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A Postcolonial Critique of Community Energy: Searching for Community as Solidarity in India and Scotland

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Abstract: Community renewable energy (CRE) represents a growing empirical and academic turn towards community-based sustainability and climate change interventions. This paper brings together postcolonial theory and CRE for the first time to outline fundamental tensions in the conceptualisation and application of the idea of community. The understanding of community within the CRE discourse is largely: (1) location-based; and/or (2) a community of choice that is consciously opted into. Driven by postcolonial theory, this paper counterposes both as a form of *community as contract* against an idea of *community as solidarity*. Its central thesis is that actually existing community, contrary to how the bulk of CRE literature commonly understands it, is a combination of bonds of solidarity and emergent purposes. The paper conceptualises community as fluid bonds of solidarity that align and realign differently around different purposes.

Résumé: L'énergie renouvelable communautaire (CRE) représente de plus en plus un virage empirique et académique en direction d'interventions communautaires de développement durable et de lutte contre le changement climatique. Cet article fait dialoguer pour la première fois la théorie postcoloniale et l'approche CRE afin de souligner les tensions fondamentales dans la conceptualisation et l'application de l'idée de communauté. La compréhension de la communauté dans le discours de la CRE est largement basée sur: (1) le local, le lieu, ou la localisation; et / ou (2) une communauté de choix qui est délibérément choisie. Inspiré par la théorie postcoloniale, cet article s'oppose à ces deux acceptations de la *communauté comme contrat* pour proposer l'idée de *communauté comme solidarité*. La thèse centrale de l'article est que contrairement au sens donné la plupart du temps par la littérature traitant de la CRE, la communauté réellement existante est une combinaison de liens de solidarité et de finalités émergentes. L'article conceptualise la communauté comme des liens fluides de solidarité qui s'alignent et se réalignent différemment autour de différents objectifs.

Keywords: community, postcolonial theory, solidarity, India, Scotland, energy transition
Mots clés: communauté, théorie postcoloniale, solidarité, Inde, Ecosse, transition énergétique

Introduction

In community renewable energy (CRE) literature, community has been predominantly understood as "area- or place-based systems of provision" (Devine-Wright 2019:894). Where there are exceptions to location-based community, community coalesces around and is purposively put to use pursuing particular energy projects. While this reflects a lot of CRE projects, it overlooks postcolonial perspectives on community. The rise in the purchase of "community" energy in the last decade in Europe and its subsequent seepage into the global South is both counterintuitive and unsurprising from a postcolonial perspective. Counterintuitive because, from a postcolonial thinking, the annihilation of community is a regular feature of capital (Chatterjee 1993, 2011). In capitalist modes of production, capital needs to separate surplus labour from other relationships of social reproduction, such as community (Chatterjee 1993). Additionally, within Marxist discourse, community is pre-capital (see Chakrabarty 2009 on history 1 and history 2; also Chatterjee 1993, 2011). The question then is, why speak of community now? The burgeoning community discourse is also unsurprising because what we observe as "community" within the CRE discourse is an emergence or imagination of an idealised community, one compatible with capital.[1] This is not a primordial community of kinship, rather a Modern one, of contract. This community comes together through a common contract and invests, crowdsources, and manages capital.

   Here, we challenge the existing understanding of community in CRE literature, rereading this community in the light of postcolonial theory. We counterpoise *community as contract* with an idea of *community as solidarity*. CRE schemes and their scholarly representation often do not start with an idea of solidarity. Our argument is that the forms of community that exist within CRE can all be seen as —and are regularly analysed and promoted as—*community as contract*. That is, a form of togetherness that is entered into for some sort of productively pursued ends: living well together in place, pursuing a common task, aggregating given identities in a totalising manner. We identify a postcolonial understanding of community as fluid bonds of solidarity that align and realign differently around different emergent purposes, contrary to the bulk of CRE literature. Following Chatterjee (2012), we take solidarity as a place-holder for reciprocal relationships of subjective morality and responsibility towards one-another that bind humans together, that is often, but not exclusively, expressed as ethnicity, caste, or political belief.

   We present two spatial-historical specificities to stich a fuller picture of these processes. The first part of the puzzle, from India, shows the changing boundaries of community through recontextualising and making fluid pre-existing bonds of solidarity in different instantiations. This "fuzzy sense of community" does not "exhaust all the layers of selfhood of its members" (Chatterjee 1993:223). Instead, community can be continually re-interpreted depending on context. The identities around which communities can congeal are *positionings* according to Hall (1990): How others position us and how we position ourselves both contribute to identities. Our second part, from Scotland, demonstrates how bonds of solidarity can emerge, and subsequently solidify to congeal a group of people coming

together for a specific shared purpose: producing community. This is "solidarity as a practice that can be forged 'from below'" (Featherstone 2012:5). Once a community is forged, they attempt to maintain their bonds of solidarity by engaging in different purposes; community becomes more important than community energy. Not coincidentally, these empirical examples reflect a predominant locus of CRE theory building (Scotland), and a relatively under-represented example (India).

The following sections review community energy literature and introduce the conceptual ideas we draw from postcolonial studies, particularly outlining the distinction it draws between community as contract and solidarity. We then outline our methodology before presenting the empirical base for our argument, and tracing various community dynamics in India and Scotland. The final section concludes before outlining the implications for geographical research.

Literature Review
Community Energy

Community renewable energy (CRE) represents a community turn in sustainability and climate change interventions. CRE refers to renewable energy schemes whether run by a community, involving a community, affecting local residents, or simply labelled community. While problematic to define (for good reasons), community here gestures towards a form of *decentralised* energy production, distribution, and consumption, and also a greater degree of *involvement* of citizens in previously expert-centred, technologically advanced, and distant/invisible energy distribution (Creamer et al. 2018, 2019; Devine-Wright 2019; Walker and Devine-Wright 2008).

