PUBLIC RESPONSE TO RENEWABLE ENERGY DEVELOPMENTS

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'Most of us have not known-or cared-where our electricity comes from. Our attitude is changing, however, as we turn toward wind energy, now the fastest-growing renewable energy resource in the world. Because we cannot extract and transport the raw energy of the wind, reaping its many environmental benefits requires that we cope with the landscape presence of its development wherever it occurs. Sometimes this interferes with the value of open space, and sometimes it may be close to subdivisions. It is the immobility and very visibility of wind power that makes its presence unavoidable. In that regard it cannot be hidden underground, stored in tanks, or moved by trains. It is an energy resource that re- minds us that our electricity comes from somewhere. The more we wish to tap the power of the wind, the less we will be able to avoid the responsibilities that our demand for energy brings' (Pasqualetti, 2000)p. 381)

THE 'SOCIAL GAP'

National opinion surveys generally indicate a high level of support for renewable energy in principle, with differing levels of support depending on the technology (Upham, 2009). But it is a great mistake to take general support for wind power and other renewables for granted and to expect people to welcome developments they claim to support (Wolsink, 2000). There is very often a gap between what people say they will support and what they actually do when faced with a development proposal for their area (Batel et al., 2015). This links to the '*attitude-behaviour gap*' (Fishbein and Ajzen, 1975, Ajzen and Fishbein, 1980, Juvan and Dolnicar, 2014, Papaoikonomou et al., 2011), and the '*intention-behaviour gap*' (Sheeran, 2002) mentioned in Chapter 6. Most people don't actually begin to think about the desirability of a particular development until a proposal is made to site one in their neighbourhood. A discussion on the practical details of a proposal usually only happens when people are confronted with an application for a concrete development. In the course of such a discussion, they learn more about the proposal and may change their opinion as to its impact and desirability (Wolsink, 1994). But, of course, this reflects the 'social dilemma' whereby, if people refuse to co-operate at all locations, renewable energy developments will not be built anywhere, despite a clear consensus in favour of them (Wolsink, 2000).

The 'social gap' between high public support in opinion surveys and local opposition on the ground can be explained in the following three ways (Bell et al., 2005):

1) *Democratic Deficit* – decisions are controlled by an opposing minority, and the planning process (plans made by the developer, announced to the public, and then defended against criticism) does not reflect the will of the majority.
2) *Qualified Support* – while people support wind energy in general they have concerns about proper siting, controls and limits.
3) *Self Interest* – people support wind energy in general but will oppose any developments in their own area – the Not In My Backyard (NIMBY) explanation, which is very common and has been widely criticized as being too simplistic (Wolsink, 1989, Wolsink, 1994, Bell et al., 2005, Burningham et al., 2006, Devine-Wright, 2005, Jones and Eiser, 2010, Batel et al., 2015).

In 2013, Derek Bell and colleagues (Bell et al., 2013) took another look at this three part explanation for the social gap. They concluded that while the social gap continues to be politically significant their

original framework was too simplistic. In their reinterpretation they ask two questions: 'What is the makeup of public opinion on wind energy?' and 'What are the relations of power in the local politics of wind energy?' (p. 129). In their view, the answer to the first question should provide a critical analysis of the results of standard public opinion surveys, and the answer to the second question should indicate who obstructs wind energy developments and under what conditions. The evidence suggests that 'there are large numbers of qualified supporters and (some) place protectors as well as a few unqualified opponents and, perhaps, some self-interested NIMBYs, who may all work together to oppose particular wind energy developments' (p. 130).

There are many *'independent variables'* which reflect the '*multidimensional nature of forces'* shaping public perceptions and concerns around renewable energy developments, including '*physical, contextual, political, socio-economic, social, local and personal'* aspects (Devine-Wright, 2005) p. 134)

From data gathered both before and after the construction of three large windfarms in the Netherlands, Maarten Wolsink identified four kinds of public resistance:
1. A positive attitude towards wind power generally, but opposition to the construction of a wind farm in their own neighbourhood, which, according to Wolsink, reflects the only true NIMBY response.
2. Objection to a wind farm in one's own neighbourhood because of a general rejection of wind power technology - sometimes called a NIABY (Not In Any Backyard) response. This kind of opposition is usually based on concerns about the impact of wind power on the landscape.
3. An initial supportive attitude to wind power which shifts dynamically to opposition as a result of the discussion surrounding the wind farm proposal for their area, and a shift in risk perceptions
4. Resistance arising from the perception that the particular development is flawed, and the proposed site is unsuitable, especially if other locations are deemed more appropriate. Qualified support, but only under certain conditions and in specific locations.

All four '*behaviour-motive combinations'* can exist, but one will usually become dominant over time (Wolsink, 2000) p. 57).

Through their research into local reactions to an offshore wind energy development proposal Geraint Ellis and colleagues (Ellis et al., 2007) have identified four objector discourses:
1. Anti-Wind Power – the *Local Resister* (17% of total variance), who has strong anti-wind views, broad concerns about the local impact and a determination that the project must be resisted locally.
2. Pro-Wind Power — the *Siting Sheriff* (21%), who generally supports the idea of wind power but has concerns about the impact on the proposed site
3. Anti-Developer—the *Pragmatic Localist* (14%) who is strongly anti-developer, concerned about local impact and not interested in the wider issues of climate change or energy security
4. Economic Sceptic— The *Siting Compromiser* (10%) who is worried about the short term consequences of the project, evaluates the proposal through economic rationale and is prepared to consider other locations

Ellis et al note that opponents to the offshore scheme are aware that the expansion of renewable energy is a progressive development, and so stress that they are not anti-renewables or climate change deniers. '*Indeed, the pattern of responses suggests that this is not merely rhetorical and it must be assumed most objectors are genuinely pro-renewable, although clearly not all pro-wind.'* (p. 526) Most objectors see their opposition as a matter of principle, and see little scope for compromise, '*at least in the absence of any extended deliberative process'.* All objectors agree that the expansion of wind

power is not a good enough reason for despoiling the natural, even spiritual, beauty of the northern coast. In relation to the project detail the proximity to the shoreline seemed to be the greatest concern.

In their analysis of a selection of published material produced by both pro- and anti-windfarm groups and interests in relation to the same offshore wind development case study, John Barry and colleagues (Barry et al., 2008) identified the following opposition discourse themes:
 ➢ a sense of sacrifice and disempowerment
 ➢ a lack of trust in government, regulatory processes and windfarm developers
 ➢ a language of war, conflict and defense
 ➢ a rhetoric of foreignness, aliens, anti-colonialism and 'them' and 'us'; the industrialization and commercialization of the environment
 ➢ a strong NIMBY rebuttal.

