countryside through the construction of the well pads and ancillary works.

While some literature draws attention to how people understand place according to their history in the area, such as the differences between established locals and those from elsewhere (recalling Petrova, 2013; Sagoff, 2005), this was not observed in how places were discussed in the data. One reason for this might be the similarities in residency found within the interviewee sample, with most not originally from the area where they now live yet still having lived there for a significantly long time (up to 40 years).

As noted in the previous chapter, while place is an important concern for the interviewed protectors, the way in which it was discussed does not fully speak to Olcese and Savage's (2015) work on the social aesthetic. As such, much of the data does not directly tie into or support efforts to decentre humans and move beyond a subject-object dualism when engaging with ideas of place or landscape, as seen in the wider literature (for instance, Wylie, 2007). However, while this is the case, one interviewee would seem to suggest the ways the social aesthetic could inform protest participation, providing insights into how place and the connections to it can feed into a unique sense of identity and, in turn, lend some degree of support for protest behaviours where threats are perceived. Further, while it would appear that the industry has contributed to a destabilisation of attachment to place, understood along the lines of Benzecry (2015), a degree of restabilisation has also been created in response with protectors highlighting the solidarity that has been formed within threatened communities and the place-protective actions that have ensued.

While some interesting discussions of local areas and engagement with them are a feature of the interview data, it has also raised methodological questions about how place connections could best be investigated. As such, this study also argues that more novel or participatory methods may provide a keener understanding of people-place relationships when employed alongside more common methods such as interviews. This suggestion comes largely from the experiences of and reflections upon this study, but also from Nettleton (2015) who notes how talking about place and associated feelings can pose difficulties for both interviewer and interviewee with the connections people have to place not necessarily being explicit, thereby resulting in difficulties verbalising feelings and ideas. As such, the work of geographers such as Wylie (2005) and Sidaway (2009) may indicate a potentially useful avenue with both authors providing an

account of their experiences and contemplation upon walking, an everyday activity, and how the landscapes they found themselves inhabiting and moving through engaged particular senses and evoked a range of feelings and ways of knowing place. These tie back in, therefore, to the ideas of Nettleton and the influence of movement with and through space in how areas are understood and engaged with through the body.

Similarly, photo-elicitation or other visual methods may provide another way in which participants could more easily understand and convey their relationship with place, as shown by Kennelly and Watt (2012; also Watt, 2013) in their study of local residents' perceptions surrounding the urban transformations brought about by the 2012 London Olympics and the changing position of the self within this. It is held, therefore, that employing these kinds of methods may benefit future studies that attempt to engage with the often complex yet seemingly latent notions of place, landscape and aesthetics that form part of everyday life.

Summary: The Influence of Place on Protest

With a keen focus on the insights the interview data can provide with regards to POS and the role of place behind protest participation, this chapter has discussed how national-level POS is, on the whole, seen as being closed to the concerns of local residents, government continuing instead with its agenda of promoting fracking in the UK and resulting in only a limited engagement between the government and campaigns. Corresponding broadly with a greater campaign focus on actions which target local authorities, in both a conventional and non-conventional sense as recorded by the PEA data, the local level is perceived to be more open and receptive to local concerns and, therefore, provides a more accessible input structure for groups to engage with.

While commonly found to be the case, the ability of local authorities to enact change and successfully prevent fracking from taking place is also an area of uncertainty given the stance and inclination of national government to overrule councils and support the industry in local areas. As such, beyond these observations it is argued here that the planning process forms a key area of contention between the local state and national government, with many of those spoken to seeing how the latter has actively attempted to undermine democratic

processes and make decisions which would otherwise be made locally. There is, therefore, a mixed picture regarding how POS is seen on different levels of government and a subsequent difference in how protectors attempt to engage with various authorities, something helpfully conceptualised through a greater focus on the local state as part of a place-based approach.

