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Failure to Consider Local Political Processes and Power Relations in the Development of a Transdisciplinary Research Project Plan: Learning Lessons from a Stormy Start

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Abstract

The 2014-2016 'Transforming Responses to Power Outages in Extreme Weather Events' Knowledge Transfer Partnership (KTP) project was rated 'Outstanding' in 2017 by Innovate UK for transforming community-level responses to power disruption during extreme weather. However, despite its eventual success, the project suffered from a failure at the very start of the project, whereby the original research plan failed to obtain the agreement of community members, as key stakeholders, to participate in the proposed project activities. This chapter draws on the findings from a failure analysis of the original project plan by drawing on evidence obtained from semi-structured interviews conducted with community participants as part of the revised project plan to highlight how this failure resulted from inadequate consideration of the importance of place-based political processes and uneven power relations between stakeholders in the original research design. Building upon existing transdisciplinary scholarship focusing on managing power relations and measuring progress in research, it argues that this failure reveals the need for researchers to be fully informed about contextual power dynamics embedded within society in advance of the development of project activity plans. In addition, lessons learnt from this failure can help in developing key recommendations for informing future transdisciplinary research endeavours.

Introduction

Managing power relations presents a challenge in transdisciplinary research (Siebenhuner 2018). While no unanimously agreed definition of transdisciplinary research exists, it can be defined as an “integrative, method-driven scientific principle aiming at the solution or transition of societal problems by differentiating and integrating knowledge from various scientific and societal bodies of knowledge” (Jahn et al 2012, 6). Most significantly, it seeks to ensure that solutions to these societal problems acknowledge and address their complex root causes, which ultimately transcend individual scientific disciplines and societal institutions (Pohl 2011). Unlike positivist forms of scientific inquiry, transdisciplinary research is characterised by its use of integrative methodologies and collaboration between scientific and non-scientific communities, including industry, governments, civil society and local communities (Brown et al 2010, 4).

Owing to the integration with society that this form of research affords, transdisciplinary researchers inevitably encounter the power relations and political processes that shape society (Jasanoff 2004; Jeong 2008). Transdisciplinary research is therefore, by its very nature, heavily politicised. This results in one of the greatest challenges within transdisciplinary research - that of managing political contestations and conflicts rooted in societal power-relations (Siebenhuner 2018). The existing transdisciplinary research scholarship presents numerous examples of how political contestations and uneven power relations present challenges for researchers (See Siebenhuner 2018). These examples include contestations resulting from conflicting economic motivations (Hirsch-Hadorn et al 2006) and contestations rooted upon claims to legitimacy in participation (Pohl et al 2010). Most significantly, they highlight that the specific forms of conflict that occur within each project are particular to the politics and power-based relations embedded within each local research context (Adler et al 2018; Lohr et al 2017).

However, the scholarship examining ways of managing power relations within transdisciplinary research remains limited (Siebenhuner 2018). In addition, almost all the current scholarship focuses upon the different forms of power-related conflicts that manifest during the *active* phase of a research project, such as during knowledge integration and solution development activities (see Lohr et al 2017

and Siebenhuner 2018 for examples). This means that they focus predominately on conflicts that emerge once the data collection phase is already complete. In addition, the limited number of suggestions offered for overcoming contestations is also focused on conflicts that emerge during the active research phase, which takes place *after* research plans have been successfully launched (see Leventon et al 2016; and Pohl 2010 et al for examples). What is missing from this scholarship are case studies that illustrate why conflicts rooted in place-based politics and power relations need to be considered within the research planning stage, *prior* to the active phase. This is because if a research project seeks to transform a complex societal problem, it must address existing inequities in participation in research by successfully engaging all relevant stakeholder groups. For example, in order to find solutions that solve existing inequities in adaptation to extreme weather amongst different social groups, a research project must engage with both members of vulnerable groups, such as people with disabilities, and members of the societal institutions that ultimately create the conditions of enhanced vulnerability amongst these groups through policies and practices that shape their social marginalisation (Connon 2017; 2019). This requires ensuring that research activities do not risk perpetuating existing inequities by failing to secure the participation of all fundamental groups in solution development. At present, the existing transdisciplinary research scholarship lacks examples that reveal why place-based power relations need to be managed at the planning stage of the research in order to address issues of societal inequity in solution development.