It is common for protest groups to question how much energy the RE development will produce, relative to its environmental impact locally, and skepticism about the reality of climate change, its causes and impacts, may also be higher than opinions polls suggest, particularly amongst objectors (Upham, 2009).

Case Study 1
A case study examining the public opposition to a wood gasification development in North Wilshire, UK, (Upreti and van der Horst, 2004) has shown that people's concerns included the following: inappropriate location; close proximity to local homes; air emissions; smells; light pollution at night; vibration and noise; impact on public health; impact of extra traffic especially trucks on the roads and implications for road safety; negative impact on wildlife, ecosystems, and local weather; visual intrusion of high chimneys; negative effects on local heritage, tourism, and other businesses; lack of openness; negative impact on property prices; social and environmental costs far outweighing any local benefits; no significant employment opportunities; no compensation for local people. There was also a concern that the proposal would set a precedent for further industrial development in the area and that it contravened the Area of Special Archaeological Significance and the Rural Buffer Zone designations. Objectors also made the following points: the development of biomass energy is good in principle, but should not conflict with local policies; there was no consultation with the public before the site was chosen; developers failed to provide adequate information on request or to listen to concerns; any information came too late as opposition was then too strong; the area is a country conservation zone and the development would have a negative impact on it's clean, peaceful and rural character.

Case Study 2
Another case study focused on the local response to a failed biomass gasifier proposal in Devon, England (Upham, 2009). Surveys were carried out in 2004 and again in 2007 before planning permission was finally rejected and the project was shelved. In 2004, the main concerns related to the negative impact of the extra truck traffic on the roads and its associated pollution; doubts about the credibility of the developer; harmful gaseous emissions from the plant and associated odours. '…local people felt that they were being asked to accept an industrial scale development that would lead to deterioration in their quality of life' (p. 4275). They felt they were bearing the environmental cost while widespread regional and national energy wastage continued.
By 2007, there had been a notable increase in the number of people worried about noise, the change in the landscape, and the negative environmental impacts of bioenergy crops. No incentives were offered to encourage acceptance. People's sense of fairness, and belief in the right to have their say in local decisions was challenged. There were strong doubts about the effectiveness of renewable energy in comparison, with for instance, nuclear power. There was a tendency to equate bioenergy with

incineration, along with all its negative connotations, and people questioned how environmentally friendly bioenergy really is, particularly if feedstock transport and combustion emissions are taken into account.

In relation to wind energy developments visual impact on the surrounding landscape and noise from the rotating blades are the most frequently reported problems. Other concerns include perceived unreliability, negative impact on birds and wildlife, economic cost, perceived inefficiencies, and frustration at idle turbines (Devine-Wright, 2005)

However, it has been noted that the research literature on public attitudes to wind power is unreflectively pro-wind, which limits its ability to fully explore and understand the range of public reactions (Aitken, 2010, Ellis et al., 2007). 'The use of unreflective public opinion surveying reinforces dominant power relationships' (Ellis et al., 2007) *p. 520)* While the motives and credibility of opponents are scrutinized, the positions held by supporters of wind power have not been analysed in a similar fashion. Yet, 'there are many examples of supporter discourses that are evangelical and ideologically committed to wind power to the point that they defy any constraints on the deployment of renewables', which is not in the interest of good research.

Mhairi Aitken (Aitken, 2010) (p. 1834) stresses that 'the literature must abandon the assumption that it knows who is 'right' and instead must engage with the possibility that objectors to wind power are not always 'wrong". Aitken calls for critical analysis of the following assumptions:
  (1) *The majority of the public supports wind power* – who commissioned the polls, how were the samples selected, who asked the questions and analysed the answers? Opinion polls can only be seen as a snapshot in time of public opinion, and do not reflect the dynamic and ever-changing nature of public sentiment.
  (2) *Opposition to wind power is therefore deviant* – opponents are often given the NIMBY label.
  (3) *Opponents are ignorant or misinformed* – quite the contrary, many are very knowledgeable about the issue.
  (4) *The reason for understanding opposition is to overcome it* – this defines how the problem is viewed, affects the conclusions that are reached, and discourages researchers from learning from opponents and incorporating their concerns. It is important to understand opposition, the social context of RE, and in particular how the planning processes affect how people react – rather than just focusing on how to quell and avoid future opposition.
  (5) *Trust is key* – it is not enough just to call for trust in the technology, in wind developers and in the planning system. Researchers need to trust the opinions and knowledge of the general public, and the process of participation, which may not necessarily lead to support for particular developments.

They are all NIMBIES
Many presume that people only object because they are selfishly protecting their own assets. The Not In My Back Yard, NIMBY, acronym was apparently coined by Walter Rodgers of the American Nuclear Society[1], and then used by the staff correspondent of The Christian Science Monitor, Emilie Travel Livezey, in an article on hazardous waste in 1980[2]. The term was popularized by the late Nicholas Ridley,

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[1] http://highlandmts.org/nimby/
[2] https://www.csmonitor.com/1980/1106/110653.html

an arch Thatcher-loyalist and the man in charge of the poll tax, in the late 1980s when he called the opposition of the rural middle classes to development 'crude Nimbyism'[3].

'In plain language, NIMBY is the motivation of residents who want to protect their turf. More formally, NIMBY refers to the protectionist attitudes of, and oppositional tactics adopted by, community groups facing an unwelcome development in their neighborhood' (Dear, 1992) p. 288). However, it has been concluded that the term is outdated, and empirical results do not support the presumed prevalence of NIMBY views (Devine-Wright, 2005, Jones and Eiser, 2010). There is considerable disagreement over the worldviews, values and concerns which lie behind 'NIMBY opposition (Hunter and Leyden, 1995) and many authors use the expression without any clear explanation, simply equating NIMBYism with local opposition, regardless of the motivation.

In popular usage NIMBYs are 'usually selfish and parochial individuals who place the protection of their individual interests above the common good' (Burningham et al., 2006). The term is used in a wide variety of senses, it does not hold for most people and, when used, can cause offense and lead to more opposition (Wolsink, 1989, Wolsink, 1994). The NIMBY concept fails to reflect the complexity of people's motives and their interaction with social and political organisations (Bell et al., 2005). The use of the term can also be culturally specific, in that it is used to describe opponents in relatively wealthy countries, but is far less likely to be linked to people who protest a development in poorer countries – which may reflect a tendency to characterize opposition from the poor as struggles for justice, and opposition from the affluent as selfish acts. This value judgement serves to legitimate one group of protesters and undermine another (Burningham et al., 2006).