Further, with one of the prominent concerns raised by protectors being the issue of industrialisation and how the presence of the industry would impact negatively upon the valued characteristics of where they live, aesthetics is also an important consideration. These characteristics are understood to include the peace, quiet and wildlife offered by the largely rural areas where fracking is proposed, these existing on individual's doorsteps and being enjoyed through frequent walks which help 'recharge the batteries' of those who live nearby. Here, it is possible to see how the ways in which these areas are understood, engaged with and valued is under threat by fracking, and that this may result in some degree of place disruption. Further, although many first became aware of fracking given proposals for development in their immediate area, it has also been possible to see how concerns and opposition to fracking have expanded beyond the local level, incorporating issues of climate change and encouraging involvement in protest in other areas, thereby moving beyond NIMBYism. Finally, while not a theme common to the interviews, the organiser in Gloucestershire would seem to provide some insights into how place can also inform identity and, by extension, support particular behaviours through, in this case, a history of activism.

In summary, therefore, it would appear that place is an important motivation which has contributed to people's (propensity to) protest against fracking on account of its associated impacts and how this would change the defining characteristics of local areas alongside the influence of the local state. Whether this is also the result of a deeper connection to these places formed from everyday engagement and identities, however, remains uncertain. That said, while interviewees on the whole did not discuss the areas where they live along the lines proffered by Olcese and Savage, glimpses of the social aesthetic have still been caught. As such, it is held to remain an interesting and evocative means by which to conceptualise the relationship between people, place and protest, and is something which can benefit from – and contribute to – further research in the

area of social movement studies, including that which adopts more novel methodologies. Some concluding remarks shall now be drawn.

Chapter Nine: Concluding Remarks

Fracking, a controversial method for oil and gas exploration, has been promoted by the UK Government for economy and security-oriented reasons, but it has also been subject to opposition in the form of anti-fracking campaigns across the country, arguing against the industry and practice on a largely environment and health related basis. It is these campaigns that have formed the main focus of this research with a specific interest in understanding if and how place, conceptualised through the social aesthetic and the local state, has influenced participation.

The protest event analysis demonstrated the extent and diversity of the movement's reaches and activities, charting over 1000 actions of either conventional or non-conventional nature across 69 unique counties with their own histories, landscapes and identities. It was on this data that the specific cases for this study were chosen, these being: Lancashire, a largely rural area with significant protests and developments; South Yorkshire, also a largely rural county with significant protests but little development; Greater Manchester, a post-industrial conurbation which saw exploratory drilling met by few protests; and Gloucestershire, a notably rural area where little campaign and industry activity has been seen. From these and in addition to supplementary material from North Yorkshire, a series of nine semi-structured interviews was conducted with those involved in opposing fracking within (and beyond) their communities.

These interviews, examined via a deductive thematic analysis, provided insights into the different opportunity structures that exist on national and local levels of government, the planning process argued to form an area of contention between the two, and were found to support the findings of previous research on the UK, including around prevalent discourses and feelings of disempowerment (amongst others, Bomberg, 2015; Szolucha, 2016). In particular, given its support for the industry, national government is seen to represent a closed structure with limited receptiveness to protector concerns. Local authorities, on the other hand, provide greater opportunities for access and engagement to campaigns, and so present themselves as more open. However, while open in input, local authorities are simultaneously found to have comparably weaker output structures given national government's ability and willingness to overrule decisions that go against

the industry, constraining local authorities and creating uncertainty around their stance.

This corresponds broadly with the PEA data which shows a greater engagement with local vis-à-vis national authorities, lending some support to the literature's ideas around the influence of closed and open POS on protest activities. Within this, the stage of the planning process reached would seem to be important with South Yorkshire, where planning applications are still to be determined by the local authority, witnessing only a small amount of non-conventional actions whereas Lancashire has seen much more direct action and demonstrations, this area being one where the planning process was concluded in favour of the industry by national government intervention. The local state would, therefore, appear to contribute to one way in which place can inform protest.

