

# Emplacing technologies in energy landscapes: The role of place and identities in the low carbon transition

Prof. Patrick Devine-Wright

Keynote Presentation

European Conference on Energy  
Landscapes, Dresden, Germany

September 16<sup>th</sup> 2015



# Summary

- Low carbon transition and the NIMBY problem
- Social acceptance: A critical approach?
- Using 'place' to understand 'NIMBY' siting conflicts
- Conceptual framework to 'emplace energy conflicts'
- Three empirical examples taken from a mixed method, multi-level project on high voltage power lines
  - Varieties of local place relations
  - Belonging at local and non-local scales
  - Essentialising place/technology meanings
- Conclusions and recommendations

# Low Carbon Transition



- Climate change - one of the most urgent and serious problems facing humanity today.
- Mitigation: Transition from fossil-fuels to low carbon energy with consequent impacts upon particular places and landscapes.
- Local objections a persistent feature of community responses to energy siting proposals, typically explained by 'NIMBY' concept – yet persistently critiqued (Burningham, 2000; Devine-Wright, 2005, 2011; Wolsink, 2006).
- *'We have three reasons for not using this term [NIMBYism]... it is generally used as a pejorative... it may not be accurate... this label leaves the cause of the opposition unexplained'* (Kempton et al., 2005).

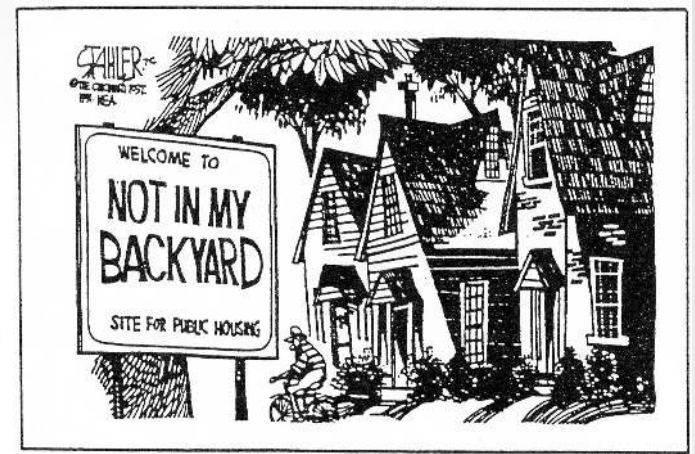
# What are we trying to explain, and why?

- The concept of '**social acceptance**' - a driver for energy social science research, yet with ambiguous meaning and questionable ethics.
- Wustenhagen et al. (2007) distinguish three parameters, but '**community acceptance**' remains under-theorised with methodological and ethical implications.
- Distinguish between acceptance & support
- Broaden scope of research
- Adopt more critical approach to (top-down) policy agendas

	Not support	Support	<i>Total</i>
Not accept	151	1	152
Accept	97	337	337
<i>Total</i>	248	338	586 (100%)

Batel, Devine-Wright and Tangelund (2013)

# Geographies of energy transition



- Low carbon transition is geographical as well as technological or economic: changing energy landscapes, implicating scale, territoriality and place (Bridges et al., 2013).
- ‘[NIMBYs are] **residents who want to protect their turf**... NIMBY refers to the protectionist attitudes of and oppositional tactics adopted by community groups facing an unwelcome development in their neighbourhood’ (Dear, 1992, 288).
- Place as location, locale, **sense of place** (Agnew, 1987).
- Rethinking ‘NIMBYism’ as **place protective action**, undertaken by people with strong, positive bonds with a place, in response to a sense of threat from development proposals deemed to be ‘out of place’ (Devine-Wright, 2009).



# Thinking with place



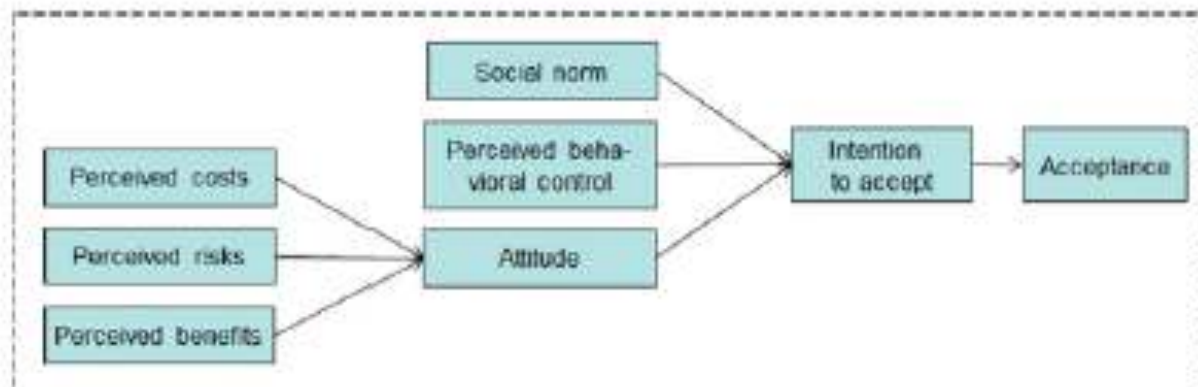
- Keystone of disciplines such as geography, planning, architecture, environmental psychology.
- More than backdrop to social life (Gieryn, 2000).
- *'A way of seeing, knowing and understanding the world'* (emplacement, Cresswell, 2004, 11-12).
- *'An alternative to Cartesian thought, which separates the mind from the body, and instead enables a discussion of the relationships between the mind and the external world through the body'* (Easthope, 2004, 130).

