

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository:<https://orca.cardiff.ac.uk/id/eprint/147713/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Lloveras, Javier, Marshall, Adam P. , Warnaby, Gary and Kalandides, Ares 2021. Mobilising sense of place for degrowth? Lessons from Lancashire's anti-fracking activism. *Ecological Economics* 183 , 106754. [10.1016/j.ecolecon.2020.106754](https://doi.org/10.1016/j.ecolecon.2020.106754)

Publishers page: <https://doi.org/10.1016/j.ecolecon.2020.106754>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



# Mobilising sense of place for degrowth? Lessons from Lancashire's anti-fracking activism

Javier Lloveras<sup>a</sup>, Adam P. Marshall<sup>a</sup>, Gary Warnaby<sup>a</sup> and Ares Kalandides<sup>a</sup>

<sup>a</sup> Manchester Metropolitan University Business School, All Saints Campus, Oxford Road, Manchester M15 6BH, The UK.

Corresponding Author: Javier Lloveras

Tel: +44 (0)161 247 3896

Email: j.lloveras@mmu.ac.uk

## Abstract:

This article foregrounds *sense of place* as a key concept to further advance spatial theorisations within both ecological economics and degrowth. We delineate the scope of the concept and apply it to the fracking controversy in Lancashire, UK. Specifically, we elucidate how sense of place notions were mobilised by both pro- and anti-fracking actors to legitimate and advance their respective positions. Our study makes three contributions. First, we review an extensive body of work in humanistic and cultural geography, developing an integrative analytical framework which can be adopted by ecological economic/degrowth scholars. Second, drawing on insights from Lancashire's anti-fracking movement, we illustrate how sense of place notions become critical for actors involved in degrowth-minded activism. In doing this, our work contributes towards narrowing the gap between degrowth theorisations and the enactment of degrowth-minded activism within real world complexities. Finally, we conclude by reflecting on the ideological implications of incorporating a global sense of place within degrowth politics, particularly in the context of rising ethnonationalism and right-wing populism.

**Keywords:** space; place; sense of place; degrowth; fracking; anti-fracking; activism; nationalism; right-wing populism

# 1. Introduction

In response to increasing calls for interdisciplinarity within both degrowth and related ecological economics literatures<sup>1</sup> (Spash 2013; Pirgmaier and Steinberger, 2019), there has been a recent interest in incorporating geographical approaches to inform current debates (Demaria *et al.* 2019). Particularly within degrowth studies, a so-called ‘spatial turn’ appears to be gaining prominence (e.g. Xue, 2014; Lloveras *et al.* 2018), motivated by a need to elucidate how degrowth ideas are socially performed and organised at different scales, as well as the type of places and territories they produce, and how new spatial subjectivities are constructed (Demaria *et al.* 2019). This increasing cross-fertilisation between geographic and degrowth scholarship has already inspired productive engagements; for example, Lloveras *et al.* (2018) explore how local forms of degrowth-minded activism reclaim urban spaces, infusing them with non-capitalist practices and logics. Gearey and Ravenscroft (2019) foreground the connections between ageing and place as a motivator to engage with nowtopian forms of activism; and Varvarousis (2019) discusses how spatiotemporal ruptures, created by moments of crisis, facilitate the materialisation of new social imaginaries in Greece.

Within this context, notions of place constitute a recurrent theme. Romano (2012: 583) observes that ‘the local dimension’ tends to be privileged as “the main institutional container and the preferable scale of application of the degrowth alternative”, and Latouche (2009: 43) explicitly articulates degrowth “as a local project”. Similarly, Trainer (2012: 390) depicts degrowth as unfolding “within mostly small and highly self-sufficient local economies under local participatory control and not driven by market forces”. Dittmer (2013) refers to ‘eco-localisation’ as one of degrowth’s most fundamental criteria, and Rees (2015: 205) argues that “restoring the local” is a cornerstone for unravelling “today’s increasingly unsustainable eco-economical entanglement of nations”. From an ecological economics perspective, emphasis on the local highlights benefits such as close-to-source production and consumption, reduced need for transportation, and shorter supply-chains (e.g. Marshall and O’Neill, 2018). Besides curbing material throughput, degrowth’s localisation argument should be considered as a radical democratic project geared towards promoting the principles of autonomy, self-sufficiency and decentralisation (Latouche, 2009).

A related strand of degrowth literature has also focused on ‘place’ through the adoption of a more nuanced scalar approach inspired by the work of Marxist geographers. These authors identify a tendency in many pro-localisation arguments to perpetuate idealised visions of place (Kallis and March, 2015), founded upon a naïve understanding of the complex multiscale processes and struggles in which the production of the local is embedded (Swyngedouw, 1997). Mindful of this, Demaria *et al.* (2013: 204-205) highlight the importance of rescaling degrowth politics by creating opportunities for ‘jumping’ scales through the formation of broader activist networks. Similarly, Beiling *et al.* (2018: 306) distinguish between “utopian projects”, involving “localized experiments with alternative forms of collective organization”, and so-called “transformative discourses” with

---

<sup>1</sup> While our arguments are primarily aimed at the degrowth literature, most of them could just as easily be applied to the field of ecological economics. However, in the interests of coherence and flow, from now on will refer mostly to degrowth. When the distinction is relevant, we will refer to both.

“global aspirations”, geared towards “bending developmental trajectories worldwide”. In this vein, Kallis and March (2015: 366) conclude that a key outcome of degrowth-minded experiments is the creation of “new scalar linkages and geographies”, which can enable activists to negotiate the tensions between the capitalist present (what is) and degrowth’s utopian imaginaries (what could be).

Although these ongoing conversations between degrowth and geography facilitate a more politically and analytically refined understanding of place, humanistic and cultural geographical literatures have been conspicuously absent from these debates. In this regard, Agnew (1987) argues that places are situated in space (*locations*); constitute material settings for social relations (*locales*); and are also laden with meaning (*sense of place*). This threefold distinction countervails reductionist analytical tendencies that treat places as mere containers of human action devoid of history, meaning and experience (Tuan, 1977; 1975). Here, humanistic geographers have noted how place notions are typically used as a synonym for either spatial location or locale at the expense of ‘sense of place’ aspects (Cresswell 2015). This omission overlooks how places are constituted through discursive practices (Dixon and Durrheim 2000), whereby social actors encode and generate multiple experiences, meanings, and connections between people and spatial locations/locales, as well as the political and material consequences thereof (Cresswell, 2015).

We start from the premise that there is scope for further cross-fertilisation between degrowth and humanistic and cultural geography. Far from being a mere theoretical concern, we propose a more explicit focus on sense of place to help close the gap between degrowth theorisations and empirical explorations of degrowth-minded activism. The questions we seek to address are intentionally broad and open ended, to allow scope for conceptual exploration:

1. How can researchers mobilise humanistic and cultural geographic theories to reframe existing preoccupations with place in degrowth?
2. What pathways for future research are opened up by a place-sensitive understanding of degrowth informed by humanistic and cultural geographic literature?

The paper makes the following contributions: First, we demarcate the scope of the sense of place concept and articulate an analytical framework for structuring analyses of sense of place in a degrowth context. Second, we apply this framework to analyse how sense place discourses have been strategically mobilised by pro-and anti-fracking activist groups in Lancashire, UK. Finally, we outline some ideological implications of incorporating sense of place within degrowth politics, particularly in the context of rising ethnonationalism and right-wing appeals to place.

## **2. A place sensitive understanding of degrowth**

During the early 1970s, growing dissatisfaction with conventional understandings of place, defined primarily in terms of physical locations and locales (Cresswell 2015), paved the way for humanistic geographers such as Tuan (1975) and Relph (1976) to foreground the fundamental

role played by meaning and human experience. These authors sought to understand the experiential facets of place through the gradual incorporation of phenomenological approaches into their analyses, leading to a fuller appreciation of the indivisibility between physical locations and locales, and the collective experiences and meanings associated with them (Casey 2001). Similarly, Seamon (2013: 11) states that “place is not a physical environment separate from the people associated with it but, rather, the indivisible, normally unnoticed phenomenon of person-or-people-experiencing-place”. Thus, rather than merely treating place as a situational construct, humanistic geographers start from the premise that places are inseparable from human experience.