The concept 'unhelpfully muddles whether opposition should be conceived as a belief or attitude towards a development, a behavioural response taken by individuals or the collective actions of organized groups'. Therefore, so-called NIMBY responses should be re-defined as 'place protective actions' (Devine-Wright, 2009)p. 431). They should also be seen as being contextually generated, in that they may shift in the course of a dispute, be influenced by interactions with developers and other stakeholders and by the solutions proposed by key players (Burningham et al., 2006). Objectors have a counter argument to the NIMBY charge: they are not being selfish, but are acting as custodians and protectors of the local environment (Batel et al., 2015).

ACCEPTANCE AND SUPPORT OF RENEWABLE ENERGY DEVELOPMENTS

It is important that we explore reasons why people support renewable energy developments as well as why they oppose them (Burningham et al., 2006). Susana Batel and colleagues (Batel et al., 2013) make the point that, in the literature on public acceptance of renewable technology, the words 'acceptance' and 'support' are used interchangeably. They argue that while the two words are similar in that they both seem to imply agreement, they have different meanings. 'Acceptance' implies a passive reaction to something external, while 'support' denotes a more active stance or engagement in favour of something. Whereas 'acceptance' could result from apathy, uncertainty, or resignation, 'support' demonstrates a positive reaction. It is therefore important to look at why people accept and oppose developments, but equally important to find out why they support them.

Dave Toke (Toke, 2002) invokes the classic rational choice theory of Mancur Olson (1965)[4] which posits that small well organized groups of people can thwart the will of the majority, while the majority may want wind energy because of its environmental qualities, or as an alternative to nuclear power or because it contributes to energy security. The effect of having a windfarm in one's area will have little

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[3] http://news.bbc.co.uk/2/hi/uk/2000000.stm
[4] Olson, Mancur (1965), The Logic of Collective Action, Cambridge, MA: Harvard University Press.

impact on collective benefits, and there are few local gains. Therefore, it is not worth making the effort to argue in favour of the development. The temptation is to take the 'free-rider' option of supporting wind power in general but doing little to support it locally. On the other hand, for people who have concerns about the impact of the development on their area, it is worth the trouble of petitioning and campaigning to stop the development, as the benefits gained are greater than the effort required.

Toke's analysis sounds a bit harsh and could lead one to blame the silent supporter for not speaking up. But the situation is rarely that clear cut. People may not come forward expressing their support for local developments simply (and often wisely) because they do not want to fall out with their neighbours or get involved in local conflict. The process of organizing, and the prioritizing of perceptions and meanings, can give rise to local splits and divisions (Dalby and Mackenzie, 1997).
Open support for a proposed development may be taken as a sign by some opponents that you are collaborating with the developer or benefitting from the project in some way. Supporters may judge that the opponents are dominating the decision making process, and that there is little role for them. They may not want to align themselves with the 'evangelical' (Ellis et al., 2007) p. 520) environmental supporters. From a campaign point of view, it is easier to rally the troops against, rather than for, something, primarily because our brains are hard-wired to veer towards negativity rather than positivity. (Gaffney, 2011).
It is suggested that if the emphasis is shifted from competitive bargaining between the different interests to consensus building, passive supporters may feel more inclined to get involved in decisions about local developments (Burningham et al., 2006).

Geraint Ellis and colleagues (Ellis et al., 2007) analysed the supporter discourse as it existed in their research on the public response to an offshore wind energy proposal in Northern Ireland. They identified four discourses of support:
1. Rationalising Globally—*Sacrificing Locally* (17% of total variance) **–** any negative impacts are necessary to achieve sustainability goals
2. Local Pastoralist—*Developer Sceptic* (7%) - a reluctant supporter with some concerns about negative local impacts and skepticism about the motives of developers and the economics and role of wind energy to meet climate change targets
3. *Embrace Wind* (28%) - a strong believer in wind power and wind developers, future oriented, and disparaging of objectors
4. Site Specific Supporter—*Energy Pragmatist* (12%) - very concerned about energy issues, a pragmatist giving support to this particular site-specific proposal

They concluded that most supporters were strongly driven by their awareness of the need to take action against climate change, and the importance of Northern Ireland playing its part. Most supporters trusted the developers, and viewed objectors as a minority with only a short term focus and going against the public interest.

In their analysis of some of the published material from pro-windfarm interests, John Barry and colleagues (Barry et al., 2008) identified the following supporter discourse themes:
➢ there is an urgent need to address the threat of climate change and to transition to a low carbon economy
➢ renewable energy is the modern way forward and is economically beneficial
➢ there is rational, knowledge-based, scientific evidence for the decisions that are being made
➢ opposition, which arises from ignorance of the facts or old fashioned thinking, must be overcome
➢ there needs to be consensus and no-one should opt out

> ➢ if only people had all the facts they would respond.

KEY FACTORS AFFECTING PUBLIC RESPONSE TO RE DEVELOPMENTS

While there are no doubt concerns relating to the local impact of different RE projects, such as increased traffic, noise, odours, impact on birds, etc , it is noted that the three most important factors affecting the public response to RE developments are: perceived equity and fairness; place attachment; and visual impact (Jones and Eiser, 2010)

1. PLACE ATTACHMENT

'In spite of (and perhaps because of) the jet, the 'net, and the fast-food outlet, place persists as a constituent element of social life and historical change…A place is a unique spot in the universe. Place is the distinction between here and there, and it is what allows people to appreciate near and far. Places have finitude, but they nest logically because the boundaries are (analytically and phenomenologically) elastic'(Gieryn, 2000) p. 463-5).

According to Gieryn, place has physicality – it is not a place if it isn't named, identified or represented by ordinary people. Place is not space. Place becomes space, when 'the unique gathering of things, meanings, and values are sucked out. Put positively, place is space filled up by people, practices, objects, and representations.'