After an initial flurry of both empirical examples and theoretical work, CRE has matured and settled into a research pattern. CRE cases are predominantly drawn from North Western Europe (Bomberg and McEwen 2012; Eadson and Foden 2019; Fuller 2017; Seyfang et al. 2014), echoing energy geography as a whole being primarily centred on the global North (Baka and Vaishnava 2020). It is telling that Bauwens et al.'s (2016) study of the development of community energy in "Europe" is based on four countries: Denmark, Germany, Belgium, and the UK. CRE work from outside this core tends to be self-titled "peripheral" (see Sorin 2017). These tend to be Anglophone countries such as New Zealand or Canada (Hoicka and MacArthur 2018; MacArthur 2017). A regular theme has been awareness of and the shifting productive meanings of community's place-base (Barr and Devine-Wright 2012; Devine-Wright and Wiersma 2013; Middlemiss and Parrish 2010; van Veelen and Haggett 2017). This work has established some core ideas around CRE, and we now know a lot about who comprises such initiatives, why, and what the main challenges and barriers to CRE development are (Hargreaves et al. 2013; Seyfang et al. 2013, 2014; Smith et al. 2016; van Veelen 2019; Walker 2008). Much CRE work concerns the challenges in getting schemes up and running. These challenges may be legislative (such as planning regulations), financial (funding the initial outlay) and administrative (the organisational and institutional challenges of running schemes) (Haf et al. 2019; Haf and Parkhill 2017; Walker et al. 2010). As the

field has matured so has the literature; addressing the sustenance rather than the development of CRE brings different aspects to light. For example, recent work focuses on the role of emotions in gelling and sustaining collective togetherness in these community initiatives (Cass and Walker 2009; Robison 2019; Rohse et al. 2020). The focus on more long-standing community energy examples is important, as it reflects a need to understand the community of CRE in a more settled sense, rather than an initial, or purposive forging of a new path.

Reflecting this relatively narrow geographical range of empirical examples and spaces where CRE theory has been built from, we see CRE overly wedded to Western, and particularly English-language understandings and applications of community. Community within the CRE discourse is largely: (1) location-based; and/or (2) a community of choice that is consciously opted into. Islar and Busch (2016) are exemplar here in finding that the boundaries of collectivity in CRE schemes often have a local focus. Walker and Devine-Wright (2008) do include the possibility of community as the opposite of place-based and local: "distant and private". But this is noteworthy for its novelty (Creamer et al. 2019).

Heiskanen et al. (2010) see CRE as place-based, but also refer to sector-based, interest-based, and virtual energy communities. Where community energy initiatives are analysed beyond place, challenging the ontological status of the local, the tendency is for communities of practice: for example an energy cooperative where membership is not limited to location. Walker and Devine-Wright (2008:499) captured the "panoply of different interpretations" of community renewables, and what this diversity illuminates and occludes. They (ibid.) pointed to the variety of meanings on offer, noting that retaining an openness to what community renewables might mean allows "a flourishing of grassroots activity without restricting this to a particular top-down notion of what a community project had to look like". Diversity is a recurring theme of CRE (Dusyk 2017). Yet even openness to diverse understandings is done only within the English-language word "community". The pattern we see emerging has community as a form of contract; a contractual form of association and togetherness. This contract is based on pursuit of a common place-rooted life, and/or an involvement consciously chosen and entered into as individuals (Taylor Aiken 2018).

Contrary to this, we use the notion of community as solidarity, derived from postcolonial theory and fleshed out in our two empirical examples, to show that human togetherness is a pre-existing, enlacing, sedimenting and suturing understanding of belonging to and becoming with one another. Finding evidence of these pre-existing solidarities we argue that the location-based and chosen categorisation of community can be a post-hoc allocation, rather than the primary point of community formation/production. In Scotland we see solidarities being produced and then solidified and in India we see pre-existing solidarities realigning around different instances of "we" vs "them".

A Postcolonial Community

This paper follows Partha Chatterjee (2004, 2011, 2012) and Dipesh Chakrabarty (2008) to apply a postcolonial analysis of the idea of community. There is a wide

array of literature arguing that in the western concept of community, aggregating together is often based on a mutual interest or preference (Amit and Rapport 2002; Bauman 2001; Delanty 2009; Gilbert 2014; Joseph 2002). Community is often imagined either simply spatially, i.e., everyone who lives in a village or neighbourhood, or based on western liberal ideals as individuals who join "together into alliances on the basis of common interests (or shared preferences)" (Chatterjee 2012).

Current community energy discourse is in turn built on this contract, as noted above. This paper proposes that, in addition to individual interests, pre-existing and forged solidarities play an important role. Community is not something that is *formed* only to pursue particular interests. Rather, community often already exists and *functions* to pursue particular interests. These interests are not only particular liberal, individual interests such as post-materialist values (Schlosberg and Craven 2019), they often concern maintaining community cohesion and its Othered outsiders. Therefore, rather than questioning whether community manifests itself through common individual interests or (pre-)existing bonds, working with postcolonial theory, we see community manifesting in particular contexts as a combination of the two. This section elaborates the postcolonial idea of community to provide a conceptual background for the paper.

Scholars in both the West and the global South commonly conceptualise the structure of community in the South as pre-modern and non-secular and modern and secular in the West (Chatterjee 2011). Chakrabarty (2008) counters such essentialised notions by arguing that Indian modernity is shaped by a mesh of western and indigenous ideas (see also, on public and private in colonial and post-colonial India, Ghertner 2012). Some central tenets of western modernity such as subjects with individual property rights and autonomy meld with indigenous practices and traditions. Gayatri Spivak (1992) provides a poignant example of independent agency in her story of the female freedom fighter who carefully singled out the menstruating period to commit suicide to thwart the then common conception that women took such action only in case of an illicit pregnancy. Yet, the individual is also shaped by communal attachments. Chakrabarty (2008:146) explains how widows in 19th and 20th century Bengal critiqued (thus demonstrating a certain autonomy) their own mistreatment by family members by asking how a good brother or brother-in-law should behave with his sister or sister-in-law, thus appealing to "an ideal subject of the extended family". By demonstrating autonomy and individualism while also linking to wider communal ties, multiple, non-compatible practices, some modern and others non-modern, shaped Indian subjectivity (Chakrabarty 2008:141). Spivak's (1992) discussion on sati in India also brings out individual autonomy and community attachments. When widows self-immolate on their dead husbands' funeral pyre, we find the presence of an "ideological battleground" of the widow's right to inherit property (Spivak 1992:96) and the family romance of a what a "good wife" must do. If widows did not have any autonomy, the question of property inheritance would have been immaterial. If they were fully autonomous, the question of familial ideas would not have come up.