Furthermore, Seamon (2015: 44) reminds us that “place remains one of the great stabilizing constituents of human life”. It is ultimately through their place-experiences that individuals draw together the realms of nature, society and culture (Entrikin, 1991). This, however, does not imply an atomistic view where individual experience becomes the centre of sense of place analyses (Dixon and Durrheim 2000). On the contrary, sense of place is a collective accomplishment. In this regard, Entrikin (1997: 266) foregrounds how the experiential aspects of place are “filtered through the language of collective narratives and public discourses that continually blend spatial scales and move between relatively centred and relatively decentred perspectives”. Thus, the ways in which individuals experience place are mediated by shared cultural codes and broader structures of meaning, the most common being place discourses and narratives (Dixon and Durrheim 2000). Nevertheless, while the malleable and fluid production of discourse affords multiple possibilities for the construction of place meanings, sense of place is not entirely detached from the material and physical qualities of specific locations and locales (i.e. infrastructure, natural resources, climate, institutional arrangements, etc.). Thus, Entrikin (1991) concludes that the study of sense of place lies somehow *in-between*, arising at the intersection of objectively shared properties of physical environments and our culturally mediated experiences of them.

Moreover, sense of place notions are multiple, contested and potentially ridden with power and inequalities. Indeed, humanistic geographers acknowledge that, despite place providing stability and order to the flux of experience (Seamon, 2015), sense of place is not necessarily a cohesive entity, nor does it always play a politically benevolent role (Harvey, 1989). Multiple, and often contested, senses of place can be juxtaposed within the same location (Warnaby and Medway, 2013). Furthermore, unequal and contradictory place-experiences are mediated by a multitude of social factors, including age, race, gender, or class, which reflect and reproduce existing social inequalities (e.g. Nelson and Hiemstra, 2008). Thus, control over the production of sense of place can legitimise the actions and interests of dominant social groups, while disadvantaging and suppressing others. For example, very different consequences would follow depending on whether a rainforest is construed as a sacred land inhabited by spirits, as a national park to be legislated by Government, as an exclusive virgin Eden for touristic escapism, or simply as a material resource to be logged for economic gain. The important point here is that asserting control over the production of place meanings (and the subsequent identities and attachments comprising sense of place), can become a strategic goal for actors with competing agendas and material interests.

Humanistic and cultural geographers have also argued that sense of place is not necessarily a bounding or bounded experience. Even though a shared sense of place facilitates the emergence of concrete forms of identification and patterns of collective action that are both place-specific and place-induced, place is fundamentally a relational construct (Massey, 2005). Consequently, places are not simply spatial areas one can easily draw a line around but rather, they are “constructions out of the intersections and interactions of concrete social relations and social processes in a situation of copresence” (Massey 1991: 277). If we think of places as the intersection of past, present and future social relations in a locality, then some of these relations will be “contained within the place; others will stretch beyond it, tying any particular locality into wider relations and processes in which other places are implicated too” (Massey, 1994: 121). Based on this relationality, Massey (1991) argued for the possibility of ‘a global and progressive sense of place’ enabled by an enlarged consciousness of the interconnections and interdependencies between localised experiences and the wider world. Acquiring a global sense of place is a necessary condition for the establishment of what Massey (2004) called ‘the global responsibilities of place’, which would prompt local actors to “actively encourage alternative globalisations”, “develop a politics of consumption that aims to build awareness of the global ramifications of local daily lives”, or to “seize/create opportunities to debate the place of the locality within the global world” (ibid: 100-101).

Crucially, a focus on sense of place does not directly correspond to predetermined scalar patterns and parameters. In other words, sense of place permeates across and between scalar relations, constituting ‘hinterlands’ of meaning and intersubjectivity that are not restricted to any predefined scale:

Neighbourhood, town, and city are places; a distinctive region is a place, and so is a nation. Common usage sanctions the application of the word "place" to phenomena that differ greatly in size and in physical character. What do the fireplace, the corner drugstore, the city, and the nation-state have in common? They are all centers of meaning to individuals and to groups. As centers of meaning, the number of places in the world is enormous and cannot be contained in the largest gazetteer (Tuan 1975: 153).

Therefore, empirical considerations of sense of place are valuable insofar as they might counter what Jessop et al. (2008: 18) refer to as ‘scale-centrism’ (i.e. spatial approaches which assume scale to be the primary source of agency and the basis around which most social relations are organised). In the context of degrowth debates, such approaches have tended to assume that scale is a fixed, nested spatial hierarchy, where actors at higher (scalar) levels exert their agency upon those operating at lower ones (e.g. Marshall and O’Neill, 2018). Whilst not denying that the ability of actors to operate at larger geographical scales constitutes an important source of agency to bring about (or impede) socio-ecological transformations, an unchecked emphasis on scale could create its own problems. Indeed, scale-centrism might render researchers oblivious to important processes whose transformative potential do not necessarily emanate directly from, or correspond to, rigid scalar layers and positions. Thus, we argue that scale-centric accounts can – and should – incorporate notions of place to counter their tendency to elide key embodied and experiential aspects associated with ‘the locality of being’ (Malpas, 1999).

In the introduction, we argued that our engagement with humanistic and cultural geography is not merely motivated by existing theoretical limitations in degrowth literature. On the contrary, our paper is predicated on the assumption that a focus on sense of place can be particularly productive when combined with empirical research on degrowth-minded activism. To this end, we distill our literature review into five analytical propositions which, taken together, can assist empirical enquiries within the context of degrowth debates:

*Proposition 1. Sense of place foregrounds the importance of places as centres of shared meaning and collective experiences.*

*Proposition 2. Sense of place arises in-between a place's materiality and its symbolic dimension.*

*Proposition 3. Sense of place is not necessarily a bounding and bounded experience, but a relational construct.*

*Proposition 4. Sense of place spans different scales, without strictly abiding by any one of them.*

*Proposition 5. Sense of place is multiple, contested and potentially ridden with power inequalities.*

We now apply our sense of place framework to a real-world case study: the ongoing socio-ecological conflict over hydraulic fracturing (hereafter fracking<sup>2</sup>) in Lancashire, in the North West of England.

### **3. Putting the framework to work**

#### **3.1 Research context**

In the last decade, the UK has experienced an intense and dynamic controversy<sup>3</sup> over the deployment of fracking (and related) techniques. Promoting fracking is part of a concerted effort by Government and industry to expand oil and gas exploration within the country. According to government surveys (Hayhurst, 2020), opposition to fracking has been gradually increasing since 2013 (currently at 41% of the UK population), while public support has been declining (currently

---

<sup>2</sup> Fracking is a process for extracting 'unconventional' oil and gas reserves, primarily through the use of two technologies: (1) 'directional drilling', which allows vertical wellbores to be guided horizontally; and (2) the injection of 'slick water' (a cocktail of water, sand and chemicals, some of which are toxic) at high pressure to fracture rock and release the hydrocarbons they contain (Howarth et al., 2011).

<sup>3</sup> This is a rapidly changing controversy, ridden with complex definitional, legal and technical issues which, given manuscript length constraints, cannot be adequately addressed here. Therefore, we would refer those readers interested in additional context to specialised online sources that are regularly updated. For example, websites such as 'Drill or Drop?' (<https://drillordrop.com/>), 'Frack Off' (<https://frack-off.org.uk>), or the Oil and Gas Authority (<https://www.ogauthority.co.uk/>) contain valuable resources such as interactive maps, timelines, newsfeeds, glossary of terms, etc.

10%). Opposition to fracking is complex and multifaceted, weaving together a variety of concerns regarding its negative impacts on air, water, public health, land use, seismicity, and climate change (e.g. Bushkin-Bedient et al., 2019; Howarth et al., 2011), as well as its implications for democracy (Szolucha, 2016). In addition, resistance to fracking can be motivated by disruptions to local communities' sense of place (e.g. Perry). Here, previous research suggests that those exposed to fracking often experience disturbances to "the connections they had with their family histories, childhood memories, their lands, their neighbors and communities", impacting their wellbeing, identity and social relations (Perry, 2012: 88).