Place Attachment
In general, place attachment is defined as 'an affective bond or link between people and specific places', and is demonstrated by the tendency of human beings and animals to seek out where they were born of to find a place where they feel comfortable and secure (Hidalgo and Hernandez, 2001) P. 274). It is a complex phenomenon (Devine-Wright and Howes, 2010), but is seen as being a fundamental human need (Giuliani, 2003). Place attachment can be defined as 'both the process of attaching oneself to a place and a product of this process. As product, place attachment is a positive emotional connection with familiar locations such as the home or neighbourhood, correlating with length of dwelling, featuring social and physical sub-dimensions the relative importance of which may vary, and leading to action, both at individual and collective levels' (Devine-Wright, 2009) p. 428). People can have an enduring attachment to a place they frequently visit, which for them gives restorative benefits such as, relaxation, stress reduction, postivity, letting go of negative feelings and worries, clearing the mind, and recovering mental focus. People are more consistent in their attachment to 'natural', rather than 'urban' favourite places (Korpela et al., 2009)*p. 95)*. Place dependence refers to the functional features of a place which facilitate certain activities, experiences and emotional connections (Clarke et al., 2018). Areas of natural beauty contribute strongly to the development of place dependence and are often visited frequently. Place attachments are 'integral to self-definitions, including individual and communal aspects of identity' (Brown and Perkins, 1992) p. 280). They are multi-faceted, involving behaviour, cognition and affect, and are nurtured through routines and daily experience. They emerge through personal experience with one's environment (Clarke et al., 2018).
Strong place attachments contribute to social cohesion, feelings of safety, and physical enhancement. There is no doubt that people of all ages and ethnic backgrounds enjoy living in a neighbourhood that instills pride. It's a self-perpetuating cycle - those who are more attached to their areas contribute more (Brown et al., 2003).
But place attachments can also have a shadow side. While they can form the basis for community co-operation and action, they can also be the cause of destructive community conflict (Manzo and Perkins,

2006). When people compete with each other over place there can be disastrous consequences (Giuliani, 2003). Place attachment may be detrimental to well-being if it prevents citizens from moving away to seek better experiences and availing of new opportunities (Bailey et al., 2012).

Place attachments are not static. They develop slowly and evolve as people's lives develop and change. Social attachment is greater than physical attachment, women show greater place attachment than men (partly reflecting the fact that many still have domestic responsibilities which tie them to their neighbourhood), attachment increases with age (even if you discount length of residence), and there is no discernable class difference (Hidalgo and Hernandez, 2001, Bailey et al., 2012). However, it has also been shown that attachment is significantly lower in more deprived areas because of weaker levels of social cohesion (Bailey et al., 2012).

The individual is often unaware of their attachment to place, and it may only manifest on a conscious level when there is a disruption (Hidalgo and Hernandez, 2001). The importance of a person's bond with their place was demonstrated in an early study by Marc Fried in the West End of Boston (Fried, 1966). He researched the psychological impact of relocation on the lives of the local population through a comparison of interviews held, both before and after, the move. Fried concluded that their reactions were expressions of the grief caused by the loss of place, which, for many, manifested in a sense of pain, continued longing, symptoms of distress, a feeling of helplessness, occasional signs of direct and displaced anger, tendencies to idealise the lost place, and difficulties in adapting to their new situation. The greater the person's commitment to the old area, the greater was their grief reaction to moving. According to Fried, relocation can cause a fragmentation of a person's sense of spatial identity and also of the group identity they have created from their local ties and social networks. 'Much of the challenge facing those with disruptions in place attachment is to negotiate a reconciliation between the past that has been lost and a future that is both desirable and meaningful' (Brown and Perkins, 1992)p. 284/5).

Community Place Attachment
Two aspects of attachment are communal in nature: a sense of '*bondedness'*, the feeling of being part of one's neighbourhood, and a sense of '*rootedness'* in the community. The emotional connections between people, and between people and their place, are at the core of the 'sense of community'. When people are able to work together to protect their place they are likely to feel empowered (Manzo and Perkins, 2006) p. 338-40). Place attachment can result in organized communities in that attached citizens are more likely to spend money, time and effort locally, and to get actively involved when their area is facing an unwelcome change (Bailey et al., 2012).

Place Identity
The development of *self-identity* is not restricted to distinguishing oneself from others, it also extends to objects and things and the places in which they are found. The concept of *place identity* refers to how physical and symbolic features of certain areas contribute to an individual's sense of self (Devine-Wright, 2009). It is 'a sub-structure of the self-identity of the person consisting of, broadly conceived, cognitions about the physical world in which the individual lives. These cognitions represent memories, ideas, feelings, attitudes, values, preferences, meanings, and conceptions of behavior and experience which relate to the variety and complexity of physical settings that define the day-to-day existence of every human being. At the core of such physical environment-related cognitions is the 'environmental past' of the person' (Proshansky et al., 1983) *p. 59.* Other people influence our place identity by what they do, say or think about these physical settings. Place identity is 'a dynamic phenomenon that grows and transforms through lived experience' (Manzo and Perkins, 2006) p. 337).

Place Change

People's psychological response to expected place change takes place over time and goes through five stages (Devine-Wright, 2009) p. 433)

1. *Becoming Aware – what kind of place changes will occur? 2. Interpreting – what are the implications of change for this place? 3. Evaluating – will the outcomes of place change be positive or negative? 4. Coping – how might I respond to place change? 5. Acting – what can I do about it?*

Those who are strongly attached are more likely to take an interest, and get involved in actions to prevent unwanted change, whereas people who are less attached to the place may feel less motivated to engage. Whether place attachment leads to a negative view of place change depends on the type and strength of the attachment and the perception and interpretation of the change. How changes to one's place are interpreted, rather than the physical form of the change itself will determine the reaction (Devine-Wright and Howes, 2010). Place attachment may invoke a positive reaction if the proposed development is seen as enhancing the area. However, if people feel their area is to be sacrificed because of climate change, or because of unfair planning rules, and the outcome is seen as being negative and immediate, they are likely to see the change as a threat to their place identity as the disruption is expected to alter how they experience the cherished place – its sights, views, smells and sounds (Devine-Wright, 2009). Interpretations of the impact of the development can be shaped by the social context which is moderated by one's trust, or lack of trust, in key organisations (Devine-Wright and Howes, 2010). Coping responses include denying the change is happening; denying its possible adverse effects; re-establishing place meanings; sharing concerns with trusted others; physically leaving the area; protecting their place by writing letters, signing petitions and becoming involved in collective protest (Devine-Wright, 2009, Clarke et al., 2018). People who feel a positive attachment to the place that will be affected may rise up in opposition, regardless of the other attributes of the proposal (Manzo and Perkins, 2006) p. 338).

A study examining the relationships between place attachment, the theory of planned behaviour and place-protective action (Anton and Lawrence, 2016) found that place attachment was stronger in those who saw place change as being negative. However, only half of the citizens who viewed the change negatively got involved in protesting. Using Ajzen's theory of planned behaviour (Ajzen, 1991), the authors concluded that those who were more likely to protest were people 'who had positive attitudes about the value of protesting, who thought that most people around them were protesting, and who had greater perceived behavioural control' (p. 145).