Regarding the influence of place as related to aesthetics, the threat fracking poses to how these largely rural areas are understood and engaged with is seen to form a main concern for interviewees. As such, the risk of losing the key defining and valued characteristics offered by the local area through the industrialisation that fracking would bring is argued to have influenced both the initial opposition to fracking and the subsequent participation in protest, linking into ideas around place attachments and disruption. However, whether the social aesthetic discussed by Olcese and Savage has contributed to people's place connections and their propensity to become involved in protest remains uncertain. That said, aspects which suggest that it may have an influencing role have been recorded within the data and so this concept is held to be of potential interest to further research.

Such research should, however, note seemingly common difficulties in exploring people's connections to place, as found in both this and other studies (for instance, Nettleton, 2015). While not applicable to every interviewee, this is held to stem at least in part from the way such a person-place relationship may not be explicitly known to the individuals being spoken to, and so can pose challenges for researcher and participant with more concrete topics such as perspectives on government policy being easier to discuss. As such, further research may benefit from adopting and/or developing more novel and embodied research practices as may be grounded in everyday activities, including walking as a form of 'performance' (following Sidaway, 2009; Wylie, 2005; alternatively, Kennelly and

Watt, 2012), which may help interviewer and interviewee better understand and reflect upon ideas surrounding aesthetics and connections to place.

In conclusion, therefore, this study has provided an analysis of a contemporary yet understudied movement in the United Kingdom, investigating not only the extent and form of the protests undertaken to date, but also contributing to an understanding of how these protectors connect with the places where they live and how they perceive opportunity structures on both the national and local levels. In this way, this study has demonstrated how adopting an approach which emphasises place can help provide a greater understanding of some of the motivations behind movement participation which are complementary to and build upon more traditional social movement theories, notably regarding POS. In so doing, a contribution has also been made to that aspect of the literature which attempts to move beyond structure to investigate the role of agency in protest, arguing for the inclusion of the social aesthetic in conjunction with the more structural ideas of the local state.

While the findings of this study may best reflect the UK context, ideas of place connections and the role of emotions have been touched upon by literature focusing on fracking in other countries (for instance, Davidson, 2018; Willow et al. 2014). Consequently, the insights provided here may also be indicative of protector perspectives and experiences beyond the UK and could support further studies which similarly adopt a place-based approach to protest. What is clear, however, is that as campaigning continues alongside the industry, ongoing need for research into this aspect of fracking is evident and would help increase knowledge and understanding of what is argued here to be a significant movement in the UK. As such, it is held to be a topic which warrants further consideration by scholars of social movements.

Appendix One: List of Conducted Interviews (Chronological)

Interview with participant, South Yorkshire, 5th December 2017

Interview with organiser, Gloucestershire, 6th December 2017

Interview with organiser, Lancashire, 12th December 2017

Interview with participant, Gloucestershire, 22nd January 2018

Interview with participant, South Yorkshire, 27th February 2018

Interview with participant, North Yorkshire, 9th March 2018

Interview with participant, North Yorkshire, 12th March 2018

Interview with participant, North Yorkshire, 19th March 2018

Interview with organiser, Greater Manchester, 31st March 2018

Appendix Two: Consent and Information Form

Title of Research Project

People Protecting Place: Anti-Fracking Campaigns in the United Kingdom.

Details of Project

This interview is for a postgraduate research degree being conducted at the University of Exeter. The main focus of this research is about the factors that influence how anti-fracking campaigns are conducted, with a particular focus on experiences in the UK context. As part of this, a series of interviews with those involved in anti-fracking activities is being held in an effort to understand the ways in which participants relate to their local area and community, what events and activities they partake in and what their perceptions are regarding fracking and associated issues, amongst other related topics. Each interview will take approximately one hour and will be conducted via telephone.

There are no commercial or other interests involved in this research and it is being self-funded by the researcher. Data collected through interviews is to be stored securely on the researcher's private password protected university storage drive and used solely for the purposes of this research. Data will be presented in the final dissertation produced for the award of the degree and may potentially be published as a paper prepared with the researcher's supervisor(s).