The UK fracking controversy has been particularly intense in Lancashire, a county located in the North West of England (see annex 1), where Cuadrilla Resources - a privately-owned company with major shareholders in Australia, the United States, and Hong Kong (Kahya and Kennard, 2013) - has attempted to frack for shale gas in the face of significant public opposition. Lancashire sits above the Bowland Basin, a carboniferous shale formation that contains large quantities of gas, but it was not until the US fracking revolution that capital began to seek opportunities to access and commercialise this gas. Cuadrilla's initial exploration activities were not widely publicised, with the company drilling several wells across Lancashire in search for viable sites to frack. This changed in the spring of 2011, when Cuadrilla's first fracking attempts induced 58 earthquakes at Preese Hall, on Lancashire's Fylde Coast. Two of these earthquakes (with magnitudes of 2.3 and 1.5 on the Richter Scale), were felt above ground causing distress and sparking broader public debate (Szolucha, 2016). Whilst the Preese Hall site was abandoned following a short-lived government moratorium, in 2014 Cuadrilla submitted new planning applications for sites at Preston New Road and Roseacre Wood, also on the Fylde. Despite both applications being rejected by Lancashire County Council in 2015, the UK government intervened, greenlighting Preston New Road and reopening the Roseacre Wood planning enquiry.<sup>4</sup> Following the commencement of works in January 2017, Cuadrilla's Preston New Road site became the focus of anti-fracking activism in Lancashire.

Although opinion polls suggest that a majority of Lancashire's residents oppose fracking (Hayhurst, 2017), grassroots campaigning is limited to a relatively small number of activists, most of whom are loosely organised under the umbrella of Frack Free Lancashire (<http://frackfreelancashire.org/>). Here it is possible to identify a relatively permanent activist core (approximately 50-80 people), working alongside a significantly broader and more diffuse network of individuals who join them for specific actions/campaigns. Anti-fracking activism in Lancashire is thus complex, porous, and intermittent; encompassing multiple modes of engagement (online and offline), a variety of backgrounds and ideological persuasions, motivations and levels of commitment. Therefore, whilst certain demographics tend to be more visible (e.g. white British, female, retirees), drawing neat boundaries and general categories to represent the real life complexities of anti-fracking activism can be problematic.

Lancashire's pro-fracking activism is decidedly less grassroots oriented than its counterpart. Alongside Cuadrilla (<https://cuadrillaresources.uk/>), the most prominent local campaign group is Lancashire for Shale (<https://www.lancsforshale.org.uk/>). This group has close ties with the local

---

<sup>4</sup> In February 2019, the government rejected Cuadrilla's Roseacre Wood appeal.



Chamber of Commerce, and its most visible members tend to be white, male, local business owners who view fracking as a commercial opportunity (Refracktion, 2016). Similar to other forms of corporate activism (Walker and Rea, 2014), the majority of Cuadrilla and Lancashire for Shale's campaigning is conducted through business engagement and sponsoring activities, lobbying, and social media. Another prominent pro-fracking actor is Backing Fracking (<https://www.backingfracking.org/>), which mostly operates online and anonymously - with its core activities apparently involving attempts to delegitimise the anti-fracking movement on social media. Despite claiming to be independent, these organisations are widely regarded by the anti-fracking movement as industry-sponsored 'astroturfing'<sup>5</sup> operations (Szolucha, 2016). Although this accusation has not been formally confirmed, Lancashire for Shale acknowledges funding from Cuadrilla and has links with Westbourne Communications; a PR/lobbying firm - also hired by Cuadrilla (Refracktion, 2016) - with a history of running campaigns aimed at countering grassroots activism on behalf of its clients (Cave and Rowell, 2015). Backing Fracking's membership and sources of funding are unknown. Thus, pro-fracking activism is characterised by its opaqueness and limited accessibility, typically organised through private events where access is restricted by a fee or invitation.

### 3.2 Methodology

Our interest lies in elucidating how sense of place constitutes an ideological battleground wherein pro- and anti-fracking groups operating in Lancashire sought to legitimise/advance their respective agendas. Since discourse is a central element of sense of place, our analytical strategy was informed by Critical Discourse Analysis (CDA) (Fairclough, 2015). CDA illuminates the protagonistic role of discourse in the (re)production of social reality. The goals of CDA are emancipatory insofar as its critiques/explanations aim to challenge the powerful and influence social change (Fairclough, 2015).

We draw on fieldwork data collected by the second author from March 2018 to April 2019. This involved participant observation, fieldnotes and 32 semi-structured interviews with anti-fracking activists (see annex 2). The majority of this data collection took place at, or in the vicinity of, Preston New Road, which is located on the Fylde; a low-lying semi-rural area of Western Lancashire where Cuadrilla's most recent drilling activities, and the consequent anti-fracking blockades, have taken place. An important aspect to consider is that data collection occurred in a context of increasing concern regarding the criminalisation of environmental activism in the UK. As many of the interviewees preferred to remain anonymous, we gave them the option to self-describe and select how much socio-demographic/background information, if any, would be made public. Interviewing pro-fracking activists proved difficult. Although attempts were made to contact and arrange interviews with representatives of Cuadrilla and various other pro-fracking organisations, these were unsuccessful. Indeed, Cuadrilla declined our invitation, and representatives of Lancashire for Shale (which has formally ceased to exist already) did not reply

---

<sup>5</sup> Astroturfing refers to business-backed grassroots political campaigns that involve heavily incentivised participation, misrepresent citizen's viewpoints fraudulently, and/or fail to disclose corporate sponsorship (Walker and Wrea, 2014: 293).

to our request for an interview. However, while no formal interviews were undertaken with pro-fracking activists, multiple discussions and informal conversations with fracking sympathisers occurred during the course of fieldwork. This data was supplemented with online and social media data published between 2011-2019. For pro-fracking content, we analysed online archives, social media content (e.g. Facebook and Twitter), and promotional materials from Cuadrilla's website (<https://cuadrillaresources.com/>), and other pro-fracking organisations such as Backing Fracking (<https://www.backingfracking.org/>), Lancashire for Shale (<https://www.lancsforshale.org.uk/>), and the Institute of Directors (<https://www.iod.com/news/news/articles/Getting-Shale-Gas-Working>). We collected and analysed online data from anti-fracking groups such as Frack Free Lancashire (<http://frackfreelancashire.org/>), the Roseacre Awareness Group (<http://www.ragfrack.co.uk/>), and Frack Free United (<https://www.frackfreeunited.co.uk/>).

We present our findings below. First, we discuss how pro-fracking actors strategically oriented their discourses towards place, tapping into place identities, feelings and attachments as a means of eliding scientifically evidenced arguments against fracking (e.g. Bushkin-Bedient et al., 2019). We then turn our attention to anti-fracking activists, showing how they re-articulated and re-politicised sense of place notions in a progressive manner. From a strategic perspective, this was critical to the formation of broader alliances and networks that enabled them to challenge the legitimacy of fracking in Lancashire, and beyond.

## 4. Research Findings

### 4.1 On the offensive: Locally embedding fracking through sense of place

Cuadrilla's "Putting Lancashire First" campaign offers a suitable entry point to consider how place-related discourses, and other symbolic associations with place, have been strategically mobilised to legitimise fracking. The company's adoption of this slogan in December 2016 received extensive coverage in local and social media (e.g. Blackpool Gazette, 2016). At this time, Cuadrilla's legitimacy to operate in Lancashire was being contested, particularly after the UK government's decision to override Lancashire County Council and allow operations to begin at Preston New Road. Prior to this decision, Cuadrilla had relocated their headquarters to the county. Subsequently, the company's discourse increasingly promoted the idea that their business model prioritises the needs of ordinary Lancastrians (e.g. working people, community groups, small businesses, etc.), while simultaneously downplaying its own commercial interests:

Creating jobs, investment, new skills and community initiatives as a result of shale gas exploration is very important to us and, as a Lancashire based company, in 2016 we launched our "Putting Lancashire First Commitments", publicly signed by our CEO, Francis Egan, as a firm commitment to the county which ensures that Cuadrilla puts Lancashire first in terms of the benefits of shale gas exploration has to offer (Cuadrilla Resources, 2019a).