After severe flooding in Clontarf, County Dublin, Ireland, in 2004, initial flood defense proposals were put forward by Dublin County Council. A protest against the project was attended by approximately 5,000 people in 2011 and the issue received significant media coverage. The project stalled but discussions over alternative flood defenses were ongoing in 2014, and residents were frequently informed of these through a community website and newsletter. In July 2014, a questionnaire survey was carried out with 280 residents of the Clontarf area (Clarke et al., 2018). Strong place attachment was evident from the responses, and was demonstrated in particular by people's appreciation of the aesthetic and recreational values of the local promenade, which would bear the brunt of the proposed flood defenses. While the residents recognized the need for the flood barriers (and some of them had had direct experience of the serious flood of 2004), they could not accept them if they required a change in the form or function of the promenade.

Using empirical data from a case study relating to a proposed 750MW off shore wind farm in North Wales, Patrick Devine Wright and …Howes (Devine-Wright and Howes, 2010) investigated the impact of place attachment on people's reaction to the proposal in two nearby coastal towns – Llandudno and Colwyn Bay. LLandudno was represented by its inhabitants as a place of environmental and scenic beauty linked to the coast, and very popular with tourists. On the other hand, Colwyn Bay was seen by its residents as having lost its former coastal beauty and becoming run down, partly due to the influx of

undesirable outsiders. LLandudno residents saw the windfarm development as posing a serious threat to the aesthetic beauty of their town, while the people of Colwyn Bay had a less negative view, seeing the development as possibly boosting employment and local prosperity. Levels of place attachment were generally high in both areas, but were significantly higher in LLandudno than in Colwyn Bay. The research found that areas which are found to be psychologically restorative and of scenic amenity value are most likely to be defended by strongly attached local inhabitants, while residents may be less engaged or concerned in areas with lower levels of attachment and which are represented as being less desirable. However, the strength of place attachment in itself does not inevitably lead to opposition to place change – that depends on the social interpretation of the change.

2. VISUAL IMPACT

'…*the literature suggests that it is the aesthetics of wind power that primarily drive both positive and negative public opinion on wind turbines and has established visual impact as one of the most problematic issues relating to wind farm siting*.
(Jones and Eiser, 2010) p. 3106) – CHECK page no.

'O*ne of the main reasons for public opposition is the visual impact they have in landscapes and their scenic quality*'
(Devine-Wright and Batel, 2013) p. 640)

'*If the perceived visual quality of a project is positive, people will probably support it*'
(Wolsink, 2000, p. 51).

Bearing in mind the importance of place attachment and the impact of place change, it is clear that a major concern for many people is the physical change in their area, on their landscape and on their view. People's emotional reactions to the visual impact is so strong because they expect permanence in their landscapes and open space remains 'the inalienable right of all those with the luck to have been born there or - as some believe - the sense to have moved there' (Pasqualetti, 2000) pp. 389-90). (Kontogianni et al., 2014) introduced the 'Not-In-My-Front-Yard' (NIMFY) concept which highlights people's concerns about what is in front of them - the view they look out upon, and how this might be changed by any new development.
An analysis of studies on public reactions to wind farms in the Netherlands between 1984 and 1989 (Wolsink, 1989) – concludes that opposition towards wind turbines can be largely attributed to concerns about the visual impact on the surrounding landscape. But because this is not a strong argument in the planning process, people reframe their opposition in terms of noise, impact on birdlife, and unreliability.

Susana Batel and colleagues refer to the concept of essentialisation which they describe as 'the process by which a given entity…is socially constructed as having a particular, natural and unchangeable, essence'. Place attachments and place identities 'are not 'there', but are instead a socially constructed 'way of seeing'. (Batel et al., 2015) p. 150). In their study, focus groups were conducted in both the UK and Norway with members of local communities to be affected by the construction of HVPLs [high voltage power lines] necessary for renewable energy development. The research shows that participants present British and Norwegian rural landscapes as having a different essence to that of high voltage power lines. And moreover, the place where they live has more of an essence of the British or Norwegian countryside than other areas in Britain or Norway. Therefore, while the HVPLs are intrusive and incompatible anywhere in the countryside, they are even more so in the rural area in which the participant lives.

Many of the people who oppose renewable energy proposals perceive a 'lack of 'fit' or compatibility between the essence of energy infrastructures, with their industrial, modern characteristics, and the essence of landscapes, where they are usually deployed, and that are seen, or presented, as natural and pristine.' (p. 150) Power lines and specifically, pylons, are represented as having characteristics that will spoil and destroy the countryside as they are industrial, man-made and unnatural, and they evoke visceral responses as demonstrated by the 'Yuck' word by one of the research participants.

3. THE ROLE OF SOCIAL NETWORKS AND CAMPAIGNS

In 2005, Patrick Devine-Wright proposed that social influence, local networks, and the opinions of friends, family and trusted others in the locality may have a bearing on people's responses to RE developments. He also stated that there was a need to examine the role of 'communities of interest' from outside the locality and the internet (then in its infancy) in mobilizing support for, and opposition to, wind farm developments across local, regional and national areas (Devine-Wright, 2005) p. 136). Interestingly, his earlier research looking at the importance of social influences (such as media, opinions of others, and level of involvement in participatory processes) on responses to a proposed community energy wind farm in Wales, found that the single most important predictor of respondents' perceptions was the opinions of their friends (Devine-Wright, 2003). Wider local ties and a sense of community can also be powerful motivators (Upham, 2009).

The impact of good local organisation, the use of the internet, and the setting up of an effective campaign group is not to be underestimated. Research into the public reaction to the Winkleigh biomass gasifier proposal in Devon, UK (Upham, 2009) highlighted how resources such as e-mail and the internet greatly assisted the 'cohesion, decision-making capability and resources of the opposition'. p. 4280/1). Campaigners were able to quickly utilize internet-based information and other expertise, and some already had experience of dealing with government agencies (Upham, 2009). In a case study of public opposition to a wood gasification development in North Wilshire, UK (Upreti and van der Horst, 2004), a broad range of individuals and organisations opposed the development, including a well organised local action group called BLOT (Biomass Lumbered On our Town). There was an unexpectedly strong reaction to the off-shore wind proposal off the Northern Irish coast (Ellis et al., 2007). The opposition was led by a group calling itself 'COAST SOS', and a high profile campaign was run by Coleraine Borough Council, funded to the tune of £80,000. A website was set up, 100,000 leaflets produced, and actor James Nesbitt and golfer Darren Clarke offered their endorsement. An investigation of the impact of place attachment on people's reactions to a proposed 750MW off-shore wind farm in North Wales (Devine-Wright and Howes, 2010) focused on the nearby coastal villages of Llandudno and Colwyn Bay. The residents of LLandudno formed an opposition group 'Save our Scenery'. The researchers concluded that strength of place attachment did not inevitably lead to opposition to the proposed place change. This depended on how people interpreted the change, and their interpretation was shaped by, and mediated through, the social context and reliable organisations – in particular, the trusted campaign group, which drew on emotional and symbolic place-related meanings to spread a vivid narrative depicting the imminent threat. The more people trusted this group the stronger was the link between their place attachment and opposition to the proposed development.