Contact Details

For further information about the research and the use of interview data, or to express any concerns, in the first place please contact:

Name: Joshua Garland (researcher)

Email: XXX

If you have any concerns or questions about the research and would like to discuss these with someone else at the University, please contact:

Name: Professor Clare Saunders (supervisor)

Email: XXX

Confidentiality

Materials produced from this interview (transcripts, recordings and other notes) will be held in confidence by the researcher and will not be shared with any third party. All data will also be held in accordance with the UK Data Protection Act and will be retained for the length of the researcher's studentship at the University

of Exeter, due to end in September 2018. By this date, any interview materials will be destroyed.

With your permission this interview will be recorded on a Dictaphone. Please delete as appropriate:

Yes, I agree to be recorded / No, I do not agree to be recorded

Anonymity

Interview data will be held and used on an anonymous basis, with no mention of your name or other personal information. Reference may be made to the group of which you are a member in the dissertation.

Please note, contact details are kept in confidence and held separately from your interview data.

Consent Agreement

I have been fully informed about the aims and purposes of the project and understand that:

- Participation in this research is voluntary and I may withdraw my consent at any time by contacting the researcher;

- Any information I give will be used solely for the purposes of this research project, which may include a future academic publication, and will not be shared with third parties;

- All information will be collected and used on an anonymous basis;

- Data will be stored securely on university systems to which only the researcher has access and will be deleted by September 2018.

Interviewee name:

Signature: Date: /   /

Email:

Researcher Name:

Signature:

One copy of this form will be kept by the participant with a second copy kept by the researcher.

Appendix Three: Interview Schedule (main and potential follow-up questions)

Community and Landscape

To begin with, I wonder if you can tell me a bit about yourself and your background?

>What do/did you do for a living?

>What kind of education did you receive?

>Would you identify yourself as belonging to a particular class?

How long have you lived in the area?

>What drew you to the area?

>Do you have family connections to the area?

>Where do your friends live?

Can you give me an idea of what it's like to live in your area?

>Do you like living there?

>Day-to-day, what places do you normally travel to?

>>How do you normally get to where you need/want to be?

>>Can you describe your journey?

>Are there any local places that have particular value/significance to you?

>>In what way are they of value? Why?

>>How often do you go there?

>>How do you travel there?

>>What do you do when you're there?

>>Can you describe what it's like?

>>>What do you see/hear?

>>How do you feel when you're there?

Are there any particular leisure activities that you like to do in your area?

    Can you tell me more about your [leisure activity]?

        Where do you go for this?

        Do you do it alone or as part of a group?

        What do you see/hear along the way?

          How does this make you feel?

        How often do you do this?

Can you tell me what your local community is like?

    Are you involved in the community?

        [If so] Was this involvement before or after you became involved in the campaign against fracking?

    How do you feel the issue of fracking has impacted upon the community as a whole?

On Fracking in General

What are your main concerns around fracking?

How do you feel about the Government's approach to fracking?

What are your thoughts about the local authority's stance on fracking?

What are your views of the planning process?

Campaign Participation

Can you tell me about how you became involved in anti-fracking activities?

    What specifically influenced you to get involved?

        Did you already know some of those involved?

        Why do you think others became involved?

Have you ever participated in campaigning before?

When? Why? How?

Are you a member of any other (environmental) campaign groups?

What activities does your group get involved in?

In what ways have you been involved in anti-fracking activities?

How frequently do you participate in these events?

What are your experiences of campaigning against fracking?

There are many labels that can and have been used, such as 'protestor', 'activist' and 'environmentalist', but I wonder how you would think of yourself?

Do you think others in the campaign would think of themselves differently?

How do you feel you relate to these others (or vice versa)?

In what ways have groups and individuals from outside the county been involved in the local campaign?

What are your experiences of their involvement in your area?

How do you feel about their (lack of) contribution locally?

How aware are you of anti-fracking activities happening outside of your area?

End of Questions

Is there anything you would like to add to what has already been discussed?

Finally, is there anything you would like to ask me?

Notes

[1] While fracking only forms one part of the process used to extract unconventional oil and gas, within the debate it is widely employed to refer to every aspect of drilling. As such, following Hawkins (2015), Howell (2018) and others, unless otherwise specified it is in this wider sense that the term is used. Also, unless further specified as in Chapter Six, discussion of fracking and shale gas is understood to relate to coal-bed methane extraction as well.