Indeed, Cuadrilla has made a substantial effort to reinforce public perceptions of their alleged embeddedness within Lancashire. This effort included the creation of a so-called Community Benefit Fund, to voluntarily compensate households located within 1.5 km of its wells, or to sponsor local charities, clubs, projects, and community groups. Cuadrilla has also mounted a

concerted campaign to win the support of local businesses, concentrating on Lancashire's two Chambers of Commerce; especially those members that could directly benefit financially from participation in Cuadrilla's supply chain. Lancashire-themed pro-fracking business groups such as Lancashire for Shale are notable products of this strategy. There is also evidence that Cuadrilla has been proactively working to gain the support of the local landowning and farming community, who enable access to land (a logistical necessity for oil and gas exploration) (Szolucha, 2016).

Linked with the above, representations of the Cuadrilla/Lancashire relationship in terms of a 'partnership' - or more emphatically, as an 'alliance' - constitute a *leitmotif* within pro-fracking discourses:

Whilst opposition to shale gas operations does exist, in common with many land use proposals, we have also received significant support from many people within the County. Like us, they see the potential for our industry to boost Lancashire's economy and create opportunities for local people (Cuadrilla Resources website, 2020).

Crucially, such language conceals power asymmetries and downplays commercial interests, repositioning the company as Lancashire's indispensable 'friend', 'partner' and/or 'ally'. Cuadrilla's main role is thus portrayed as that of providing residents with the technological and business know-how to unlock valuable natural sources, in this case shale gas, which are rightfully theirs to exploit. Implicit in such rhetoric is the idea that although the company's owners may benefit from the exploitation of Lancashire's shale gas, it is ultimately Lancastrians, not Cuadrilla, who will take back control of their own resources. Herein lies a seductive appeal to aspirations towards place-empowerment, autonomy and agency, realised through a cycle of investment, jobs, skills/training, and overall economic growth; all allegedly impelled by Cuadrilla and the adoption of fracking.

Alongside this, fracking advocates have appropriated and reworked elements of Lancashire's history and place identity to render fracking familiar and unthreatening. Unlike some other fracking-targeted counties in the UK (e.g. Sussex or Lincolnshire), where the landscape has been minimally exposed to heavy plant machinery in the past, Lancashire's industrial legacy still shapes locals' senses of place. This is particularly so in former cotton-manufacturing centres such as Preston and Blackburn. Drawing on this, the adoption of fracking is presented as a mere continuation of the County's industrial culture and heritage:

Lancashire has for centuries had first- or early-mover advantage in nascent industries. These included wool, cotton, coal, canals and railways. In the 20th century, this continued with motorways, aerospace and nuclear fuel manufacturing. High-technology manufacturing is one of Lancashire's key strengths today, with BAE Systems Lancashire's largest private sector employer...Viewed from a historical long-run, a shift to exploit the Bowland Shale in Lancashire is not a radical departure out of keeping with the region. The county is absolutely no stranger to the exploitation of natural resources, technological progress and business acumen (Taylor et al. 2013: p.10).

Therefore, even though the specific locations targeted for fracking do not necessarily correspond with Lancashire's former industrial areas, pro-fracking discourses tend to sidestep this point and

establish a recognisable connection between extractive activities, and the history, identity and character of the county. These references to Lancashire's industrial past serve a twofold purpose. First, they invoke a linear account of past economic success and managed change, which offers continuity and certainty in a world characterised by increasing complexity, uncertainty and disruption. Second, it caters to nostalgia for a bygone era, where industrial jobs and traditional working-class institutions provided residents with a sense of community and belongingness.

Thus far, we have shown how Cuadrilla (and fracking advocates more generally), aim to establish a place-based nexus whereby the interests of residents and the fracking industry coincide; thus, support for fracking becomes tantamount to support for Lancashire. Conversely, anti-fracking actions are discredited as external attacks perpetrated by outsiders against the interests of the place:

Emma Thompson, the world's most highly paid actress, has visited Lancashire to join a protest in a bid to stop fracking on the Fylde, a move that would deny struggling local families the affordable energy and jobs they need...Local people that are hoping for well-paying jobs to spring from shale, and looking forward to potentially lower gas bills, will find it offensive and distasteful to hear this filthy-rich London luvvie lecturing them about what's good for them (Backing Fracking, 2018a).

This exemplifies how appeals to the interests of local communities are used to “other” fracking critics by representing them as “foreign” and “out of place”. Drawing on cultural perceptions of an alleged North-South divide, critics (here supposedly epitomised by actress Emma Thompson), are portrayed as privileged southerners who are detached from an economically struggling North and the lives of working-class Lancastrians.

Narratives of a *menaced place* constitute another strategy through which sense of place aspects have been brought to bear. Here, many of the pro-fracking arguments appear to draw on existing anxieties and fears associated with purported foreign threats to their places. To imbue residents with a sense of a place in peril, pro-fracking discourses typically combine three arguments. First, they depict the rest of the world as a hyper-competitive environment, where fierce competition between towns, cities, counties, countries, or supranational entities, is both inevitable and unavoidable. Second, in such a world, their places are portrayed as fragile and vulnerable entities that need to make difficult choices (e.g. accepting the risks associated with fracking) to protect themselves from external menaces lurking in the background. Finally, the adoption of fracking is presented as a development that promises security and protection against these external threats, thereby restoring residents' sense of a safe place:

The head of NATO has previously suggested that Russia has been behind the anti-fracking movement in the UK and Europe, which most observers thought was about trying to bolster markets for Russian gas exports. But what if the real motivation is to prevent us from developing our own, secure supplies of gas so that in a potential military conflict, it could inflict more damage and suffering on us by starving us of energy from abroad? We don't go in for conspiracy theories, but this isn't a theory, it's a very realistic possibility. And it wouldn't just have to be Russia - other nation states may well have similar notions, as might stateless enemies. It all makes getting on with fracking a defence imperative (Backing Fracking, 2018b).

By presenting “their place” as being “vulnerable” and “exposed” to imminent attack by a foreign entity (in this case Russia), support for fracking is depicted as more akin to a patriotic duty and an act of loyalty towards the community. Consequently, fracking advocates capitalise on place-attachments and other sentiments (e.g. fear, anxiety, anger) arising from a perceived threat to their place, warning residents of the dangers Lancashire - and the UK - could face if the industry’s plans were thwarted. The opposite is also true, with opposition to fracking framed as a form of treason, collaboration with the enemy, or disloyalty towards the place and its constituents. It is not coincidental that this discourse reproduces the language and nationalist overtones endemic to the UK tabloid press. For example, the “place traitor” trope has been used by the latter to attack pro-remain actors during the Brexit debate (e.g. Slack, 2016). Indeed, while politically Lancashire has historically been divided between rural, mostly Conservative voting areas (e.g. the Fylde), and other, more urban, pro Labour communities (e.g. Preston), the county voted to leave the European Union during the 2016 referendum. This argument highlights how sense of place is inseparable from the wider political/cultural context, in this case the rise of nationalist sentiments and rightwing populism in the UK (Calhoun, 2017). We will return to this point in the conclusions.

#### 4.2 Mounting the defence: Resisting fracking through sense of place

The anti-fracking movement has strategically mobilised alternative place discourses focusing on localised/global environmental degradation, extractivist profiteering, and the need for inter-place solidarity to secure universal rights to a clean and safe environment. Such discourses are deployed through a variety of tactics, including public talks, information stalls, billboards, placards and banners (see figure 1), artwork (see figure 2), leaflets (see e.g. <https://frack-off.org.uk/campaign-materials/>), and both social and traditional media (e.g. national and local press, TV broadcasters, etc.).