Looking into the history of peasant resistance in colonial Bengal, Chatterjee (2012:14) posits that community solidarities did not result from "common individual interests". Rather existing bonds that tie people together motivated peasants to act as a collective. Opposed to the dominant western idea of common contractual obligations—resulting from a "contract among individuals"—collective action resulted from shared identities "derived from membership in a community" (Chatterjee 2012). Chatterjee (2012:14) clarifies that community cannot be immediately reduced to a "determinate social institution" like caste or religion and that communities have a certain "ideological resilience and innovativeness" capable of a range of transformations that help navigate varying contexts. The point here then is that while caste and religion influence the limits of community action, they are not determinant. This is because the "the boundaries of solidarity, the line separating the 'we' from the 'they' can shift according to changing contexts of struggle" (Chatterjee 2012:16). Solidarity here is a placeholder for reciprocal relationships of subjective morality and responsibility towards each-other that bind humans together. For Chatterjee (2012:13), solidarity is the "expression of the communal character" which can often manifest as ethnicity, kinship, or class awareness. These lines of solidarity change based on different instances of us vs them. Therefore, while community reveals solidarity, it also reveals, as Ranjeet Guha reminds us, Othering (Gandhi 1998). Community includes just as it excludes.

Our empirical material below demonstrates these changing lines of solidarities. What we elucidate is an understanding of community through relationships built on "mutual identity and differences of social groups" (Chatterjee 2012:16). Moreover, these mutual identities and differences evolve according to the context of struggle or action, and therefore, the boundaries of community change. As Hall (1990:225) argues, identities form and frequently alter through a "continuous 'play' of history, culture, and power". How others place us and how we place ourselves lead to identity formation (Daigle and Ramírez 2019). This challenges the idea of a liberal community based solely on shared individual interests but also the idea that once formed community is harmonious and stable.

According to Chatterjee (2012), community is also the space in which a citizen-subject makes known her contradictions of accepting domination and revealing autonomy. In the postcolonial space, this contradiction is made possible by the citizen-subject's simultaneous inhabitation of a space of autonomy afforded by "law and the idea of the rights-bearing individual" and a sphere of extended family and kinship (Chakrabarty 2008:147). Importantly, fraternity and family are also present in the western idea of community. However, the key demarcation is that while the "emergence of private property" is foundational to fraternity, in western political thought freedom from "parental/paternal authority" is also required (Chakrabarty 2008:217).

From this, we take three points forward. First, while social institutions like caste, class, and religion shape community action, they are not determinate because the line of solidarity shifts based on changing contexts of we vs them. Second, community for us sits in the complicated space that is neither liberal—based on only individual choices, emergent shared interests; nor stable and illiberal—staying

congealed only around traditional social institutions. Third, we see community, in particular contexts, manifesting as a combination of common individual interests and (pre-)existing bonds. This makes community both emancipatory and exclusionary. The simultaneous occurrence of solidarity and othering reveals a politics of/in community that is important to infuse into the analysis of community energy projects.

This paper builds on the postcolonial idea that "pre-modern" structures come together with modern "autonomy and equal rights" in the slippery space of community (Chatterjee 2011:206). We then apply this to the idea of community in community energy. Chatterjee's (2011:206) observation that "autonomy and representation are being claimed on behalf not only of individuals but of communities" by *both* the subaltern *and* elites, rings true in the growing discourse of community energy. We wish to reread the community of CRE, not only in terms of the locus of where CRE theory has been built from (North West Europe and the Anglophone sphere), but in terms of the foundational ideas of togetherness (community-as-contract) underpinning such theory.

Methodology

The theme of this paper emerged from conversations on two substantial research projects. While neither was initially interested in asking questions of the (micro) politics of solidarity—one focused on community-based environmentalism in Scotland, the other on the politics of energy access in rural India—the politics of community discourse emerged as a generative theme in both projects. The first project studied the emergence of city-wide Transition initiatives over a three-year period in Scotland (Aiken 2014). In our reflections, we were struck by a stark disbalance between the significance of a renewable energy scheme and the way the group put this project to use in order to solidify the group relations and perpetuate togetherness. The second project explored community-based energy for development projects in five villages in the East Indian state of Bihar. Here, we were able to observe the changing boundaries of community, based on a combination of familial and purposive uses. Although community here plays a minor role, it emerges prominently in initially unexpected situations. The co-occurrence of the politics of togetherness around the use and deployment of community was the initial departure point for this article. For the Scottish project, 11 interviews between one and two and half hours long with active participants in this group touched on these themes. Quotes are taken from these, alongside a 1.5-hour long focus group with wind turbine project participants. The interviews and focus group were part of 30+ months of ethnographic research within the wider Transition group.

The India part of this paper draws from a larger nine-month long ethnographic research done in 2012–2013 (Kumar 2015). In total 60 home tours and family interviews (34 higher caste and 26 lower caste), 10 group discussions and 24 elite interviews were conducted. Participant observation data were recorded as 580 diary pages and more than 1200 photographs and videos. In addition, two

higher caste, seven lower caste, and one mixed caste group discussions were carried out, of which one group was a mixed gender group and one a female-only group. Following a grounded theory approach (Crang and Cook 2007), NVivo was used to code the field notes, photographs, interviews, documents and website data.

It is important to note here that while we draw on these two research experiences, we are not—strictly speaking—comparing them. According to Robinson (2011), the basis for comparison is variation finding, which we have not done. Following Robinson, we look to "stimulate theory cultures alert to the local, while also staying open to learning from other places and scholarly traditions" (Kumar and Shaw 2020:156). We note, following Lowe (2005) and Weber that comparison is oft "an institutionalized method for producing modern knowledge through the ideal-type of Western rationality and deviations from it" (Hart 2018:372). Rather we follow what Hart (2018:382) has termed *relational comparison*: "an approach that is closely attentive to constitutive processes arising out of multiple arenas of practice … profoundly critical of Eurocentric forms of analysis". We lean more towards the *relational*—looking for relations that bring our findings together —than *comparison*. We wish then to take these two ethnographic, grounded studies and trace an outline not of some universal vision of community that reveals itself differently in different CRE projects: some in the West, some in the global South. Rather we want to point to how togetherness is crafted, curated, and condensed under the name community, quite differently to how any universal "community theory" could presume.