[2] This self-identifying language of 'protection' and 'protectors' seems to be commonly used by those involved in protest events with it being employed over that which labels participants as 'protestors' and/or 'eco-warriors', something not everyone who is part of the campaign against fracking wants to be associated with given the negative connotations that accompany these terms (i.e. troublemakers, violent, irrational; see Steger and Drehobl, 2018 regarding the influence of these connotations on perceptions of movement actor legitimacy and credibility in Ireland; see also Chapter Seven). Accordingly, this preferred language has been adopted and used throughout this work when referring to the anti-fracking movement.

[3] For a good account of government policy development regarding shale gas and fracking in the UK (as well as France), see Keeler (2016).

[4] In 2016 the reliance on combined oil and gas imports stood at around 38 percent, but this figure is predicted to rise to around 73 percent by 2035 (OGA, 2016).

[5] The other resource that is subject to fracking and is of interest in the UK, namely coal-bed methane, is extracted in the same manner as shale gas but originates from underground coal seams rather than the shale formations discussed throughout this chapter.

[6] Given limitations on available space a greater account of the technical processes involved in fracking is not included in text, but may be found in other literature (for instance, Holloway and Rudd, 2013; Stephenson, 2015; RS and RAEng, 2012; Zoback et al. 2010; amongst others).

[7] While this is true, some also discuss another process known as 'fracture acidisation' in which acid in injected into the ground to improve oil or gas flow to the well by breaking down target rock layers. The UK's Environment Agency (2018) classifies this as a form of stimulation which may also be termed 'hydraulic fracturing'.

[8] These views espoused by government are suggested by Stokes (2016) to represent two contradictory yet complementary regulatory schemas, one of which ('domain') rejects call for reform and emphasises the adequacy of the existing regime, the other ('dexterity') highlighting flexibility and further regulation such as in planning and finance. While different, both are suggested to be ultimately focused on promoting fracking and supporting the government's approach.

[9] Reproduction permitted under the Open Government Licence, as available at: http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/. Last accessed 19th January 2017.

[10] A greater and more up-to-date context for selected cases is provided in Chapter Six. Further, a good discussion and analysis of the background to Lancashire's experience is presented by Bradshaw and Waite (2017), as will be mentioned in Chapter Three.

[11] It should be noted that environmental permits for both exploratory sites were granted by the Environment Agency at the start of 2015, covering requirements regarding borehole construction, the composition of frack fluid and groundwater monitoring. In addition to this, the storage and disposal of waste, including of natural gas through flaring, is also considered alongside other aspects (Environment Agency, 2015a, 2015b).

[12] Section 79 and paragraph 3 of Schedule 6 specifically (DCLG, 2016; Town and Country Planning Act, 1990).

[13] Mid-January 2018.

[14] Although the protest was about hydraulic fracturing and shale gas, the site at Balcombe was identified for conventional oil extraction (see Cuadrilla, 2017b; West Sussex County Council, 2010). However, concerns existed that fracking may have taken place later once the well was established as it had not been ruled out at that point (O'Hara et al. 2013).

[15] For instance, as the young, the educated, those more politically liberal and women (Michaud et al. 2008).

[16] However, it should be noted that place attachments are not necessarily positive in the first place and may instead be marred by unemployment, deprivation, crime and the like (Groves, 2015). Attachments can also change over time and in response to certain events or experiences (see Manzo, 2003).

[17] The full film and its sequel, *Gasland II*, can be found and viewed online. The official website is available at: http://one.gaslandthemovie.com/home, and was last accessed on the 10th October 2016.

[18] Tilly attempted a similar categorisation with regards to different regimes and repertoires of contention but employed a different terminology, namely that of low- and high-capacity (non)democracies (see Tilly, 2006).