Figure 1 - Anti-fracking billboards, Preston New Road



Figure 2: Anti-fracking artwork, Preston New Road

While many parts of Lancashire have been heavily industrialised in the past, others, like the Fylde in particular, are still closely identified with its farming communities, distinct rural character, and pleasant natural environment. The fracking site at Preston New Road, on the Fylde, is surrounded by low-lying farmland, traditional market towns such as Kirkham, and picturesque villages such as Wrea Green. For many Lancastrians, notions of wellbeing, tradition, and community are

inseparable from such rural sensibilities and the place aesthetics thereof. Tapping into these place-sensibilities, anti-fracking discourses highlight the irreversible damage the industry would bring to the countryside through its negative impacts on air, water, and landscape. This is concomitant with warnings regarding likely disruptions to residents' routines, health/wellbeing, and quality of life (e.g. through increased levels of pollution, noise, traffic congestion, and/or damage to property). One underlying message stands out: since fracking is demonstrably a danger to the (local) environment and public health, Cuadrilla's claims to the contrary, like the company itself, are not to be trusted. In this vein, anti-fracking activists regularly hijacked Cuadrilla's "Putting Lancashire First" slogan, rearticulating it as "Destroying Lancashire First", or similar variations of this theme (see figure 3).



Figure 3: Anti-fracking slogan: "destroying Lancashire first"

In addition to local concerns with environmental risks and public health, grievances regarding lost place-sovereignty constitute a potent motivational theme for anti-fracking activism. From this perspective, and contrary to the pro-fracking discourses outlined above, notions of place-empowerment, agency, and democracy arise not from accepting fracking, but from opposition to it:

I was literally jolted into it [activism] by the injustice of national government imposing something upon a community. And a county council that had actually looked at the facts, that had had big debates and actually looked at it and decided that the risks weren't worth taking ... it seems so unfair that a county council that basically understands its geology, road structure, and the nature of its communities, could be just overruled by somebody who hadn't even been to the county (Interview 6: Female/49/anti-fracking activist and Parish Councillor).

Here the interviewee is voicing the widely shared concern that Lancastrians' democratic will and self-governance have been usurped by more abstract and remote financial/political interests. Another way anti-fracking activism has undermined Cuadrilla's claims of place-rootedness involves depicting the company as an extractivist profiteer, whose interests lie not in Lancashire, but in the placeless world of global finance. To reframe Cuadrilla's *modus operandi* as a vehicle for placeless financial capital - as opposed to its place-rooted industrial facade - activists emphasise the company's highly financialised business-model, and its complex multinational ownership structure:

So, that's essentially a Ponzi scheme with gas. The way it worked is that AJ Lucas is the parent company. They've gone into debt trying to make Cuadrilla work. So, they then had to get the loans, so they got the loans from Kerogen in China. Kerogen ended up lending them so much money, they ended up owning 51% of AJ Lucas. AJ Lucas doesn't really care because AJ Lucas CEOs get their bonuses every year, and they're perfectly happy. Kerogen's fucking on cloud nine, because they keep lending all this money at huge interest...and Cuadrilla is the collateral on the loan (Interview 4: female/anti-fracking activist).

Within declining post-industrial areas especially, there is a tendency to idealise industrial capitalism as a place-rooted endeavour (as discussed above). In contrast, the workings of financial capital tend to be viewed with suspicion and are associated with notions of volatility, precarity, and short-termist profiteering - particularly since the financial crash of 2008. Such perceptions prevail in Lancashire; particularly in former manufacturing towns such as Preston and Blackburn, as well as in other urban centres such as Blackpool, whose decline as a prosperous tourist destination coincided with the decline of adjacent industrial towns - despite not having been necessarily caused by it.

Against this backdrop, activists offer an alternative industrial vision of Lancashire predicated on a radical shift from carbon-intensive to renewable energy sources and technologies. This vision does incorporate some aspects of place used by pro-fracking advocates, for example an emphasis on prosperity through technological development, employment, and a thriving local economy. However, emphasis is placed on a 'just transition' away from fossil fuels, whereby the public sector consults with workers and businesses to ensure social protections, opportunities for (re)training, and the creation of good, unionised jobs for local residents. Lancashire-based trade unions have been amongst the most vocal advocates of this place vision. For example, a Public and Commercial Services Union (PCS) campaign explicitly linked a rejection of fracking with positive visions of Lancashire's future as an alternative, thriving, local economy, based on renewable energy and cutting-edge low-carbon technologies:

In renewable energy, the Fylde is ideal for work in offshore wind...That would mean 10,800 jobs over seven years to build and install the wind farms...Today many workers are seeing their skills laid to waste or abused through bad working practices who could be put to work on building a new zero carbon economy. Blackpool, Fylde and Wyre is a resource rich area whose workers and communities deserve better (PCS, 2018: 10).

Like many within the degrowth movement, some anti-fracking activists are skeptical of a Green New Deal, which arguably might not go far enough to address what they identify as the root cause of the problem: capitalism and its relentless pursuit of profit. However, they generally adopt a pragmatic position and accept this discourse in the knowledge that a more radical view of Lancashire's post-fracking future is not widely shared amongst other place constituents. In this regard, the vision of Lancashire as a green industrial hub plays an important strategic role in uniting a highly heterogeneous anti-fracking movement, as well as offering a broader appeal.

Another feature of the place discourses mobilised by anti-fracking activists is their ability to fluidly oscillate between local concerns (e.g. risks of pollution to air and water, seismicity, traffic congestion etc.), and more global ones (e.g. the climate emergency). Therefore, like other

grassroots environmental justice movements, while anti-fracking campaigning is partly motivated by 'not-in-my-backyard' (NIMBY) issues, it is certainly not confined to them. In fact, the more time, information, and experiences local campaigners share with other activists - often from different places and social backgrounds - the more they begin to draw connections between their immediate concerns with fracking and broader political issues:

[Anti-fracking activism] just turns your life upside down, and I wish it hadn't, because I would rather be spending my retirement as I planned doing yoga and rambling...One of the Nanas<sup>6</sup> basically said that "your eyes are opened when you first get into this, and once they're opened, you can't shut them, because you are aware of so many more issues" (Interviewee 16: Female/69/Chair of local residents' group/Frack Free Lancashire).

This shift in perspective is intimately linked with activists' success in cultivating a global and progressive sense of place; one which develops as they begin to recognise and render visible the myriad interconnections and interdependencies between their own local struggles and those unfolding in different parts of the world. With this enlarged place-consciousness come new affects, shared feelings and attachments which traverse and unite multiple localities in a global struggle against the extractive industries. This approach is forcefully encapsulated by the slogan "not here, not anywhere", which became a motto for anti-fracking campaigners throughout the world. Such sentiments are commonly shared among anti-fracking activists through social media, as illustrated by the following post, taken from the "Fracking Hell (UK)" Facebook group in May 2019:

To the Patagonian community Vista Alegre and the Indigenous Mapuche community Campo Maripe, the UK Nanas send you our thanks, our solidarity and our love for all that you are doing in the face of such a powerful and driven opponent that is the energy sector. We will do all we can to target our corrupted and inept government as well as the dangerous UK companies that are doing this to you ... we want international co-operation to ensure our shared air, water and oceans are safe for all earth inhabitants. We are shoulder to shoulder with you... there's no distance between our hearts x.

Consequently, this development of a global sense of place serves to push NIMBY attitudes to the background in favour of a more salient ethic of inter-place solidarity, which, in turn, paves the way for the formation of broader alliances and networks:

So, I planned seven different groups to meet with, and at every one I found myself saying something that sounded like a "Game of Thrones". I'm like, 'You'll come when we call you. The North needs you' [laughs], because we'd been down for Balcombe and supported them. And then it was like, 'The North really needs your help. Will you come when we call?' (interview 4).

Indeed, activists frequently visit other places to share knowledge, resources, and solidarity with other communities affected by fracking. Lancashire's anti-fracking groups have built alliances with other groups in, for example, Yorkshire, Nottinghamshire, and Sussex, as well as other parts of the world such as Cantabria (in Spain), and the Mapuche communities (in Argentina). This inter-

---

<sup>6</sup> Nanas (a colloquial term for grandmothers) is a self-labelled group comprising mainly older female anti-fracking activists (e.g. see <https://www.theguardian.com/environment/2019/oct/13/dont-frack-with-us-the-victorious-nanas-of-lancashire-activism>)



place solidarity, derived from a global sense of place, has become central to building successful opposition to fracking in Lancashire and beyond. While this move indicates that multiple senses of place are capable of converging by operating within and across geographical scales, there were other instances where some anti-fracking campaigners adopted a more insular approach. A case in point is the formation of 'Locals Rising' in May 2018. During their short-lived campaign, this fringe group exhibited a distinctly hostile attitude towards other anti-fracking activists, often questioning their provenance or loyalty to Lancashire. We will return to this point in the following section, where we conclude by explicitly linking our findings to our five analytical propositions and reflect on the value of incorporating sense of place within analyses of degrowth-minded activism.