In these ethnographies, both of us had broad empathy for and alignment with the progressive values, hopes, and aims of the community initiatives recounted here. However, continuously straddling an outsider and insider position prompted us to reflect on when and why we were easily able to "become part of" a community and when not. In Scotland being a white, straight, cis, Scots-speaking man granted affordances and access. Additionally, being educated and knowledgeable about environmental issues brought down barriers among many activists. Even having never lived in Edinburgh allowed a more aloof, outsider stance: not being seen as a threat to participants' own micro-boundaries granted research possibilities.

Similarly, a higher caste Bihari male identity gave a rough familiarity with local society and culture. Ankit understands and speaks the local language, though not as well as the locals. Again, they never lived in a village for an extended time, and received higher education in Delhi before undertaking a PhD in the UK. The caste identity put them in an insider category—"one of our own"—for higher caste households but not for lower castes.

We found in both locations, although more starkly in India than Scotland, that community was capacious and multiple, riven with fragmentations. When we performed jarring identities, it became difficult to gain access. Naturally, a neutral status and concurrently gaining the confidence of all proved impossible. Yet both of us performed a kind of "insider-who-lives-away", or "familiar outsider" identity which was beneficial for access.

Community Energy Projects in India and Scotland
India: Solar Lanterns and Electricity Transformers

The Indian side of the story plays out in two villages, Bijuriya and Sahariya, in Bihar's Lakhisarai district. Bijuriya[2] has 393 households and a population of 2539, 53% male and 47% female. It has a comparable proportion of lower and higher caste families. The main caste groups are Bhumihars, Yadavs and Dalits. Sahariya is a small village with 276 households and a population of 1899, 54% male and 46% female. The village is predominantly higher caste, with only a few lower caste families. The main caste groups are Bhumihars, Thakurs (Barbers), and Dalits.

The Lighting a Billion Lives (LaBL) initiative set up a solar station capable of charging 50–60 lanterns in the house of local village entrepreneurs in both villages. The entrepreneurs then rent these lanterns to villagers daily or monthly. Customers need to visit the entrepreneur twice a day—in the morning to deposit the lantern to be charged all day and then in the evening to take the lantern for use at home. The lanterns are meant to provide access to clean lighting to the whole village. In both villages, the entrepreneurs are higher caste males. In Sahariya, most lanterns are regularly rented and the scheme runs well. In Bijuriya, many lanterns have fallen into disrepair. Few are rented and the entrepreneur now uses some of the solar panels from the charging station to run domestic appliances. The entrepreneur in Bijuriya accepts that he has now lost interest in the solar project, which has contributed to its demise.

Both villages are connected to India's national electricity grid, and this connection functions as community as much as state energy infrastructure. Electricity transformers that are part of the national grid network become a community rather than state project because the state is absent or only partially present. Once installed during electrification, the state peripatetically maintains the local infrastructure and its upkeep often rests with the local community. Local communities initiate repair and maintenance of electricity transformers that are part of the national electricity grid system, putting them in the realm of community energy initiatives.

In 2012–2013, a group of young men in Bijuriya had initiated a money collection campaign to purchase their "own" transformer for the village. They saw this as a community endeavour where everyone was supposed to pitch in because once they installed their own transformer in the electricity grid network, the whole village could derive benefits from it. Their neighbouring village (Sahariya) had successfully achieved their own transformer. However, it often broke down and the village community took it upon itself to repair it every time. Such repair was funded by money collection campaigns with contributions from *all* families of the village.

Scotland: Tilting at Wind Turbines

The Scottish story follows the search to establish Scotland's first urban community-owned wind turbine. Environmentalists from Portobello, near Edinburgh, conceived and planned this, alongside various supplementary projects, from an

awareness raising campaign to the establishment of a farmer's market, all revolving around relocalising environmental concerns.

The attempt to start a wind turbine was filled with hope and excitement of kickstarting a bold, ambitious showcasing of what could be possible, and the sense of being a pioneer. The group (PEDAL) won significant funding from energyshare—a competition designed to support community-owned renewable initiatives. Then, through involvement with planning procedures the project stalled. In addition, local opposition emerged; some residents of Portobello not involved with PEDAL had a particular problem with the wind turbine. Objections were partly aesthetic: solar panels would be ok, so the objectors said. Eventually it became clear that obtaining planning permission for a wind turbine in an urban environment would probably be impossible. After another period of reflection, further follow-up schemes emerged. For example, solar panels on the roof of the local bus company or placing turbines in an alternative, brownfield site along the harbour, now in partnership with another grassroots community group. Both of these also failed.

To understand these cycles of promising plans, followed by becoming bogged down in challenges, we need to take stock of the social and emotional dynamics. At each point of failure, the group reported feeling disappointed, exhausted, and worn down/out. Interviewees described many frustrations—feeling they had "got in over their head" (Volunteer). And yet there was also an emerging excitement about again doing something new, vanguard, and progressively making a change. With the failure and the chance to take stock, came an appreciation of the value of acting together, of feeling supported and not alone. It was this desire to consciously, purposively act together that led to the choice of a new task.

Eventually, there was another new proposal: community-owned wind turbines, but 164 miles away. The profit was to be reinvested into both the "local community" of Portobello, supporting community organisations in Edinburgh, not those living near the proposed turbines. The example of the wind turbine proposal is instructive, as it provides a clear example of the ways in which this group deliberately sought successive, specific projects to focus on. The project was important, but likewise was an awareness that without an activity to be engaged in, many of the benefits of community involvement—feelings of belonging, participating in a bigger-than-self project, sense of solidarity, and connection to others—could slip away.

Tracing the Community in Energy Projects
India: The Story of Changing Solidarities

Solar Lanterns. Brij Kumar, a higher caste male, runs a solar lamp charging station in Sahariya village. Most funding for the charging station comes as grants through corporate social responsibilities, state schemes or individual donations for electrification of the village community. The village is connected to India's national grid but the electricity supply is intermittent. Therefore, a stable demand for the solar lanterns exists.