[19] Part of the literature further examines the impacts movements may have through these particular repertoires, distinguishing four general types: 'procedural', which involves the development of further channels through which groups can access decision-makers; 'substantive', in which more material results are gained, including policy change; 'structural', resulting in changes to institutions and/or other as aspects of POS; and 'sensitising', where shifts in public opinion and/or the political agenda are achieved (Kitschelt, 1986; Van der Heijden, 1999). By understanding the relationship between movement actions, impact and POS in these ways, it can further be argued that the presence of opportunities can themselves be influenced by movements. Specifically, through

prior experiences and setting precedents by demonstrating which strategies can be successful, one movement can highlight the presence of exploitable opportunities to those that follow (see Tarrow, 1998; Tilly, 2006).

[20] See also the work of Haenfler et al. (2012) on 'lifestyle' movements, understood to include vegetarianism and veganism amongst others, where social change is brought about in the private sphere, is motivated by an individual's identity and informal networks, and influenced further by 'cultural entrepreneurs' through art and literature.

[21] Interestingly, in examining opposition to fracking in Canada, Neville and Weinthal (2016) discuss frame expansion in terms of the broader campaign linking to local concerns, rather than the other way around which is more common within the literature. In this, anti-fracking protectors made a link between fracking and local plans to use liquified natural gas for energy reserves, noting how tying in their broader concerns with the local level provided the wider campaign with both greater legitimacy and a more concrete case from which to argue against fracking.

[22] Wylie (2007) gives a good account of the literature that follows in this vein, prominently around the work of Merleau-Ponty and the later non-representational theory perspectives which attempt to conceptualise people's relation to landscape in such a way so as to go beyond dualisms. Here, discussion turns to the emphasis placed on the intertwining of body and landscape, amongst other related ideas. The key point conveyed across this literature is neatly encapsulated by Wylie in an earlier work, where he writes that 'Landscape is neither something seen, nor a way of seeing, but rather the materialities and sensibilities *with which we see*' (2005:243, original emphasis). Put differently, there is a deeper, more connected relation here which questions the understanding of landscapes as something observed through distance and detachment, the bodies through which people engage with and inhabit space being 'both *in and of the world*' (Wylie, 2007:149, original emphasis). Here, however, it is important to mention how 'landscape' and 'place' can be conceptualised as being distinct from each other within this literature, although in this study they are conflated through the notion of the social aesthetic.

[23] It should be noted that while Jackson's (2016) argument can be seen as broadly supportive of the intention shown by Olcese and Savage, this does not extend to the language they employ with Jackson's paper focusing on how the use of the term 'aesthetic' vis-à-vis 'aesthesis' is bound up with a Eurocentric notion of a subject-object or human-nature divide, as seen through the work of Descartes or Kant regarding cognition, for instance (as discussed by Wylie, 2007, amongst others).

[24] Regarding movement through place and landscape in these ways, see also the narrative accounts provided by Wylie (2005) and Sidaway (2009) on their experiences of and reflections upon walks through (and with) landscape.

[25] Davidson (2018) has also tried to emphasise the importance of emotions in how people are able to reflect upon and perceive fracking in Alberta, Canada, and how such an understanding helped inform two individuals' actions towards

the industry and subsequently influenced the outcomes of their decisions, including changing relationships with others in the local community.

[26] Throughout, 'protest event', 'protest action', 'protest activity', 'campaigning' and similar are used interchangeably unless specified.

[27] To define the terms used to refer to particular forms of direct action, 'lorry surfing' is when an individual climbs on top of a lorry and remains in place as a means to disrupt site deliveries and the like. Meanwhile, a 'lock-on' is where an individual attaches themselves to an item, such as a gate, vehicle or piece of equipment, to make themselves difficult to move and disrupt work. For this, bike locks and similar items can be used or, alternatively, an 'arm tube' may be used. Arm tubes can be made from metal and other materials and involve the individual chaining one of their arms inside the device (for an illustration, see Johnston, 2014). It is not uncommon for two individuals to be attached to the same tube, one at either end. 'Tripods' can also be used in protest events, these involving an individual placed on top of a tripod-like structure.

[28] This being at the Preese Hall site where the test fracks resulted in two local tremors, as referred to previously.