While strong local opposition may arise from the presence of established and cohesive social networks in the surrounding areas, and behavioural resistance may be less likely if levels of collective efficacy are weak (Devine-Wright, 2009), conversely, a sense of local community may be 'formed and shaped by the opposition to a proposed facility…that is portrayed as threatening' (Dalby and Mackenzie, 1997) p. 101)

Therefore, collective opposition can contribute to social cohesion. 'Previously disempowering conditions such as an individual's sense of powerlessness, or inability to escape a hazardous situation, can be transformed through collective action, in which individuals develop a common purpose and create new responses to meet the challenges they face' (Manzo and Perkins, 2006) p. 344). Political struggle, and the process of responding to a development which is planned and financed from the 'outside', can play a part in the construction of community identity (Dalby and Mackenzie, 1997).

People's perception of risk can be affected by campaign groups. The social amplification of risk theory (Kasperson et al., 1988, Upreti and van der Horst, 2004) proposes that the public perception of hazards can be influenced by psychological, social, institutional, and cultural processes so that the response to the risk is amplified and risks with minor potential consequences can prompt strong public concern. This is exacerbated by the fact that people see themselves as being more, rather than less, vulnerable to the dangers arising from technology. The system of information and features of public response which create social amplification are essential components in determining its nature and level. Signals arising from direct personal experience of the risk or from information about it are processed through 'social amplification stations' (Kasperson et al., 1988)(p. 181) such as the media, campaign groups, opinion leaders, peers, social networks, and public agencies. The flow of information is important, as is the amount of information available, the degree to which the information is disputed, and how dramatic and symbolic it is. Kasperson and colleagues use the analogy of dropping a stone into a pond, with the ripples spreading outwards over a distance, to illustrate the spread of the message. The amplified risk then leads to behavioral responses, which, in turn, result in secondary impacts.

Group polarization can occur when groups usually come to conclusions that are more extreme than the average view of their individual members (Sunstein, 2009). As part of the group process, members exchange new information with each other, corroborate and strengthen any tentative views, and ensure that people become more confident that they are correct. Partly because members compare themselves socially to each other and want to be perceived favourably by other group members, they will adjust their views in the direction of the dominant position. Social cascades can occur when a number of separate groups move quickly in the direction of a similar set of beliefs or actions (Sunstein, 2009). This was demonstrated when 200 hundred groups came together nationally to oppose the Irish government's 'flawed energy policy' and plans for new power lines, pylons and wind farms (McDonald, 2014).

Good campaign slogans also help. When faced with specific proposals and the likelihood that they will be asked to use reclaimed water, Californian citizens were truly put off by catchphrases, which were widely used by project opponents, like 'Toilet to Tap' and 'Sewage Beverage'. In San Diego, the newspaper published a cartoon of a dog drinking from a toilet and a man behind the dog saying, 'Move over…' (Hartley, 2006) p. 116)

4. GOVERNANCE

The success of renewable energy depends on institutional factors within the energy policy and planning processes. There is a clear need to build up institutional capital both within policy making and planning agencies and developer organisations in the three areas of knowledge resources, relationship building, and the capacity for mobilization (Wolsink, 2000). The public lacks trust in governments, policy makers, public agencies and the industrial and business sector. The more developers and planning agencies can develop public trust the more likely they are to gain acceptance for projects (Bell et al., 2005, Clarke et

al., 2018). To gain the trust of the public 'transparency is important and secrecy must be avoided' (Upreti and van der Horst, 2004) p. 62).

The decision making process around the siting of developments, the 'decide–announce–defend planning strategy' (Jones and Eiser, 2010) p. 3116), gives little space for public engagement prior to approval and implementation, which means that citizens have little choice but to mount a reactive or obstructive stance (Burningham et al., 2006). Therefore, the planning process should be modified so as to encourage collaboration rather than confrontation, to prioritise participation over consultation, and discussion over education (Bell et al., 2005). But more open planning processes will only emerge 'from reducing the arrogance of utilities, wind power developers, and public bodies involved' (Wolsink, 2000) p. 63)

The Provision of Information

The provision of information is still the most common, almost default, action taken by project developers and state agencies in their efforts to encourage the public to accept local RE developments or adaptive measures. The provision of information, public consultation and awareness raising is usually based on the misconstrued assumption that if only objectors knew all the facts they would change their minds. There is little evidence that providing information or education on its own leads to significant reductions in the level of public opposition (Ellis et al., 2007, Clarke et al., 2018).

Providing information has its risks. It can intensify the extremes. Greater knowledge and awareness can mean that those who are opposed to the development became more strongly opposed and those who support it become more strongly supportive (Hartley, 2006). Increased debate is as likely to shift people's views to one of opposition as to one of acceptance (Ellis et al., 2007). If scientists, engineers or other 'experts' argue with each other over the details of the technology and potential risks, and introduce uncertainty into the debate, the level of opposition and expression of public concerns can rise (Hartley, 2006). Objectors often question the transparency of the information provided (Clarke et al., 2018).

Despite the risks, proper dissemination of information, and public awareness raising has to be part of the decision-making process but it needs to be offered from the beginning before any planning application is lodged (Upreti and van der Horst, 2004). The information provided needs to be accessible and understandable and it should be grounded in trust and communicated through an inclusive participatory process (Bell et al., 2005).

The communication strategies used by the developer and regulatory agencies at different stages of the proposal will shape people's perceptions and expectations (Goedkoop and Devine-Wright, 2016). Any information given by planning agencies, developers or their experts will be filtered through each person's mindset, values and beliefs (Bell et al., 2005). The public is well able to absorb scientific knowledge when it is advantageous to do so, and they may choose to ignore such information if they do not trust the messengers. Active opponents are often more knowledgeable about the development proposal that the passive supporters (Burningham et al., 2006). Whether the information connects or not with 'existing norms, values, affect, cognition and practice' will have a bearing on the outcome. There is no point in developers presuming that the public will perceive the proposed technologies as having the same symbolic attributes (e.g. as being clean, green and worthy) as themselves (Upham, 2009) p. 4282).