However, only 50 solar lanterns serve a village of 276 households. Most of Kumar's customers are higher caste families. *Dalit* families, who have lower
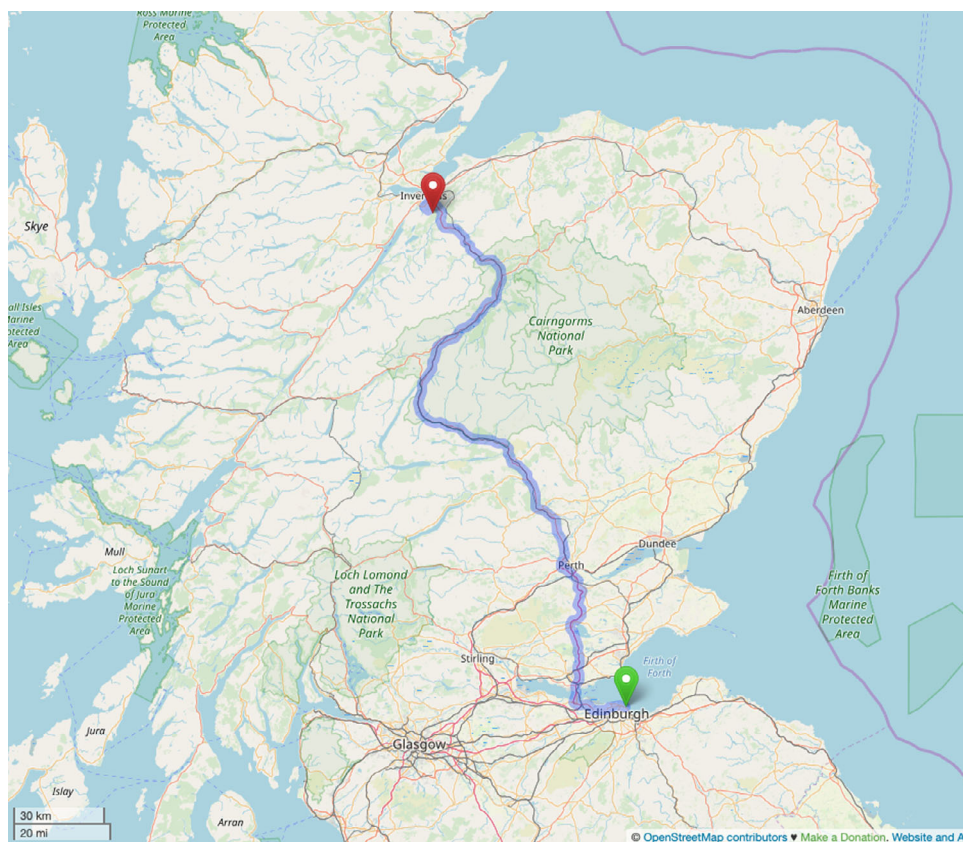
Figure 1: Map of showing the distance between the eventual community wind turbine location and owners (source: Open Street Map) [Colour figure can be viewed at wileyonlinelibrary.com]

incomes and are mostly landless, do not find the lanterns' benefits worth the extra expense (Kumar 2018). Another reason for mostly higher caste customers is the socio-spatial distribution of caste neighbourhoods in Indian villages. Figure 2 shows that higher caste families are spatially more proximate to the entrepreneur and people from other caste neighbourhoods have to walk further to get solar lanterns.

A key factor behind most customers being higher caste is the fact that the entrepreneur prioritises those with whom he has stronger bonds of solidarity. Based on historical and cultural relationships of caste, where most people from the same caste in a village (and sometimes with people from neighbouring villages) trace their lineage to the same ancestors, the higher caste entrepreneur's customers are also his kin. He gives them preference. This prioritisation of "own" community, while othering some who are part of the "village community" becomes apparent in a dispute over a solar lantern:

> We used to bring number 22 and now they have given us number 7 … We did not go for two days [to collect the lantern] and now the beetle shop guy takes it [number
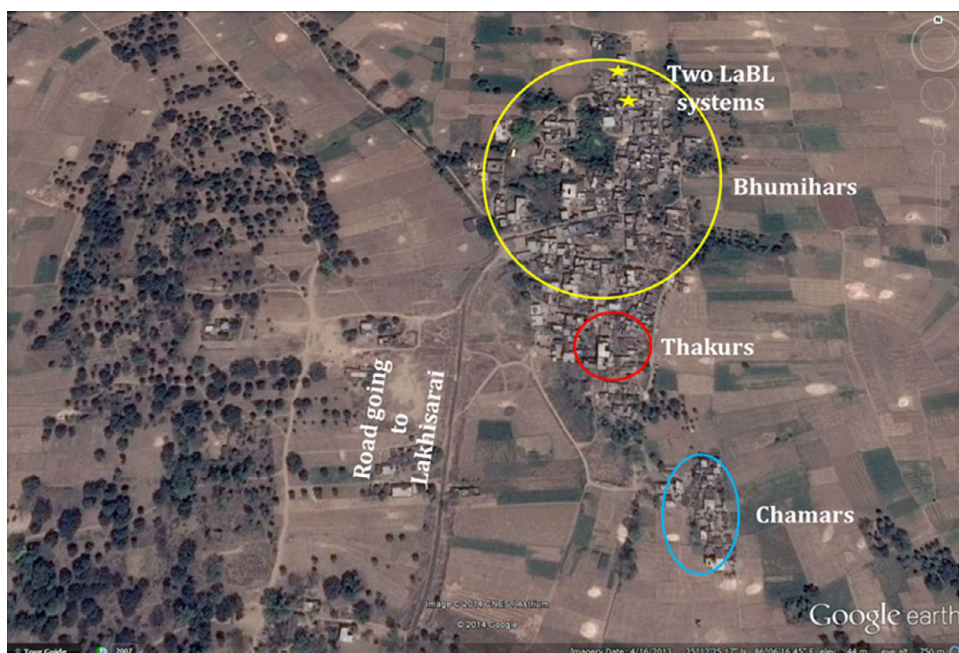
Figure 2: Map of Bijuriya. Bhumihars are higher castes, Thakurs are lower caste and Chamars are Dalits (source: Google Earth) [Colour figure can be viewed at wile yonlinelibrary.com]