## 5. Discussion and conclusions

Drawing on humanistic and cultural geographic literatures, we approach place as a complex and multifaceted construct, interlacing and intersecting locations, locales and senses of place, without being reducible to any one aspect. Our first analytical premise is that places constitute centres of shared meaning and collective experiences, which engender forms of identity and relations that are both place-specific and place-induced (proposition 1). Starting from people's lived-experiences of place is important, not least because questions of 'who we are' are most often inseparable from questions of 'where we are' (Dixon and Durrheim 2000). Thus, the study of sense of place emerges as a privileged site to access what is contextually important to actors. Discourses and narratives are means through which actors endow places with meaning. In this regard, we observe how a plurality of place discourses infuse and animate political action across multiple spatial locations (e.g. Preston New Road, Blackpool, the Fylde, the UK, and indeed beyond). These discourses coexist and overlap, resulting in a complex kaleidoscope of placial meanings (e.g. Lancashire as an unspoiled green and pleasant land, a place of industry and enterprise, a place in decline, a place under threat, a place of opportunity, etc.).

Pro-fracking campaigners attempted to exploit residents' anxieties over neoliberal globalisation, the dislocation of capital, and place decline. These anxieties were channelled into discourses of place-empowerment, identity, and heritage that linked past and present with visions of a fracking-impelled industrial renaissance. While such discourses were seductively aimed at local communities longing for certainty and knowability about the future, on this occasion, competing anti-fracking discourses seemed to resonate more widely. These convincingly depicted fracking as a threat to place and a vessel for placeless financial interests and offered alternative visions for Lancashire based on a Green New Deal. Herein lie opportunities for other degrowth-minded activists. The latter are often confronted with the problem of so-called "hyperobjects" (e.g. climate change or neoliberal globalisation), which, being extensively distributed over time and space, are largely incommensurable with the human scale (Morton, 2013). For most, hyperobjects are too remote, enormous, and complex to even begin contemplating how to engage with them. However, a lesson from our case study is that sense of place constitutes an effective frame to render such hyperobjects more meaningful and actionable for place constituents. It is ultimately through sense of place (incorporating more than location alone), that these entities are resituated into a space and time that is more concrete, familiar, and knowable.

Furthermore, we have argued that sense of place arises in-between the material and symbolic dimensions of places (proposition 2). For example, fracking cannot happen everywhere. In this regard, there is a very material dimension, associated with geographical location - and in this specific case, geomorphology - which determines the potential to become a site of fracking, and thus, a potential source of ecological distribution conflicts (Scheidel et al., 2018). However, whilst material aspects were key (e.g. the earthquakes; the heavy truck traffic, machinery/infrastructure; or the air pollution and chemicals used in the fracking fluid), a significant amount of activist work was necessary to articulate this materiality through an array of discursive and symbolic practices (e.g. producing leaflets, public talks, artwork, social media content, protests and direct action, etc.). Therefore, understanding how ecological distribution conflicts unfold and become placialised requires a sensitivity to the intersection/interaction between the symbolic and material aspects of place.

Sense of place is not necessarily a bounding and bounded experience (proposition 3) and can span multiple scales (proposition 4). In this regard, sense of place is perhaps better considered as a relational and generative construct arising from temporary convergent spatial meanings, experiences and social relations. The simultaneous coexistence of people and things is always open to the creation of new relationships, new interconnections, and interactions that defy spatial boundaries (Massey, 1991). In the case of Lancashire, the anti-fracking controversy brought together a unique spatio-temporal configuration of people, things, and ideas, operating across different scales, which generated potent forms of activism and resistance. By sharing time, experiences, and knowledge with others involved in anti-fracking campaigns, Lancashire's activists gradually drew cognitive and emotional connections between their immediate, locally-contextualised concerns about fracking, and broader political/socio-ecological complexities. This paved the way for the formation of a global sense of place, and a greater appreciation of the complex, often invisible, webs of global relationships that constitute the places they inhabit and care about (Massey, 2005). This would not have been possible if the identification between activists, anti-fracking struggles, and place, had been limited to a particular, predefined scale (e.g. had remained tied to one locality, region, or nation). Thus, sense of place is more than an outcome; rather, it is a generative process, not fixed in the past but always open into the future. It can change and be changed, without ceasing to exist (Massey, 1991).

Nevertheless, the workings of sense of place should not be fetishised as inevitably progressive or benign (proposition 5). Indeed, reactionary and illiberal appeals to sense of place were prominent in the discourses of some of Lancashire's pro-fracking groups, but not exclusively limited to them. A minority of anti-fracking activists (e.g. Locals Rising) also encouraged division, parochialism, and enmity towards outsiders. To complicate matters, the presence of inter-place solidarity alone is no guarantee of progressiveness, particularly in those cases where "not here, not anywhere" is not an option (e.g. translocal opposition networks against windfarms). In this regard, a key consideration should be the extent to which inter-place solidarity is informed by principles of environmental justice (Schlosberg, 2013). In their absence, appeals to place, or inter-place solidarity, create ambiguities and opportunities that can be - and often are - seized upon by less progressive actors. Hence, activists cannot discount the possibility of their place-based

discourses being co-opted by other groups for xenophobic, authoritarian, racist, or chauvinistic purposes.

To conclude, Muradan and Pascual (2020) have recently pointed to the rise of ethno-nationalism and right-wing populist movements as a challenge that can no longer be ignored by ecological economists. This leads us to our final reflection: there is a need to better understand the links between socio-ecological conflicts and struggles over the production of sense of place; particularly as they unfold within this changing political context. From our findings, it is apparent that rooted identities are important for actors, and place notions can help restore missing bonds and attachments in the face of unfettered neoliberal globalisation. At the same time, we refute the notion that clinging to historically inherited place constructs - nationhood in particular - is the only possible way that place sentiments and attachments can be conceived. In fact, as our data suggests, activists' sense of place can be transformed and enlarged throughout the course of their struggles.

As socio-ecological conditions continue to deteriorate, with large swathes of the population increasingly dominated by fear and division, the further spread of authoritarian forms of nationalism becomes increasingly probable (Muradan and Pascual, 2020). While problematic in itself, this tendency also hinders the unprecedented levels of interplace solidarity that will be required to address imminent global challenges. Such arguments pose a political conundrum. On the one hand, it is incumbent on radical socio-ecological movements to work towards traversing and transforming the very idea of national identity, becoming a collective platform to experiment with new forms of global citizenship (e.g. Krasteva et al. 2018). Yet, at the same time, we recognise that abruptly abandoning the language of nationhood, which still resonates widely, is a move that risks alienating many, while freeing the authoritarian right to fill this void unchallenged. Although we do not offer an answer to this conundrum, Kallis and March (2015) usefully remind us that degrowth's activist potential lies precisely in the movement between reality and utopian imaginaries. In the same spirit, we propose degrowth discourses and praxis to dialectically move between the realities of already existing place boundaries, attachments, and identities, and a more utopian aspiration for a global sense of place which is not imprisoned by them. The latter is unavoidable if we are to deal with the complex challenges of the Twenty-first Century without succumbing to resurgent nationalist sentiments and right-wing populism. Whilst these arguments fall outside the remit of the present study, our research suggests potential ways forward to further develop this research/activist agenda.