Another branch of transdisciplinary research scholarship has examined the concept of progress in transdisciplinary research (Lang et al 2012; Pohl et al 2010). For example, Pohl et al (2010) explains that progress can be evaluated in terms of the lessons that can be learned from the experience of undertaking transdisciplinary research. This is because these lessons can then be elaborated upon through tools and case studies that help to guide researchers in managing future transdisciplinary research projects and practices (ibid). However, although a plethora of examples exist that demonstrate progress in transdisciplinary research practice (See Palmer 2013 and Ruppert-Winkel et al 2014), these examples predominately focus on lessons learnt from the successes of research, rather than from failures to achieve intended research aims and outcomes. This can be argued to limit the

scope of lessons that can be learnt from the experience of undertaking transdisciplinary research, as not all projects are successful, some are only partially successful, and some are successful in different ways to what was originally intended (Hruschka et al 2018). Failure also represents a crucial part of the scientific method as every failed experiment helps to refine approaches to problem solving (Loscalzo 2014). In addition, failure can be regarded as an especially important part of the learning experience in transdisciplinary research, owing to the emphasis on interaction with wider society that this form of research involves. This is because analysis of failure in cross-cultural research has shown that learning from failure can help to ensure that future research questions and methodologies are consistent with local realities (Faas et al 2019; Hruschka et al 2018). Several other chapters within this edited collection (See chapters by O'Rourke et al and Robson-William et al) highlight how managing stakeholder dynamics contribute to failure in transdisciplinary research. However, the foci of these chapters is on failure that occurs during the active phase of the research, rather than at the very start of the project.

This chapter addresses the above shortcomings in the existing transdisciplinary research scholarship and complements the other chapters in this edited collection that focus on failure in managing stakeholder dynamics by contributing a case study that shows that how, what eventually proved to be a highly successful and award-winning transdisciplinary research project, transcended from a major failure at the very start of the project. This was that the project failed to secure the willingness of a fundamental group of participants to participate. The findings from a retrospective failure analysis that drew upon in-depth qualitative research data obtained from activities undertaken as part of the revised project plan show that the failure to secure willingness to participate resulted from a major shortcoming in the initial research design. This was the failure to adequately consider the political processes and power relations that characterised the specific research context and which shaped participant willingness to participate in the proposed project activities, when selecting research methods for conducting the project. The chapter begins with an overview of the project in question, a description of initial reactions to the proposed project plan, and details of how failure to obtain the willingness of key stakeholders to participate led to revisions being made to the research plan in order

to steer the project towards a successful outcome. This is followed by an outline of the approach used to analyse the failure in the original research design, and an in-depth discussion of the findings. The chapter concludes by presenting the key lessons learnt and by highlighting how the case study presents an important contribution to the existing transdisciplinary research scholarship. In addition, a series of recommendations and take-home messages are provided to help inform future transdisciplinary research practice.

A Turbulent Tale in Chasing Storm Trails: Overview of a Transdisciplinary Knowledge Transfer Partnership Project

Research problem and context

Extreme weather can seriously disrupt daily life. Existing studies within the environmental hazards scholarship emphasise that human vulnerability to extreme weather, defined as the conditions that make up a person's capacity to prevent, withstand and cope with the effects of hazardous weather, is associated with demographic, environmental, social, cultural and economic determinants (Fadigas 2017). As such, it represents a complex problem entangled throughout society.

Over the past decade, the UK has witnessed increasing severity and frequency of seasonal weather patterns, including flooding, heavy snow and unpredictable seasonal weather patterns (Scottish Government 2012). This severity is predicted to further increase over the next 50 years (IPCC 2013). Power disruption during extreme weather results in disruption to livelihoods and produces significant levels of fear and stress (See Cannon 2017; 2019).