22]. I went one day [to the entrepreneur] and asked why they do not give us 22 any-more when it is in the name of their [points to her children] father. We used to keep it [number 22] responsibly, take care of it. (Women of Bilas Thakur's family, lower caste, Sahariya)

Thakur's is a lower caste family whereas Kumar and the "beetle shop guy" (in the quote above) are higher caste. Both—Thakur and the beetle shop guy—pay the same rental for solar lanterns, and theoretically have the same claim over this "community energy" system. However, Kumar's solidarity with the beetle shop guy draws the lines of community elsewhere. In fact, Kumar explained that the lanterns perform better and the project faces fewer upkeep problems if people have a sense of owner-ship and use the lanterns judiciously. Many people in Sahariya agree that a sense of ownership gives them a reason to care for solar lanterns and use them "judiciously".

Due to their caste connections and kinship, Kumar feels a greater responsibility towards "the beetle shop guy" than towards other castes in the village. Falling within the boundaries of this community the beetle shop guy gets lantern num-ber 22, which is in a better condition because the Thakurs have taken care of it. The existing social and spatial location of the entrepreneur ends up determining a caste-based community boundary in this community energy system. This shows that the "community" is internally multiple, but also that the boundaries of the community shift and evolve based on pre-existing lines of enlacement, such as caste, leading to both inclusion and exclusion. In addition, the stark example of Kumar and Thakur shows that relationships of power play a critical role in

enacting the community lines. If Thakur (a lower caste) were the entrepreneur, would she have been able to take the well performing lantern away from Kumar (a higher caste) to benefit her kin? It seems unlikely.

Electricity Transformers. Bijuriya village was first electrified in 1967. Since then, the national grid electricity infrastructure broke down and required repair more than once. In 2011, Bijuriya was re-electrified under the Indian government's village electrification scheme. Two transformers of 16kVA each were installed in *dalit* colonies, to supply electricity only to below poverty line (BPL) families, most of whom are *dalits* and other lower castes. However,

> Electricity came to our village, for BPL. But what we did was, although it was not for us, all of us connected to it. Not only did we connect, we also monopolised it ... [We were adamant] that we must use it. The result was that both transformers burnt off. (Rahul Kumar, male, higher caste, Bijuriya)

In Sahariya, the solar lamps were for the whole village community but higher caste families monopolised them. Here the electricity was for the BPL families, most of whom are *dalits*. Even so, higher caste families requisitioned it. This resulted in overloading and breakdown of the electricity infrastructure. Everyone was left without electricity. At the time of Ankit's fieldwork, some higher caste males were collecting monetary contributions from the villagers to purchase a higher capacity electricity transformer from the black market and to pay bribes to the electricity department officials to install it. This was not going as well as some expected. The higher caste coordinators of this exercise expected every household to contribute INR300, regardless of their caste or economic status. The higher caste men, who saw the acquisition of this transformer as a community endeavour complained that many *dalits* refused to pay. As opposed to the solar lantern rental, here the higher caste men drew the line of community as the whole village; yet when the state previously provided transformers only for BPLs, they refused to accept it. A group of higher caste elderly males said, "It's a government thing, there is no one to stop us" (Group discussion, elderly male).

However, *dalits* that the Ankit spoke to drew the community line as BPLs. It was clear to them that only BPL families were allowed to participate in the transformers installed as part of the government's electrification programme. Higher caste families forcefully connected to those transformers, contributing to their breakdown. Many *dalits* found it unreasonable and unjust that now they should pay INR300 for a new transformer while the state had allotted them one. One higher caste man complained that *dalits* were not ready to pay for the new transformer because they wanted "their own" transformer. They hoped that the government would either fix the existing BPL transformers or install a new one. Therefore, while higher castes drew on an expanded idea of community to further their claims on the BPL transformers and then appealed to a village level solidarity to fund a new transformer, *dalits* saw through this politics of solidarity and refused to play ball.

In Sahariya village, the story of community and electricity transformer played out differently. Sahariya was first electrified in 1965. Since then, unlike Bijuriya,

the national grid infrastructure in the village never fully broke down. In a subsequent round of electrification, distribution wires were extended to the *dalit* habitations. There is no separate transformer for BPLs or *dalit* neighbourhoods. One transformer in the village serves everyone. Many higher caste families are formal customers of the state electricity department and receive electricity bills. Most *Dalit* families do not have formal electricity connections. Nevertheless, they use electricity from the national grid.

M1:   No one has taken a [electricity] connection. When the transformer breaks down, we help in [fixing] that. [when it] breaks, we do a [money] collection in the village.

A: So, you contribute to the money collection?

M1:   Yes, yes! We are managing. When it breaks down, we get it fixed. (Group discussion, male, *dalit*, Sahariya)

Even though *dalits* are not customers per se, they claim their share in the "community transformer" by helping with its upkeep. The transformer was initially brought to the village through everyone's contributions and is now maintained through everyone's contributions. Here, the community lines were never redrawn based on above poverty line, below poverty line, higher caste, and lower caste for grid electrification. For the solar lanterns, the lines of a socio-spatial community were explicitly redrawn and maintained.

Although imagined through a liberal lens by the project developer and funders, "community" reveals itself very differently in these different instances. These communities of solidarity align and realign differently around different purposes. While higher caste groups dominate the solar lanterns meant for the whole village in Sahariya, all social groups draw electricity from the central grid by participating in the maintenance of the network. The same central grid network sees a more fragmented idea of the village and alignment of community around caste lines in Bijuriya. This is partly due to the different socio-material histories of the national grid in the two villages—in Sahariya the state never allotted electricity transformers for BPL families, most of whom are *dalits*, while in Bijuriya it did.

While the story largely follows pre-existing solidarities that realign around changing instances of "we" vs "them", it adds a critical corollary of thinking through relationships of power. In both the solar lanterns in Sahariya and the central grid in Bijuriya, members of higher caste, who hold more social, economic and political powers, opportunistically limit the community lines to "their own" kin to exclude "others" or extend it to the whole village to include themselves. In Bijuriya, *dalit* families resist by refusing to contribute to the higher caste "community endeavour" of buying a greater capacity transformer.