Participation and Deliberative Processes

'The use of power to crush opposition leads to qualitatively poor decisions. In siting facilities the only way to arrive at decisions of reasonable quality is through the participation of interest groups at all levels in the process, with an opportunity to influence all policy issues linked to the facility…Their objections must

be taken seriously…No matter what strategy is advocated, one thing is clear; if it is aimed at reaching decisions without regard to the local community, it will very likely fail'
(Wolsink, 1994). (no page available)

Local people may become active opponents because they have not had a chance to engage with the development proposal. Meaningful participation must empower the participants and allow for relevant, social, environmental and sustainable outcomes. Participation should not serve a greenwash or cosmetic purpose whereby public involvement is encouraged but only after the key decisions have been made (Aitken, 2010). There is a fundamental difference between showing people what development will be taking place within their area, and allowing communities to demonstrate what kind of development they find acceptable (Jones and Eiser, 2010). National policy guidelines need to put in place a framework for the making of place-sensitive local decisions, and f or the development of a participatory process which begins before any siting decisions are made. Furthermore, in order to make less sensitive sites more appealing to developers, energy policy may have to be radically revised (Bell et al., 2005).

'If government is to influence the level of public acceptance of wind farms, it must engage in a sophisticated and carefully initiated deliberative process that takes cognisance of underlying worldviews and values of those involved' (Ellis et al., 2007) p. 522/3). Democratic participation is an 'open-ended process, the end results of which cannot be determined in advance' (p. 538). While essential to the effective governance of RE siting and planning issues, participative processes need to be very carefully organized and executed. According to Ellis and colleagues, they need to: take account of the key local concerns, and, in particular, to sensitively draw out, explore and understand how the issues are framed and perceived by the different (and often opposing) stakeholders; have a clear purpose other than simply giving information; incorporate deliberative methods in order to reach 'a settlement of differences' rather than 'resolution', and 'agonism' rather than 'consensus', as opposed to striving unsuccessfully for accord or persuasion; encourage self-reflection; recognize that both sides have value-based arguments which need to be explored alongside their corresponding beliefs and worldviews, concerns and interests, in order to establish a level of mutual respect between the different sides, in advance of productive and effective dialogue; and explore the tensions between supporters and protestors, in the hope of reaching a common settlement on the shared issues and a better mutual appreciation of the outstanding differences
'Where a developer facilitates a participatory process within a local community the outcome can only truly be said to represent the interests of the community if they were allowed to lead and control the process, otherwise the developer, being in a position of power, is able to shape the process and interpret the results as they see fit—or as fits their own interests (whether consciously or unconsciously)'. (Aitken, 2010) p. 1838

However, public consultation and participation should not be seen as a quick-fix solution to public opposition because 'public participation is a complex process through which different motivations, power differentials and other social attributes are played out, with consequences that do not always align themselves with the outcomes desired by normative theory or regulatory agents' (Ellis et al., 2007) p.538). It should not be presumed that objectors will necessarily want to have any involvement in activities organized by the developer, as they may not trust that these exercises will give them a chance to influence decision-making, or that their views will be taken on board. They may perceive that developers are only interested in finding ways of managing or overcoming the local opposition (Aitken, 2010). There is also the possibility that open and transparent decision making practices may actually empower and bolster opponents (Burningham et al., 2006). The idea that the purpose of participation is to overcome opposition also neglects the 'dynamic nature' of the processes, whereby some actions of

the developers and regulators can inflame the reactions of opponents. 'Public engagement should be viewed as an interactive, rather than one-way, process, with the aim of changing the attitude of developers as much as objectors' (Ellis et al., 2007) p.29). It also has to be asked if the aim of overcoming protest and opposition is always appropriate or desirable – as in democratic politics, where there is an opposition party, the existence of opposition to a proposed development may itself contribute to the quality of decision-making and to the final outcome (Burningham et al., 2006).

Nevertheless, rhetorical analysis of a selection of published material produced by pro- and anti-windfarm development groups and interests in relation to a Northern Ireland case study (Barry et al., 2008) has shown that there is a lot of shared and common ground between supporters and opponents, which gives hope for the outcome of open and deliberative processes which bring the two sides together. Central to this is the adoption of a 'conflict resolution' approach which 'accepts the legitimacy of pro- and anti-positions and moves in the direction of demanding each side to engage with the other on grounds of mutual respect and as co-equals' (p. 94) and then looks to arrive at a negotiated compromise.

Benefits
It is thought that the way to help deflect any self-interested objectors is to offer financial compensation provide share options, or encourage community ownership (Bell et al., 2005). Solutions that are considered appropriate for self-interested opponents rely on trade-offs and compensation, such as community trust funds and shared benefits (Burningham et al., 2006).

However, there is no evidence to show that benefits to communities will lead to less public opposition to proposed RE developments. Payment can be seen as a bribe, particularly if it is offered when the dispute between the opposition and developers has already begun (Wolsink, 1994). 'Since the issue is one of building trust any act which might be perceived as bribery could have detrimental effects, whereas those which are seen to allow meaningful participation of local community members might serve to create greater community engagement, and perhaps community acceptance' (Aitken, 2010) P. 1838).

Some evidence suggests that once money comes into the picture, people tend to be more self-reliant and less helpful to others (Vohs et al., 2006). Feelings of civic duty are crowded out by the offer of compensation (Frey and Oberholzer-Gee, 1997). Motivation crowding theory (Frey and Jegen, 2001) proposes that when external incentives are offered, people's intrinsic motivations to act for the common good may be reduced. In effect, the outside inducement goes against the reciprocity norm and undermines a person's sense of social responsibility (Titmuss, 1970) and can 'crowd out' people's intrinsic desire to act effectively and be civic-minded (Ostrom, 2005). Local communities respond more to procedural, rather than material, fairness (Aitken, 2010).

Concepts of justice, fairness and equity are important when it comes to benefits and shared ownerships. In particular, procedural justice concerning the perceived fairness of the decision making process, and distributive justice, concerning how the distribution of the costs, risks and benefits are perceived. The fair distribution of benefits is important because, if handled badly, benefit provision can increase tension between community members, and it can also cause opposition to community run projects (Goedkoop and Devine-Wright, 2016).