Between 2013 and 2014, discussions with personnel from Scottish and Southern Energy Networks (SSEN), a private sector energy company responsible for delivering power supplies to Scotland and the South-East region of England, revealed that during periods of extreme winter weather between 2011 and 2013, certain groups of community members, including people with disabilities, were

deemed more likely to have had significant difficulties coping with power disruption than others. This was further supported by discussions with members of emergency responder public service groups (local and national Government, Police, Ambulance, and Fire and Rescue services), who stated they had observed that community members, particularly those who had experienced difficulty coping during power outages and extreme weather, wished to receive more information and support to enable them to better prepare for and respond more effectively to future weather-related events. Similarly, SSEN recognised that it needed to develop new forms of support for communities so that the ‘wellbeing gap’ between electricity disruption and restoration for its customers could be effectively addressed. Members of the emergency services also expressed concerns that their resources were becoming less able to meet the demand for emergency support during winter storms. Concerned about increasing pressures being placed upon official emergency response organisations, both the UK and Scottish Government recognised the need to focus on increasing the resilience of communities to withstand the impacts of extreme weather. In particular, the governments looked at how a participatory approach involving community-led action and aimed at enabling communities to be able to plan for and respond during periods of extreme weather, would help build community resilience, with resilience being defined as, “that which maintains the continuity of our way of life or returning to relatively normality after a disruptive event” (Scottish Government, 2012, 3).

Development of a transdisciplinary research project to address vulnerability to power outages in extreme weather in the UK

As a result of identifying a shared need for improving community-level responses to power outages, a 36-month Knowledge Transfer Partnership (KTP) project, between the University of Dundee (UoD) and Scottish and Southern Electricity Networks (SSEN) was developed in 2014. The aims of the project were four-fold:

- **Understand** how a sample of communities and individuals in urban and rural areas has responded to recent natural hazard events (e.g. flooding, snow) and electricity supply disruption;
- **Develop** effective solutions to prepare for and respond to the challenges of hazard events and electricity supply disruption by drawing on these insights and working with sample communities, local authorities, emergency services and voluntary groups;
- **Mobilise** the solutions generated throughout society and institutions;
- **Embed** knowledge at all scales and levels.

As the project aimed to integrate knowledge from a range of stakeholders to co-develop solutions to help transform responses to extreme weather, an initial research plan was drawn up to mobilise the project aims. Six case study sites were identified after discussions with government and emergency response personnel on the basis of being either ‘exceptionally outstanding’ (all rural areas) or ‘relatively poor’ (urban areas) by these organisations, in terms of community coping ability during extreme winter weather between 2011 and 2014. The six case-study sites included three villages and a town in Scotland; and a village, and a larger town in England. Each of the six sites had been affected by prolonged power outages (lasting 24 hours or more) in the previous four years as a result of extreme weather, including snow, rain and gale force winds, which damaged overhead power lines and flooded electricity sub-stations.

Knowledge of each community’s strengths and limitations in responding to extreme weather was obtained through researcher consultation with local government and SSEN representatives. The knowledge offered by these representatives was further supported by SSEN data on the number of complaints made by community members about loss of power during the storm events. This was then used to select appropriate research methods. As the project sought to identify and mobilise the knowledge required to ensure successful coping ability during extreme weather, an emancipatory approach was chosen that aimed to recognise local communities as key participants, rather than

passive recipients of the outcomes of scientific research (Mauser et al 2013). The project plan therefore aimed to utilise participatory methods of engagement that focused to a greater extent upon knowledge integration, synthesis, and the provision of co-learning opportunities than what is normally afforded by traditional exploratory research methods (Davidson et al 2007).

The charrette method was chosen as the means to facilitate the integrative, democratic co-learning process. The charrette method is defined as “a time-limited, multi-party design environment organised to generate a collectively” produced outcome (Condon 2008) and one which “involve[es] all associated stakeholders in critical decision-making points” (Lennertz and Lutzenhise 2006). The plan was to implement three charrettes in each of the case study sites through a series of meetings held within each site. The first would facilitate team-building, opportunities to hear different understandings of the research problem, and collaborative re-framing of the research problem. The second would focus on determining the possibilities for change and co-production of solution development. The third aimed to refine the solution through dissemination of the results among different stakeholders groups and to develop the project toolkit to mobilise the solution throughout communities, institutions and society. The decision to conduct charrettes within each of the sites was made on the basis findings from the existing transdisciplinary scholarship that emphasised the importance of acknowledging context in solution development (Mauser et al 2013: 426-428).