Scotland: The Story of Forging Solidarities

PEDAL—the Transition Town movement's 21st overall initiative—was founded as a coming together of residents in Portobello, a coastal town within Edinburgh, Scotland's capital. Portobello lies along the promenade facing the Firth of Forth,

from where it gets its local moniker: Edinburgh-on-sea. Portobello is a relatively wealthy area, with a largely commuter population working in Edinburgh, and a fairly strong sense of place. "Porty" has cultural events; its own high street and is more than just a neighbourhood within Edinburgh, partly due to its shoreline which serves as a focal and delineating point.

PCATS to PEDAL: Forming Community. In the early 2000s it was announced that an unnamed supermarket had applied for planning permission to build a super-store in Portobello. Edinburgh council had to approve planning permission, and so a core group of like-minded residents came together to protest.

In May 2005 PCATS (Portobello Campaign Against the Supermarket) "success-fully opposed a planning application for an 85,000sq ft superstore development in Portobello, Edinburgh. Although the supermarket developer was never revealed, local campaigners suspected it was an application from Tesco".[3]

While PCATS celebrated their victory, they now had a question. The purpose PCATS came together for was gone—so what would they now do with their forged solidarity? Should they disperse, satisfied with their success? Some were concerned about retaining their social learning, their lessons learned about how to protest, raised agency, and knowing how to deal with municipal and planning procedures. Some just wanted to hold onto the feeling of belonging, and acting with likeminds. Similar to Don Quixote, the supermarket was the windmill the group tilted at; without this common enemy the group was left purposeless. PCATS' campaign success, and the emerging feelings of group belonging, led to a desire to continue albeit without a proposed supermarket to fight. In interviews volunteers talked about "holding onto their community", and finding a way to "sustain community".

From the remains of Portobello Campaign Against the Superstore (PCATS) a core group stayed active, adopting the name PEDAL (Portobello Energy Descent and Land Reform). After looking around for various ways to sustain their forged community, PEDAL took the decision to adopt the Transition Town branding. PCATS members were influenced by texts outlining the lack of diversity in UK high streets,[4] something also concerning Transition. Central was the rhetoric and visibility Transition put on acting as a "community". PEDAL can be seen as an attempt to "keep the community together" as one volunteer put it. It helps then to see community movements for sustainability as much about community as about sustainability. And CRE as about pursuing and preserving community as much about acting for energy security, democracy, or justice. PEDAL can be seen as the phoenix that emerged from the ashes of PCATS. However, this repurposing or rebranding of PCATS to PEDAL did not happen in one moment or meeting. Rather it emerged from a core group's growing realisation that they wanted to remain active together, to focus on pursuing "useful tasks", and that they enjoyed acting with and belonging to one other. This collective sense of holding on to and carefully curating their new-found feelings of togetherness—the "community feeling" as they described it—led to finding subsequent tasks which would build and keep their community. Here, community is not to be found in achieving tasks like the prevention of a supermarket, but in working towards it. It is not that the

supermarket would have destroyed their community (as a neighbourhood), but that they found their community (as activists) in responding to the supermarket. This community is not a settled or static form of togetherness, but a form of journeying together, repurposing solidarities and togetherness.

What Did PEDAL Do? A Group of People Becoming Community. Becoming a Transition Town accompanied both shifting tasks and domain: from protesting against a supermarket and fostering economic relocalisation to doing something in the face of looming global and local environmental challenges. PEDAL as a Transition initiative carried out a variety of activities, all fitting with their aims and objectives, but also crucially building links, connections and community within those involved. For instance, PEDAL put much effort into promoting and advertising a Car-Free Day for Portobello each September. They had a tie-in with a local church. PEDAL also engaged with community gardening, as is typical for Transition initiatives. PEDAL's relationship with food went further to the instigation and support of the Portobello farmers market, and the organic food on sale there.[5] This was enabled by Portobello High Street's status as a satellite "town-centre" of Edinburgh. PEDAL also had a reasonably large tenement insulation programme[6] which involved increasing the energy efficiency of Edinburgh's tenements—the standard, multi-occupier, solidly stone-built, residential form in the urban core of Scottish cities.

By far the most ambitious and long-term of PEDAL's activities was their attempt, with Greener Leith—a grassroots environmentalist group from the adjacent neighbourhood Leith—to build the first urban community-owned wind turbine in the UK.[7] The plan was for a turbine capacity between 500 and 2300 kW, saving 400–2000 tonnes of CO_2, powering up to 1300 homes, and providing income for the neighbourhoods Portobello, Craigentinny, and Leith (Reynolds and Lavery 2012).[8]

PEDAL found a location for the wind turbine on the seafront, on a sewage waste treatment plant. Redeploying the skills and experience acquired from the anti-supermarket campaign proved too ambitious though. Scottish Water, the owners of the site, claimed it would be impossible to insure their site for the scheme and planning permission was refused. Energyshare, who had funded the development of the proposal, indicated they would allow the monies to be continued to be used in developing a proposal at another site. So, PEDAL tried out other community renewable energy proposals: solar panels on the roofs of bus sheds, of the city's municipally owned bus company. At this point PEDAL had won funds specifically to develop a community-owned renewable energy scheme, and the "community" took to finding unfolding and consecutive purposes in order to keep acting together. Having exhausted options in and around their local neighbourhood, Scene—a social enterprise specialising in small scale renewable energy projects—suggested developing a proposal to build their community-owned wind turbine, but in Tomfat, a remote rural wooded hill. This scheme would build 2 × 750 kW wind turbines, 80 m tall: much smaller than most commercial operators. This, PEDAL claimed, would cut 40,000 tonnes of CO_2, and generate £5–7 million income for PEDAL and Greener Leith.

Over a few years this community group continually evolved. Core members remained, some became more involved, and others drifted to the fringes, or away. PEDAL shifted in area of concerns from economic to environmental. They repurposed from supermarket protest to proposing a wind turbine to a solar scheme. Then PEDAL shifted back to wind but from a scheme in the local neighbourhood, to one 257 km away, half-way across Scotland.