A study of shared ownership has shown that, while the concept is widely supported, in practice it poses significant challenges. Questions arose as to whether it should be optional or mandatory, and there was

an obvious lack of trust between developers and community actors. Developers expressed skepticism about the representativeness of the local actors, and their capacity for involvement, while community actors saw the developers as only using communities to get their planning permission. For shared ownership to become a more acceptable option, policy will have to become more stable and supportive and a way will have to be found to identify and involve local partners, and to build trust between both parties, at an early stage (Goedkoop and Devine-Wright, 2016).

An examination of the views of different stakeholders, including developers, activists, consultants, politicians and members of the general public (Cass et al., 2010), towards the idea of community benefits has shown that they generally accept the principle but the exact method of providing them remains an issue. Furthermore, the public is highly ambivalent about the benefits on offer and why they are being offered. Developers were keen to stress that they were not paying compensation, but were acting as 'good neighbours' and sharing the rewards, as part of their policy of corporate social responsibility. The notion of bribery arose in most of the discussions and was seen as a constant tension, particularly in relation to when the benefit is negotiated and offered, and questions were asked as to who should administer a community fund. Would the reputation of local groups who are picked for the task be tarnished? It was concluded that 'there is much questioning, much scepticism and a significant degree of dismissal of the significance of any local benefits that are being offered or claimed…The sensitivity of developers, as to how and when benefits are made part of local debates and how their motives are understood, therefore appears both necessary and well founded.' (p. 270). The study also found that, in general, focus group participants presumed that the energy from any RE installation in their area would directly supply their locality, and so should result in cheaper household bills. While acknowledging that it is currently not an option, the authors suggest that if a way were found to do this it would be an important development.

The Role of Intermediaries
There is an important role for intermediaries in arranging and managing partnerships between communities and developers, in helping to identify local community groups, and providing both sides with information required for negotiations, and also suitable spaces for dialogue (Goedkoop and Devine-Wright, 2016)

In his analysis of public acceptance of two offshore wind projects in the UK (Devine-Wright, 2012) – Lincs and Gwynt y Mor, both which were subsequently built, Patrick Devine Wright compared how intermediaries were used in each case and the impact they had on the outcomes. There was limited opposition to the Lincs wind farm, whereas Gwynt y Mor sparked much protest and the setting up of a campaign group in the nearby seaside town of LLandudno. Early on in the consultation process, the UK developer in the Lincs case recruited a former teacher, who lived in the area to play an active education oriented role within the local community, running workshops, and working with children in the local schools. She adopted a neutral stance and portrayed herself as both a company representative and the intermediary between the developer and the community (but not vice versa). In contrast, the Gwynt y Mor developer, a German company, employed a person from the PR company who ran their public exhibitions to be their representative on the ground. That person lived outside the directly affected area and acted in more of a passive, monitoring, listening capacity, keeping the company informed on developments on the ground, rather than acting as a bridge between both sides. Interestingly both intermediaries were female. The fact that there was so much controversy in the Gwynt y Mor case and relatively little in Lincs, would seem to indicate that the approach of employing a locally based intermediary in an educational role was more successful than helicoptering in a PR monitor. However, Devine-Wright urges caution on making any firm conclusions from this study and calls for further

research. Such outcomes are not guaranteed as they don't address key issues such as the power inequality between actors.

OTHER ISSUES/QUESTIONS

Think Globally Act Locally
Developers are likely to face opposition if they try to appeal to people's sense of global environmental citizenship and ignore the importance of its local manifestation (Upham, 2009). Research (Uzzell, 2000) has shown that, when asked, people demonstrate an awareness of global environmental problems and they can differentiate between them and judge their relative importance. It was found, without exception, that people believed that environmental problems at the global level were far more serious than those closer to home. The study also showed that people felt they were more responsible for their local environment, with the level of responsibility decreasing as the area becomes more remote. These findings might help to explain why people are unmoved when an RE developer claims that their proposed plan will help to combat climate change, and why, when the same people perceive a direct threat to their local environment, in the form of the proposed development, they take action.

Proximity
The NIMBY concept has led to the assumption that the closer a renewable energy installation is to one's own 'backyard' the stronger will be the opposition. However, the earlier empirical evidence around the proximity hypothesis is mixed (Devine-Wright, 2005) and continues to be inconclusive (Kontogianni et al., 2014). It is proposed that the variable nature of the research results may have something to do with the development of wind turbine technology, and the introduction of quieter designs (Devine-Wright, 2005).
The proximity theory implies that the public should be more accepting of off-shore wind farms. However, Patrick Devine Wright notes that 'it is by no means clear why deploying wind turbines offshore will be any less controversial than onshore projects' (Devine-Wright, 2012) (p. 195). There has been considerable opposition to a 150-250 MW offshore proposal off the North Antrim (Northern Ireland) and Donegal (Republic of Ireland) coasts (Ellis et al., 2007) and to a 750 MW offshore windfarm off the coast of North Wales (Devine-Wright and Howes, 2010). The focus on physical proximity masks the importance of the visual impact of a particular place. People often choose to live in coastal locations because of their splendid views across the sea. Coastal resorts do not stop at the water's edge.
This is backed up by a study which asked participants to give their opinion on a number of proposed locations for on- and off-shore wind energy installations in the UK (Jones and Eiser, 2010). While there was an increase in positive attitudes with increasing distance, the increase was not linear, and it was obvious that responses were not caused only by spatial proximity. The authors made a tentative hypothesis that landscape concerns, perceived site visibility, and 'an aversion to development on visible sites' (p. 3114) were playing a key role in influencing respondents' attitudes towards development within their area, and that developments which were out of sight would garner more local support.

Acceptance After Construction
Public opposition is at its height during the planning stages of development, and may become very active and visible at the construction stage, and once the plant is operational local unrest can settle down. It is therefore tempting to presume that public support will inevitably increase over time as people get used to the installation. Early research has shown some support for this (Wolsink, 1989, Devine-Wright, 2005). However, it is now stated that increased exposure to wind farms only improves

public perceptions marginally, and it can often have a negative impact on people's responses (Kontogianni et al., 2014). Acceptance may reflect a sense of fatigue, resignation and defeat which leads people to feel that they are no longer able to oppose the wind farm (Aitken, 2010). It is unlikely that there will be 'a simple, linear relationship between experience and perception because of the numerous other influences that shape people's judgements and opinions' (Devine-Wright, 2005).

Size of Development
There is clear evidence that people perceive smaller wind farms more positively than larger developments, which is a finding that jars with the official wind energy policy support for largescale projects, both larger turbines and more of them (Devine-Wright, 2005)

NEED TO CHECK

Community acceptance: an evaluation of onshore wind energy development in Ireland Strain, C., & Barry, J. (2017).

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