The plan was to select a broad range of participants who would represent each of the stakeholder groups. This approach to participant selection was influenced by systems-approaches to societal transformation (Fazey et al 2007; Reed et al 2010), with the idea being that each charrette would represent a microcosm of society. Each charrette would therefore include members of SSEN, members of official emergency response organisations including Fire and Rescue services, Ambulance services, Police, members of transport providers, local and regional government, local voluntary organisations, and members of the local communities. The plan was to seek community members whose experiences of coping during extreme weather ranged from highly successful to extremely problematic. Plans were put in place for the lead researcher to visit each site with project

information sheets to source out potential participants and introduce them to the project. This was to be facilitated through one-week visits made by the lead researcher to local SSEN outreach depots within each of the sites to shadow the work of the power outage response staff and to meet with local residents during the course of these activities. The first two visits to each of the case study sites took place in two rural Scottish communities in April 2014.

Reception to the project plan: A failure from the start

Despite efforts made by staff from the local SSEN depots to introduce the researcher to local community members who had previously coped well or who had experienced difficulty coping during previous storm encounters, initial attempts to engage community members in the proposed project activities failed. Although community members expressed interest in the researcher's visit, listened to details about the project aims, and read the project information sheet, all participants said the same thing – that they would not wish to participate in the meetings proposed. This was despite the fact that they assured the researcher that the project sounded interesting and that they believed that local residents, like themselves, could make an important and beneficial contribution to the project. However, without their agreement to participate in the proposed activities, the project plan could not be mobilised. The reasons as to why participants refused to participate were not made explicitly clear until the project was later mobilised with a revised research plan. However, these reasons, which are detailed and analysed in depth in the following sections of the chapter, are key to understanding why the original project plan failed.

Transitioning from failure towards success

This failure to secure participant willingness meant the original research plan had to be revised. The revised plan took into consideration the brief insights offered by community members from initial discussions about the weather, including information about the vulnerabilities of certain groups of community members that were hidden from official accounts about the coping abilities of residents.

Most importantly however, the revised plan drew on what a number of residents had explained to the researcher - that key to understanding local people's responses to severe weather required visiting the area for a number of weeks to experience it for themselves. Therefore, instead of undertaking a charrette-based approach to simultaneously engage all participants, the revised plan utilised a qualitative, multi-tiered approach. This involved undertaking 12 weeks ethnographic research and conducting semi-structured interviews with participants in each case study site in order to better understand the nature of the research problem and to enable participants to offer inputs for solution development (see Palmer 2017 about the benefits of ethnographic and deep qualitative research methods in transdisciplinary research). Focus-group meetings using the charrette method were then later utilised to integrate the knowledge gathered from the ethnographic and semi-structured interview research in the development of solutions with members of official institutions. Permission was sought from each participant for the researcher to share their insights at these meetings. The outcomes of these meetings were then be fed back to participants for further input. While this meant community participants were not involved in face-to-face interactions with other stakeholders, it still allowed for knowledge integration and collaborative generation of solutions. Community approval of the revised plan was checked in advance by contacting a number of potential participants from the initial site visits, who agreed that they would be much happier with the ethnographic approach and to offer their contributions via qualitative interviews. Formal ethical clearance by the University of Dundee was obtained in advance of commencing the revised plan in summer 2014.

The project successfully followed the revised project plan through to completion. In March 2017, the research team achieved an award from Innovate UK for 'Outstanding Contribution to Knowledge Exchange', for the project's eventual success in helping to transform responses to power outages during extreme weather.

Analysing the Failure of the Original Research Plan

The failure to secure the participation of community members in the originally proposed project activities was analysed by conducting a forensic (retrospective) failure analysis through an analysis of qualitative interview data obtained from interviews with community members conducted during the active phase of the revised project plan. Failure analysis refers to the process of collecting and analysing data to determine the cause of a failure (McDanel 2002).