[29] The use of social media therefore does not seem to be heavily focused on public engagement, but rather on intra and inter-group communication, particularly with regards to informing of protest events through the sharing of videos, for instance. While the use of these online platforms is not of interest to this research, if this is the case the use of Twitter and social media in general would seem to reflect findings in Hopke's (2015) study of tweets made as part of the Global Frackdown day of action in 2013 (Chapter Three). Fracking-related hashtags include #DontFrackLancs, #DontFrackYorkshire and #WeSaidNo alongside more event specific hashtags such as that used for Reclaim the Power's fortnight of action in Lancashire, #BreakTheChain, as well as for the 'No Fracking Way' national day of action that occurred on 31st January 2016, #NFWj31.

[30] To better define these codes, 'protection camp' includes both the occupation of land and any associated events that take place within the camp, such as moves to prepare for eviction through the construction of treehouses and tunnels to slow the process down (as seen in Cheshire at the Upton Community Protection Camp in November 2015; see Frack Off, 2015b; Holmes, 2015). 'Training events' includes (social) media and legal rights training, as has been offered by groups such a Green and Black Cross, Seeds for Change and Reclaim the Power. 'Other' includes events that do not strictly fall into the given definition of a protest event, such as anti-fracking group picnics, fundraisers and water blessings which are not explicitly aimed at claim-making. As an additional note, performances of the play 'Fracked!', which depicts a community's response to fracking planned in their area, were not counted despite their frequent occurrence on consulted event calendars even though it could be argued to hold some degree of claim-making and awareness raising. This was largely based on the lack of discernible ties to any anti-fracking and/or broadly environmental campaign group like those of particular interest to this research.

[31] In accordance with the University of Exeter's ethics process, an application for ethical approval to conduct these interviews was submitted and later granted with minor corrections in October 2017 (approval reference: 201718-004) for start in the same month. An extension to this was requested and approved in February 2018, extending the approval's end period from March to June 2018.

[32] A thematic analysis approach has been adopted inductively in other studies of fracking (see Krause and Bucy, 2018; Partridge et al. 2017).

[33] *Gasland* is one of the documentary films that has been shown by groups in the UK, but it is not the only one. In addition, others such as *Groundswell Rising* and more recently *The Bentley Effect* have been screened. The former discusses fracking with those who have been affected and/or have campaigned against the industry in the US while the latter centres on one community's resistance to fracking in Australia, with filming having taken place over a five-year period and involving depictions of how thousands of people successfully came together in opposition to the industry and government. More information is available on the films' websites, http://groundswellrising.com/ and http://www.thebentleyeffect.com/, both last accessed 27th July 2017.

[34] Graphs showing protest events from the selected cases have been uniformly scaled (0 – 60) in Excel to allow a greater comparison between them.

[35] For a more comprehensive coverage of protest events that have formed part of this 'rolling resistance' outside the PNR site gates and some of those at contractor depots, see the Preston New Road Video and Livestream Page (2017).

[36] This request was made on the grounds of climate change contributions and the lack of assured financial cover from the company to address any long-term environmental pollution which may result from their fracking operation. The final judgement of the High Court (2016) was to dismiss the basis for the claim in favour of the process followed and decision reached by North Yorkshire County Council to grant Third Energy planning permission.

[37] After interviews were completed, the government was in the news given their plans to further support exploratory drilling which aims to assess the commercial viability of shale gas in the planning system, potentially considering it as 'nationally significant' infrastructure which would require planning permission from the national level rather than from local authorities (see Vaughan, 2018). This therefore further emphasises what interviewees see as central government's attempts to subvert and bypass local planning processes in favour of the industry.

[38] Those in employment, however, would arguably have greater resources that enable them to participate when compared to retirees or the unemployed. Again, further research into protector demographics would be needed to investigate this in-depth.

[39] As relayed in Chapter Six, North Yorkshire also demonstrates a fairly mixed campaign strategy with awareness raising activities being predominant in the PEA data and more physical protest forms also being adopted following the establishment of a protection camp in response to the industry's activities. While

these latter activities are underreported by the PEA due to aforementioned reasons, such a shift was noted by two interviewees who live locally.

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