## References

- Agnew J.A. 1987. *Place and Politics: The Geographical Mediation of State and Society*. Allen and Unwin, London
- Backing Fracking. 2018a. *Actress Emma Thompson wants to deny people jobs in Lancashire: Nanny McPhee actress neither wanted or needed by Lancashire residents*. 21st March. [Online]

[Accessed on 07/08/2019] <https://www.backingfracking.org/actress-emma-thompson-wants-to-deny-jobs-in-lancashire>

Backing Fracking. 2018b. Russia doesn't just want to sell us gas, it wants to bomb our imports. [Online] [Accessed on 07/08/2019] <https://www.backingfracking.org/russia-wants-to-bomb-uk-energy-imports>

Bauhardt, C. 2014. Solutions to the crisis? The Green New Deal, Degrowth, and the Solidarity Economy: Alternatives to the capitalist growth economy from an ecofeminist economics perspective. *Ecological Economics*, 102, 60-68.

Beiling A.E., Vanhulst J., Demaria F, Rabi V., Carballo A.E. and Pelenc J., 2018. Discursive synergies for a 'great transformation' towards sustainability: Pragmatic contributions to a necessary dialogue between Human Development, Degrowth, and Buen Vivir. *Ecological Economics*, 144, 304-313.

Blackpool Gazette, 2016. 'Fracking firm's benefits pledge to the Fylde coast.' *Blackpool Gazette*. [Online] 3rd December. [Accessed on 26th October 2019] <https://www.blackpoolgazette.co.uk/our-region/blackpool/fracking-firm-s-benefits-pledge-to-the-fylde-coast-1-8271924s>.

Bushkin-Bedient, S., Dyrszka, L., Gorby, Y., Menapace, M., Nolan, K., Orensteing, C., Schoenfeld, B. and Steingraber, S., 2019. *Compendium of Scientific, Medical, and Media Findings Demonstrating Risks and Harms of Fracking (Unconventional Gas and Oil Extraction)*, 6th ed. Concerned Health Professionals of New York and Physicians for Social Responsibility [Online] [Accessed on 1st November 2019]. Available at: [https://concernedhealthny.org/wp-content/uploads/2019/06/Fracking-Science-Compendium\\_6.pdf](https://concernedhealthny.org/wp-content/uploads/2019/06/Fracking-Science-Compendium_6.pdf)

Calhoun, C. (2017). Populism, nationalism and Brexit. In W. Outhwaite (Ed.), *Brexit. Sociological response* (pp. 57–76). Anthem Press, London.

Casey E.S., 2001. Between Geography and Philosophy: What Does It Mean to Be in the Place-World? *Annals of the Association of American Geographers*, 91(4), 683-693.

Cresswell T., 2015. *Place: A Short Introduction* (2nd edition). Blackwell, Oxford.

Cuadrilla Resources, 2019a. *Putting Lancashire First*. Cuadrilla Resources. [Online] [Accessed on 1st November 2019] <https://cuadrillaresources.com/benefits/>

Cuadrilla Resources, 2019b. *Giving Back*. Cuadrilla Resources. [Online] [Accessed on 1st November 2019] <https://cuadrillaresources.com/our-community/donations/>

Cuadrilla Resources, 2020. *About fracking*. [Online] [Accessed on 11th March 2020] <https://cuadrillaresources.uk/about-fracking/>

Demaria F., Kallis G., Bakker K., 2019. Geographies of degrowth: Nowtopias, resurgences and the decolonization of imaginaries and places. *Environment and Planning E: Nature and Space*, 2(3), 431–450.

Dittmer K., 2013. Local currencies for purposive degrowth? A quality check of some proposals for changing money-as-usual. *Journal of Cleaner Production*, 54, 3-13.

Dixon, J. and Durrheim, K., 2000. Displacing place-identity: a discursive approach to locating self and other. *British journal of social psychology*, 39(1), pp.27-44.

Entrikin, J.N., 1991. *The Betweenness of Place: Towards a Geography of Modernity*. John Hopkins University Press, Baltimore.

Entrikin, J. N. (1997). Place and region 3. *Progress in Human Geography* 21(2): 263-26

Fairclough, N. 2015. *Language and power*. 3rd ed, Routledge, London.

Gearey, M. and Ravenscroft, N., 2019. The nowtopia of the riverbank: Elder environmental activism. *Environment and Planning E: Nature and Space*, 2(3), 451-464.

Harvey D., 1989. *The Condition of Postmodernity*. Blackwell, Oxford.

Hayhurst, R., 2017. '66% of Lancashire residents oppose fracking near their homes – new survey' Drill or Drop? [Online] 30th June. [Accessed on 3rd March 2020] <https://drillordrop.com/2017/06/30/66-of-lancashire-residents-oppose-fracking-near-their-homes-new-survey/>

Hayhurst, R., 2020. '10% support UK fracking – new record low in government survey.' Drill or Drop? [Online] 6th February. [Accessed on 3rd March 2020] <https://drillordrop.com/2020/02/06/10-support-uk-fracking-new-record-low-in-government-survey/>

Howarth, R.W., Ingraffea, A. and Engelder, T., 2011. Should fracking stop?. *Nature*, 477(7364), 271-275.

Jessop B., Brenner N., and Jones M., 2008. Theorizing sociospatial relations. *Environment and Planning D: Society and Space*, 26(3), 389-401.

Kallis G. and March H., 2015. Imaginaries of hope: the utopianism of degrowth. *Annals of the Association of American Geographers* 105(2), 360-368.

Kahya, D., Kennard H. 2013. Fracking in the UK: Who owns the rights to drill for oil or gas in the UK?. 3rd March. Greenpeace Unearthed. [Online] [Accessed on 1st November 2019] <https://unearthed.greenpeace.org/2013/03/03/fracking-uk-owns-rights-drill-oil-gas-uk/>

Krasteva A., Saarinen A., Siim B. 2019. Citizens' Activism for Reimagining and Reinventing Citizenship Countering Far-Right Populism (pp. 265-292). In: Siim B., Krasteva A., Saarinen A. (eds) Citizens' Activism and Solidarity Movements. Palgrave Macmillan, Cham.

Latouche S 2009. Farewell to Growth. Polity Press, London.

Lloveras J., Quinn L. and Parker C., 2018. Reclaiming sustainable space: A study of degrowth activists, *Marketing Theory*, 18(2), 188–202.

Malpas J., 1999. Place and Experience. A Philosophical Topography. Cambridge University Press, Cambridge.

Marshall, A.P. and O'Neill, D.W., 2018. The Bristol Pound: A tool for localisation?. *Ecological Economics*, 146, 273-281.

Massey D., 1991. A global sense of place. *Marxism Today*, June, 24-29.

Massey D., 1994. Place and Identity: Introduction. In: Massey D (ed) Space, Place and Gender (117–124). Polity Press, Cambridge.

Massey, D., 2004. The responsibilities of place. *Local Economy*, 19(2), 97-101.

Massey, D., 2005. *For Space*. Sage, London.

Morton, T., 2013. *Hyperobjects: Philosophy and Ecology after the End of the World*. University of Minnesota Press. Minneapolis

Muradian, R. and Pascual, U. 2020 [online first]. Ecological economics in the age of fear. *Ecological Economics*, 169, no pagination.

Nelson L. and Hiemstra N., 2008. Latino immigrants and the renegotiation of place and belonging in small town America. *Social & Cultural Geography*, 9(3), 319-342.

The Public and Commercial Services Union 2018. There is an alternative to fracking: Building a climate jobs plan for Blackpool, Fylde and Wyre. The Public and Commercial Services Union, London.

Pirgmaier, E. and Steinberger, J.K., 2019. Roots, Riots, and Radical Change—A Road Less Travelled for Ecological Economics. *Sustainability*, 11(7), 2001-2019.

Rees W.E. 2015. Avoiding collapse: An agenda for de-growth and re-localisation. In: Davoudi, S and Madanipour A (Eds) *Reconsidering Localism* London: Routledge, 193-215.

Refracktion., 2016. 'Same shit – different shovel! The NWETF gets a reboot' Refracktion [Online] 28th July. [Accessed on 4th March 2020]

<https://www.refracktion.com/index.php/same-sht-different-shovel/>

Relph E 1976. *Place and Placelessness*. Pion, London.

Romano O 2012. How to rebuild democracy, re-thinking degrowth. *Futures* 44(6), 582-589.