During the ethnographic phase of the revised project, semi-structured interviews were undertaken with community members in each case study site. However, only the 29 interviews conducted at the two case study sites where the initial fieldsite visits took place have been included in this analysis. This is because during these interviews, participants from these sites either pro-offered reasons why they had previously been reluctant to engage in the research, or directly referred to this matter when answering a question about preferred methods of community engagement. These interviews lasted between 60 and 90 minutes and were conducted between September 2014 and December 2015. All interview responses were recorded and transcribed.

These responses were used to develop a failure analysis framework between February and May 2019 to uncover reasons why the initial plan failed to mobilise. Data were analysed by identifying key themes and reasons as to why participants were unwilling to take part in the proposed activities. Predominant themes were used to develop conceptual headings. Data were then divided into each of the headings as appropriate. Findings were cross-checked using NVivo software.

Direct quotations from the interview transcripts have been included in the reporting of the findings. This is to ensure that the voices and insights from participants help guide the development of recommendations from the findings. However, owing to the politically sensitive nature of the research context, all responses have been anonymised.

Findings: Understanding the Failure to Mobilise the Original Project Plan

The analysis revealed that political processes and uneven power relations that shape rural Scottish society influenced participant willingness to take part in the proposed research activities. It also revealed the failure of the researcher to consider these political processes and power relations in the original project design.

Failure to consider how political processes influenced local views on the representation of local knowledge

The failure to secure community members' interest in participating in the charrettes was exposed as resultant from failure of the initial research design to fully acknowledge: a) the extent to which local conceptualisations of identity were bound up with local weather-related knowledge, and b) how political processes that shaped Scottish society heightened resident consciousness of this symbolic link and perspectives on local representation.

This is because the interviews revealed the presence of a symbolic connection between local weather-related knowledge and the extent to which a person viewed themselves or others as being 'local'. For example, one participant explained that having the knowledge to be able to forecast weather and to be prepared in anticipation of a storm was regarded as core skills associated with having a local identity.

This is because these skills could only be learnt through long-term experience of local weather conditions:

“We grew up with how things were round here. How to get by during storms, well it is something you know if you've seen it; it is something we all grew up with. It's how things are round here...you get used to what the storms round here look like and you come to know what parts flood round here and what's normal. You've got to really grow up with it.” (Participant, Case Study Site (CCS) 2).

Another participant explained how possession of weather-related knowledge was used to demark those born and raised in the area from other residents:

“All of us round here. You have to know the place to get by.... weather, protecting from high winds. It sort of all came natural to us. We were brought up like that. We’d say a real local knows all this like the back of their hand. For others, it’s not the same. They live here but don’t think quite the same way as a local local.”
(Participant CCS1)

This connection between weather-related knowledge and local identity was deeply embedded in local society, but could not be fully accessed by the researcher on the basis of the secondary information available about the project sites and which was used to design the initial project plan.

Analysis of interview data also revealed how failure to appreciate the extent to which weather-related knowledge was bound up with local identity conceptualisations resulted in inappropriate selection of research methods for the local context in question. This is because the interviews highlighted that although residents were proud to be in possession of knowledge that enabled them to cope during extreme weather, they were unwilling to share this in focus-group meetings with other participants. This unwillingness was due to heightened awareness of the link between local weather-related knowledge and identity politics as a result of ongoing political processes that characterised the case study sites at the time of the launch of the original project plan, namely the Scottish Independence Referendum of 2014. In the UK, Knowledge Transfer Partnership projects are jointly funded by the UK Government and a private sector organisation; in this case SSEN. UK Government funding was not seen in itself as problematic from the perspective of Scottish participants, including those in favour of Scottish Independence. However, as initial sourcing of participants took place during the months immediately preceding the referendum, when political debate and discussions of identity politics dominated both national media and local conversation and invoked critical questioning about who should represent local views and with whom local knowledge should be shared, people were concerned about the potential implications of what the project was asking them to do.