What the thematic and locational displacement of the community's aims and objectives show is that it was not the specific project that gelled and sustained the community. Nor was it even the specific field of active engagement, whether economic, social, or environmental. But rather a general commitment to localisation and a will to stay and act together. The specific object of coalescence, or even the ways in which this coalescence happens were not crucial, but the fact that the community required a project or scheme to focus on is a telling point. For PEDAL energy was for community, rather than community for energy.

As we indicated at the outset, community, when understood in CRE is often seen similarly to what we can find in PEDAL's wind turbine proposal: a community of individuals that "contracts" itself to pursue a renewable energy project. However, by tracing this particular example back to an anti-supermarket protest we can see that the community—the sense of solidarity and togetherness—was forged through active struggle, and only then subsequently put to use. The geographical displacement of the final CRE proposal, far removed from Portobello as

Figure 3: Proposed wind turbine on Portobello seafront. "Predicted view" is the operative phrase, as it was never actually built. [Colour figure can be viewed at wileyonlinelibrary.com]

a container of this group's place-based togetherness, also heightens this point that PEDAL's core group of activists were not in the end held together by place, individual values of self-interest, or contracting themselves to one another. Rather they forged a sense of solidarity, which they subsequently put to use in pursuing particular progressive aims, only some of which were CRE projects. As Featherstone (2012:7) outlines, these solidarities "are not just part of the binding together of pre-existing communities", rather this solidarity is forged, not latent. This chimes with the postcolonial perspective outlined above where togetherness pre-dates, and can already be found, before any community label is applied, or task is given, to social relations.

Conclusions

Taking a postcolonial approach, this paper adds critical new insights to the field of community energy. Community, within the field of community energy, is mainly understood through a mediation of energy projects: where is the project located, how many people are involved, who is investing in the projects. Here, we show how people and groups define and redefine "their communities" and how communities coalesce, dissipate and recoalesce. Although based on studies of energy projects, our analysis attempts to study the dynamics of these communities rather than the projects themselves. This is to say, rather than understanding these communities in energy project terms, we take community on its own terms and then consider what this might mean for energy, sustainability and climate change projects.

Our argument is that the two broad uses of community in CRE (1. location-based; 2. chosen) can be seen as—and are regularly analysed as—community as contract. Community here is a form of togetherness that is entered into for some sort of productive ends: living well together in place, pursuing a common task. We counterpoise this form of *community as contract* with an idea of *community as solidarity*. This is the idea that bonds of human togetherness and solidarity cannot be contained by choices or places.

We use the notion of community as solidarity, derived from postcolonial theory, and flesh out through two empirical examples to argue that human togetherness is an existing, enlacing, and solidifying understanding of belonging to and becoming with one another. We find evidence of solidarities in both examples, and argue that the location-based, elective, and voluntaristic categorisation of community can be a post-hoc allocation, rather than the primary point of community formation/(re)production. In Scotland, we see solidarities being forged and then solidified. The energy project becomes a vehicle for maintaining these solidarities. In India, we see pre-existing solidarities realigning around different instances of "we" vs "them".

At the heart of our argument is an ontological claim; a simple central thesis. Rather than solely being formed around a purpose, or emerging within a container space of surrounding territory, community is revealed through bonds of solidarity and emergent purposes. We pay particular attention to what community is and could be, as it is implied within the field of community energy. Taking Indian

and Scottish community energy schemes together, we shed light and bring to attention the particularly Western notions of community underpinning CRE. The consequences of this ontological narrowness are that alternative forms of togetherness are overlooked.

As more scholars and practitioners turn towards "communities" to tackle the climate crisis and promote sustainability transitions, there are two points to flag for radical geographical research. First, techno-economic thinking, which dominates this field, frequently drives community initiatives and their analysis. Increasingly, the dominant mode of conceptualising community is a pursuit of developing "connections" by digitally linking homes or a street, without taking into account (pre)existing social relations. Such techno-economic connections of wires, meters, and mobile applications attempt to transform a community based on pre-existing bonds into one solely based on contract. Geographical research should enquire what this means for creation, subversion and destruction community in different spaces of everyday life. In addition, what further impacts does this have for inclusions and exclusions based on gender, races, caste, and class?

Second, initiatives like Transition (Towns) partly derive their legitimacy from a "need to develop community"; they will bring community to "those who do not have it". We observe that within such initiatives, people get together as a group for a particular purpose and slowly coalesce as community to a point that they look for purposes that would help them stay together and work together as a community. As their explicit political identities and ideologies solidify, in Chatterjee's (2004:138) words, we observe a movement "from empirical discreteness of a population group into the moral solidarity of a community". Radical geography research on community projects should ask how they could become a vehicle of strengthening community bonds.

Acknowledgements

Endnotes

[1] For example, Larner and Craig (2005:421) show how neoliberalism "constitute[s] a rallying cry for various sites of community".

[2] The village population data are from Census of India 2001. Interviews and observations in the villages form the basis of the descriptions of social makeups.
[3] http://www.corporatewatch.org.uk/?lid=2383
[4] Mentioned were Monbiot's *Captive State: The Corporate Takeover of Britain* (2000), and New Economics Foundation's *Clone Town Britain* (2007).
[5] http://local.stv.tv/edinburgh/23109-organic-market-bucks-recession-to-celebrate-year-of-success/
[6] http://www.pedal-porty.org.uk/2012/05/city-of-edinburgh-councils-free-insulation-scheme-frequently-asked-questions/
[7] http://local.stv.tv/edinburgh/25317-environmental-charity-secures-scottish-government-loan-for-wind-turbine/ and http://www.greenbuildingpress.co.uk/article.php?category_id=34&article_id=1040; http://local.stv.tv/edinburgh/27818-leiths-proposed-wind-turbine-could-lose-out-on-100000-of-funding/ and http://local.stv.tv/edinburgh/28453-msps-back-community-call-for-portobello-and-leith-wind-turbine-votes/
[8] http://www.greenerleith.org/greener-leith-news/2011/11/18/leithers-back-our-community-owned-wind-turbine-bid-in-huge-n.html

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