Scheidel, A., Temper, L., Demaria, F. and Martínez-Alier, J., 2018. Ecological distribution conflicts as forces for sustainability: an overview and conceptual framework. *Sustainability science*, 1-14.

Schlosberg, D., 2013. Theorising environmental justice: the expanding sphere of a discourse. *Environmental politics*, 22(1), pp.37-55.

Seamon, D., 2013. Place Attachment and Phenomenology: The Synergistic Dynamism of Place. In: Manzo LC and Devine-Wright P (eds.) *Place Attachment: Advances in Theory, Methods, and Applications* (pp. 11-22). Routledge, New York.

Seamon, D., 2015. Lived emplacement and the locality of being: a return to humanistic geography? In S. C. Aitken & G. Valentine (Eds.), *Approaches to human geography: philosophies, theories, people and practices* (pp. 35-48). London, England: Sage Publications.

Slack, J. (2016). 'Enemies of the People'. Daily Mail [Online] 4th November. [Accessed on 20th March 2020].

<https://www.dailymail.co.uk/news/article-3903436/Enemies-people-Fury-touch-judges-defied-17-4m-Brexit-voters-trigger-constitutional-crisis.html>

Spash, C.L., 2013. The shallow or the deep ecological economics movement?. *Ecological Economics*, 93, 351-362.

Szolucha, A., 2016. *The human dimension of shale gas developments in Lancashire, UK: towards a social impact assessment*. [Online] [Accessed on 1st November 2019]

Available at: <http://appgshalegas.uk/wp-content/uploads/2016/05/The-Human-Dimension-of-Shale-Gas-Developments-in-Lancashire-pdf.pdf>

Taylor, C., Lewis, D. and Byles, D., 2013. 'Shale Gas Working'. Infrastructure for business series, 6. Institute of Directors, London [Online] [Accessed on 1st November 2019]

Available at: <http://www.iod.com/influencing/policy-papers/infrastructure/infrastructure-for-business-getting-shale-gas-working>

Trainer T., 2012. De-growth: Do you realise what it means? *Futures*, 44(6), 590-599.

Tuan Y.F., 1975. Place: an experiential perspective. *Geographical Review* 65(2), 151-165.

Tuan Y.F., 1977. *Space and Place: The Perspective of Experience*. University of Minnesota Press, Minneapolis.

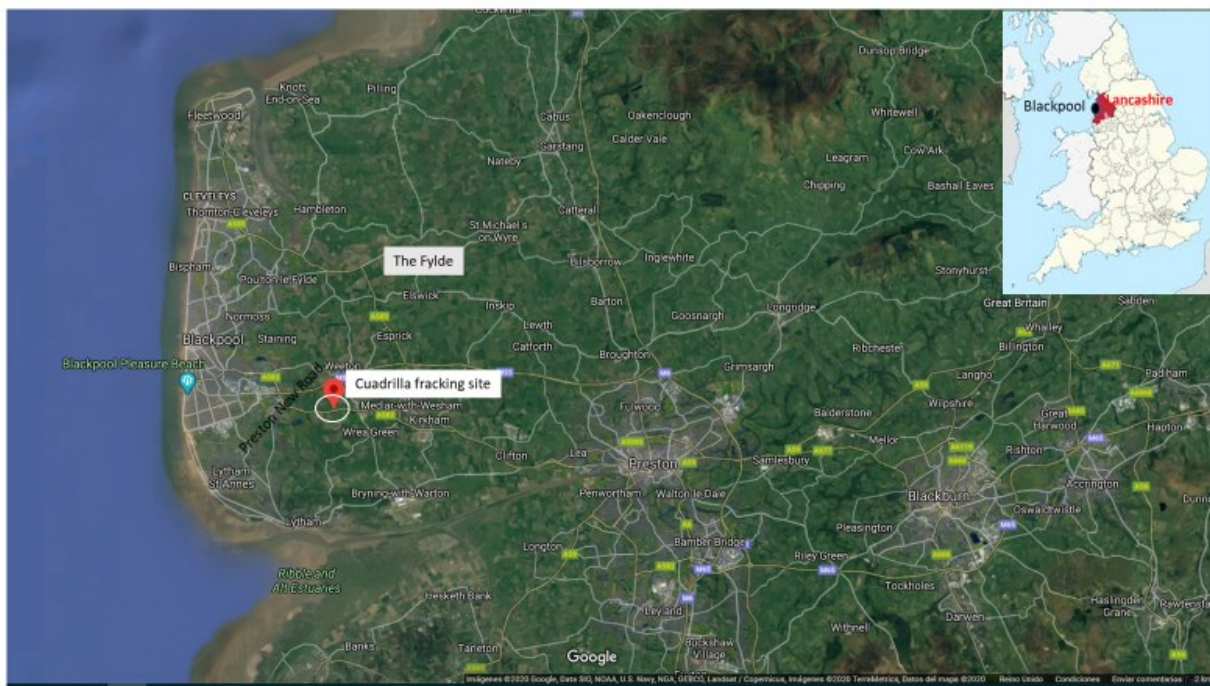
Varvarousis, A., 2019. Crisis, liminality and the decolonization of the social imaginary. *Environment and Planning E: Nature and Space*, 2(3), 493-512.

Walker, E.T. and Rea, C.M., 2014. The political mobilization of firms and industries. *Annual review of sociology*, 40, 281-304.

Warnaby, G. and Medway, D., 2013. What about the 'place' in place marketing?. *Marketing Theory*, 13(3), 345-363.

Xue J., 2014. Is eco-village/urban village the future of a degrowth society? An urban planner's perspective. *Ecological Economics*, 105, 130-138.

## Annex 1:





**Annex 2:**

<b>Interview number</b>	<b>Interviewee information: gender (optional)/age(optional)/self-described role, affiliation, occupation etc. (optional)</b>	<b>Place of residence (optional)</b>
1	Produces a well-known anti-fracking website	Not stated
2	Female/47/Nana. Hairdresser	West Lothian, Scotland
3	Female/54/Nana	Lancashire, England
4	Female/Anti-fracking activist	Lancashire, England
5	Male/57/Retired Civil Servant. Frack Free Lancashire	Fylde, Lancashire, England
6	Female/49/Anti-fracking activist and Parish Councillor	Kirkham, Fylde, Lancashire, England
7	Female/43/Cantabrian Assembly Against Fracking	Cantabria, Spain
8	40/National Protector. No group affiliation.	Preston New Road, Fylde, Blackpool, Lancashire, England
9	Female/70/Grandparents for a Safe Earth. Extinction Rebellion Elders	Bristol, England
10	Anti-fracking activist. Retired.	North Yorkshire, England
11	Male/Coordinator of NETPOL (Civil Liberties NGO)	London, England, UK
12	Anti-fracking activist	Not stated
13	Activist	Preston New Road, Fylde, Lancashire, England

14	Male/69/Retired former textbook author. Green Party Member.	Keswick, Cumbria, England
15	Local resident	Fylde, Lancashire, England
16	Female/69/Chair of residents group. Frack Free Lancashire.	Fylde, Lancashire, England
17	Female anti-fracking campaigner	Not stated
18	Male/40/Resident	Blackpool, Fylde, Lancashire, England
19	Anti-fracking activist	Not stated
20	Local councillor	Not stated
21	Female/69/Member of Local Friends of the Earth Group. Campaigner with Frack Free Lancashire.	Lancashire, England
22	Male/35/Full-time Campaigner.	North Yorkshire, England
23	Anti-fracking campaigner	Not Stated
24	Grassroots and NGO anti-fracking activist	Not stated
25	Male. Reclaim the Power activist	Bristol, England
26	Anti-fracking activist	Lancashire, England
27	Anti-fracking activist	Not stated
28	Trade Unionist. Greater Manchester Association of Trade Councils	Lancashire, England

29	Male. Environmental Campaigner and Retired Priest. Keep East Lancashire Frack Free	Lancashire, England
30	Resident. Borough Councillor	West Lancashire, England
31	Female/ Environmental campaigner	North Yorkshire, England
32	Male/48/Co-founder of Frack Free United	North Yorkshire, England

Accepted version - please cite original