As the project interviews continued for over one year after the referendum, they captured the extent to which enhanced thinking about identity politics influenced residents’ perceptions regarding communication of the issues associated with extreme weather. For example, the Independence

Referendum was often alluded to when answering direct questions about preferred methods of engagement and reasons for refusing to take part in the originally-proposed charrette-based activity:

“It’s not we had anything against what you wanted to find out. But it’s where this would all go; that was the worry. I suppose we wanted that control over it and we didn’t know you then like now. It’s with everything, what we are now saying to outsiders is this is our knowledge, we decide what we do with it. The referendum and all that, whatever you make of it, it’s brought all that out in the open. We’re all thinking about all that now” (Participant CCS2)

As revealed in this statement, residents were particularly conscious about maintaining control over what their knowledge would be used for. This affected willingness to share knowledge, particularly in the public space, for the purposes of the project.

The interviews also revealed that enhanced consciousness of identity politics resulted in those who had struggled to cope during the periods of bad weather refusing to share their experiences within the public space. This was due to concerns about the risk of exacerbating existing tensions between long-term residents and recent in-migrants at a time of heightened local tensions:

“Everyone was talking and I didn’t want people to hear me say that I would prefer better arrangements during the storms or anything really as your adding fuel to the fire. You’re basically saying we [incomers] are different and things were tense enough then. I didn’t want to sway people one way or another over things like this.” (Participant CCS2)

In addition, enhanced consciousness of identity politics also affected willingness of lifelong residents who had struggled to cope during periods of severe weather to share their experiences via participation in the proposed project activities. In particular, the enhanced pride attributed to being able to cope during storms resulted in generating feelings of shame and low self-worth amongst those who had encountered difficulties:

“It was sort of a sense that I had somehow failed. I’m born and bred here so I should know what I am doing. To sit down at a table and say to people from in front of local leaders who I felt will be thinking I should know better that I struggled with the bad weather, you know I’m like standing up and saying I’m a failure.” (Participant CCS2)

The interviews also exposed how increased consciousness of issues concerning local representation led to a situation whereby residents who had struggled to cope believed that by publically exposing local variations in the coping abilities of long-term residents, they risked undermining public images of cohesive rural community identities that each village sought to portray. They believed that undermining these images through public discussion of failures to cope during the storms risked harming local political campaigns calling for increased political recognition of rural affairs and for the transfer of decision-making power from central to local government:

“If you say not all cope well, you are talking about division and that gives the government a way not to give more control to us. It will be used against us. You say that, then you get problems because locals will say your siding against them. So you start problems...No-one would dare do that in those meetings you were wanting” (CCS1)

This shows that the proposed charrette activities were highly insensitive to the political dynamics of the local context. It reveals clear failure on behalf of the researcher to adequately understand and address underlying power relations and political processes that impact upon residents' lives when constructing the original project plan.

Failure to acknowledge pre-existing tensions between local communities and national-level governments

The interviews revealed that long-term tensions between the central Governments Scottish and rural communities also impacted upon willingness to participate in charrette-based project activities. This also exposed how the original plan failed to consider the presence of tensions between official governments, institutions and communities, as a result of researcher reliance on secondary information from 'known-contacts'.

In particular, the interviews exposed that participants were concerned about ‘hidden agendas’ by national government institutions. Comments were frequently uttered about how, since the 1980s, the interests of the central UK government were believed to have been heavily geared towards the financial capital of London and the South East region of England, at the expense of local economies and communities. Rural regions of Scotland were also described as having been given limited and unequal attention by the devolved Scottish Government. As a result, participants had specific concerns about the extent to which the project aims would benefit central government agendas over the needs of local residents:

“I know you wanted it to be equal, but when big governments are involved it’s never going to be equal. The fact they were in on it means they want something out of it. They are only interested in it for themselves” (Participant CCS1)

Other participants raised concerns that the project initiatives would be used to justify central government financial cutbacks to the emergency services. This, they argued, would place an unfair amount of responsibility for safeguarding human wellbeing during periods of extreme weather upon local communities. While participants viewed the transfer of formal political decision-making power to local communities as a positive move, they did not feel comfortable with the transfer of responsibility for human safety and wellbeing:

“Political decisions, that sort of thing, yes. That’s what we want. But to say we are in charge of filling the hole of the emergency services, that’s not right. Dangerous when you think about it. And it’s worse when you think that this is only so they can shrink down the emergency services.” (Participant CCS2)

Because of this widespread lack of trust over the motives of central government institutions, residents were particularly suspicious about participating in project activities that involved face-to-face interaction with institutional representatives. In particular, interacting on a face-to-face basis with government representatives raised concerns over loyalty to local communities and inducing local level tensions:

“I suppose it’s a matter of take part to stop the government trying to have things all their way, but to be seen to be sitting down with them, it feels wrong. Defending local rights against big government doesn’t usually involve working with them. I wanted to be involved, to keep check on the government, but not out in the open like that. Folk would have been thinking I’m on their side and even if I said no, I’m not sure they’d trust me. Being there would be the problem” (Participant CCS2)

This reveals the extent to which the charrette method was highly unsuitable for the project context, owing to the public exposure that this form of participation would result in for those taking part.

Failure to acknowledge long-standing differences in motivational values between local communities and large corporate industries

The interviews also revealed that residents were often even more distrustful about the motivations of private industry, including SSEN, which is a private utility company. Participants expressed concerns about the incompatibility of the financial profit-generating agendas of corporate industry with local understandings of ‘the greater good’. A significant number believed that corporate industry would not support the project unless it had a strong economic reason to do so – a reason, which they believed would override the needs of society in the interests of economic benefit. Furthermore, this lack of trust in the motivations of corporate organisations led to reluctances in discussing and working together with members of these organisations to develop solutions. This was often justified in terms of an ethical duty to protect local interests in the face of interests of large economically-powerful organisations. This is because large nationwide industries were associated with past failures of local businesses and downturns in local economies during the previous three decades:

“I’ve known these companies. They are interested in one thing and one thing only – money. Yes, they are interested in people, but that boils down to one reason – money. These companies, they harmed people round here. It would be immoral to agree to sit down and say we’re doing this together. Goes against what the done thing should be.” (Participant CCS1)

Residents also expressed concern that the project risked commodifying experientially-based local knowledge to serve the economic interests of private industry. Concerns were highlighted about

whether SSEN, being a private company, would measure the success of the project outcomes in terms of financial savings made because of reduced complaints during periods of extreme weather as a result of the development of community resilience activities. As a result, participants were concerned that the project risked ‘putting a price on local knowledge’ and ‘investing off the back of human misery’, for the purpose of greater returns on company ‘profit margins’. This, participants believed, was irreconcilable with their beliefs about what it meant to serve the collective interests of society:

“Businesses are about money however you look at it. What to me they are doing here is wanting to take that knowledge to benefit them. People become a by-product of a business success. They are expecting us to provide it and they are benefitting. And those who suffered during the storms, they are saying you follow the instructions and we take credit for it. Think about it. What they’re doing is investing in people’s misery. They’ve thought, how can we make money on the back of that.” (Participant CCS1)

This led participant concern that by refusing to participate in the proposed face-to-face activities, they risked undermining local voices in the development of strategies that would affect the lives of local members of society. This was because they feared that local ideas would be inadequately represented in solution development if very few local residents participated in the project. This, they believed, could risk harming community members in the event of a future weather-related emergency. However, at the same time, participants believed that if they were to sit down and collaboratively work with members of these organisations they would be perceived by others as betraying the local community:

“I can see the point for the community, but to work with them and openly say I’m working with them, I’d be seen as selling out the place, our knowledge, selling us to big players and it wouldn’t go down well, I tell you. You have to say something to make sure they don’t make money out of us and to keep them in line by saying it’s our knowledge, we call the shots, but at the same time, you can’t be seen to do it.” (Participant, CCS1)

This reveals how the original project plan risked creating a moral ‘paradox of participation’ for these local residents, which stemmed from the need to reduce harm to local people, while, at the same time, the very act of working with members of corporate organisations risked participants being perceived by other members of the community as acting against local interest. The original project activities

therefore risked creating upset in the communities, again due to the lack of anonymity afforded by participation via the charrette method:

“It was a case of damned if you do, damned if you don’t. Catch 22. On one hand you don’t want to leave it all to them. But then you don’t want to be disloyal to folk here by saying we’ll work with them. You have to take part, but then you also can’t take part at the same time. Then I chose not to. But when you then said it wouldn’t be face to face now, well that was much better because I’m not going to be seen as a traitor any more. I’m doing it for them so I’m not being a traitor, but not all will see it that way.” (Participant CCS1)

Concluding Discussion: A Cautionary Tale and Learning Lessons from Chasing Storm Trails

Learning lessons from failure to mobilise intended project activities

The study reveals how failure to consider how political processes and uneven power relations between stakeholders in the original research design led to failure to secure the willingness of community members to participate in the proposed project activities. It shows how the charrette method of engagement was clearly unsuitable for the research context, owing to the need to utilise anonymous methods of community engagement to show sensitivity to the political situation and power dynamics that shape Scottish society. This failure also highlights the need for researchers to be fully informed about political processes and power dynamics embedded within society *prior* to the development of the research activity plan. From this, four recommendations can be made for informing future transdisciplinary research practices:

Recommendation 1: Undertake a deep primary scoping study prior to developing the project plan

The failure to consider power relations when designing the project activities reveals the need for researchers to undertake deep-level primary scoping research activities in advance of constructing the research plan. This is to ensure that the methods selected are sensitive to contextual power dynamics that ultimately shape willingness to take part. In addition, the discrepancy between the depth of

information provided about political tensions in the interviews and the lack of information known about these tensions during construction of the original project plan illustrates that these scoping activities need to avoid over-reliance on ‘known’, ‘familiar’, sources of secondary information. This is because information about divergences in local opinions are unlikely to be readily pro-offered in contexts where there exists a perceived need to present a united public image.

Recommendation 2: Select research methods that are sensitive to local political contexts

The insights offered reveal the importance of selecting research methods that are sensitive to the particular local context in question. The delicate task of balancing intentions to reduce existing social inequalities of representation and selecting methods that are suitable for navigating the power dynamics that influence relationships between participants, requires in-depth knowledge of participant preferences and consideration of potential consequences of adopting particular methods. Collaborative charrette-based workshops aimed at providing opportunities for participants to share experiences and to contribute on an equal basis to the project outcomes can be regarded as inappropriate for situations where high levels of distrust amongst participants exists. This is because interactional group settings may risk enhancing participant discomfort, feelings of disloyalty, perceptions of moral transgressions, and local-level tensions. In these instances, participants require the use of less public and more anonymous forms of engagement.

Recommendation 3: Consult directly with community participants to obtain views on preferred methods of engagement prior to constructing the project plan

The failure encountered at the start of the project could have been avoided if the researcher had spoken directly with community members about preferred methods of engagement before devising the original activity plan. Early consultation not only ensures that activities are suitable for politically sensitive local contexts, but provides community members with greater agency in devising the project plan.

Recommendation 4: Be adaptable when managing the research project

The case study shows that project failure can be overcome. However, it also shows the need for researchers to be able to adapt to the changing political context and to respond by being flexible in managing the development, as well as the implementation, of project plans.

Enhancing knowledge in transdisciplinary research practice

This case study addresses a limitation in the existing transdisciplinary research scholarship focusing on power dynamics and ways of managing power relations in transdisciplinary research practice by showing why conflicts rooted in place-based politics and power relations need to be considered within the research planning stage, *prior* to the active stage of the research. It also contributes to discussions about progress in transdisciplinary research practice, by showing the importance of learning from failure in order to develop recommendations aimed at improving transdisciplinary research practice. Only by understanding the reasons for failure can recommendations be made to avoid the same problems emerging during future research endeavours.

Key take home messages

- **Be knowledgeable** about place-based power dynamics prior to constructing the research plan
- **Be mindful** of these issues when choosing research methods
- **Be proactive** by asking stakeholders how they would prefer to participate
- **Be flexible**: If your plan fails to mobilise, revise it and try again.

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