# Contrasting perspectives

- Place-based approach contrasts with conventional social science theory (e.g. environmental and social psychology, sociology) that typically neglects the physical/material setting of everyday lives (Gieryn, 2000)
- Contrasting modes of research – and views of the person – can be identified (Clayton et al., 2015)
  - The person (or group) in abstraction, decontextualised from the physical/material environment
  - The person (or group) in context, inseparable from the social and material situation in which they are embedded
- Methodological consequences:
  - Lab based experimentation or social analyses divorced from the physical setting
  - Field-based research, case study research designs (Flyvbjerg, 2006)

# Decontextualised approach

- Application of socio-cognitive perspectives from social psychology (values, norms, attitudes) since 1990s
- Conceptualising **acceptance as an attitude** (e.g. Huijts et al., 2012)



**Fig. 1.** The theory of planned behavior [2,3] adapted to technology acceptance.

- Conceptualising **place attachment as an attitude** (e.g. Vorkinn and Riese, 2001; Stedman, 2002)

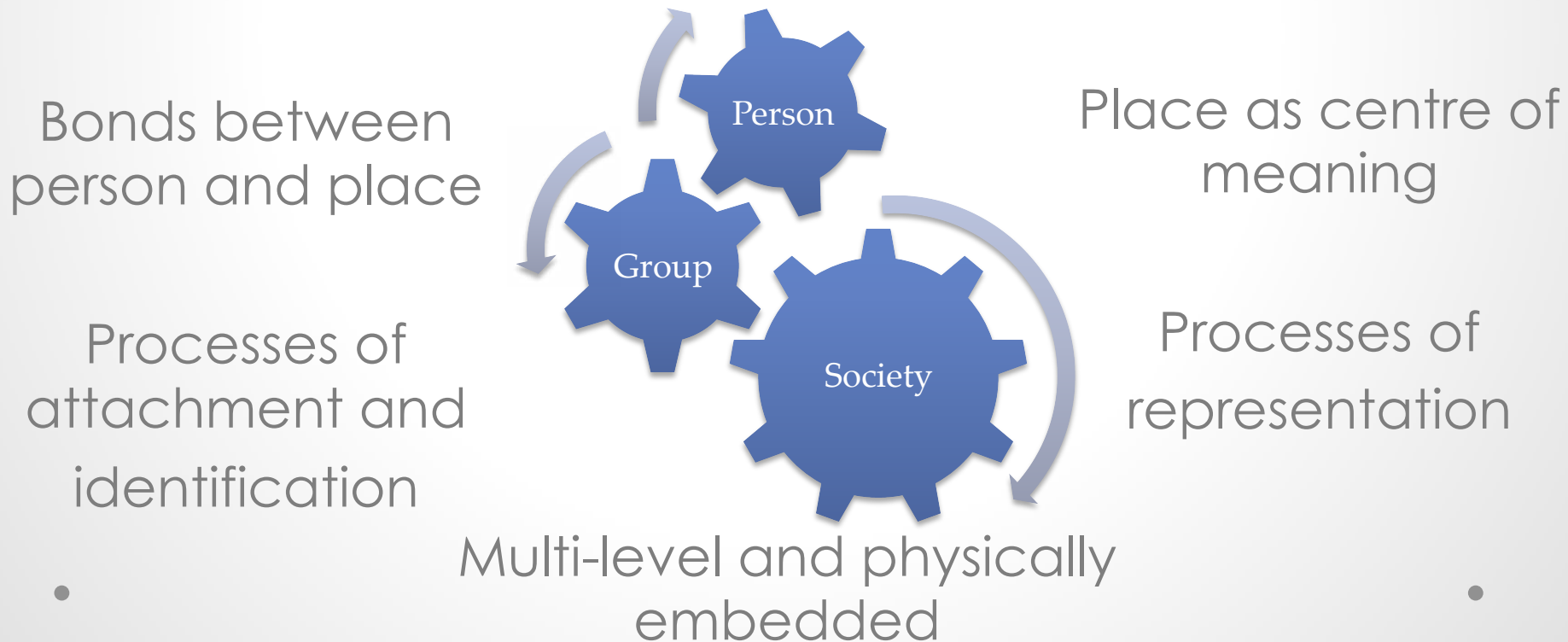


# Contextualised psycho-social approach

- Recent approaches to energy research in Human Geography advocate a **socio-material approach** whereby daily practices and physical environments are mutually co-constituted (e.g. Walker et al., 2015).
- Overcomes tendency towards individualism in psychology that neglects how physical environments - and our relationships with them - are socially constructed and strategically manipulated (Massey, 1995; Leibenath and Otto, 2014; Batel and Devine-Wright, 2015).
- But 'cultural turn' in geography has itself neglected relations between self and place (Antonsich, 2010)
- Hence need to recognise the sociality of individual experience *and* the role of individuals in maintaining or challenging normative ways of thinking and acting, embedded in particular physical/material contexts. •

# Theorising sense of place

*‘Place attachments are positively experienced bonds, sometimes occurring without awareness, that are developed over time from the behavioural, affective, and cognitive ties between individuals and/or groups and their socio-physical environment’*  
(Altman and Low, 1992, 284).

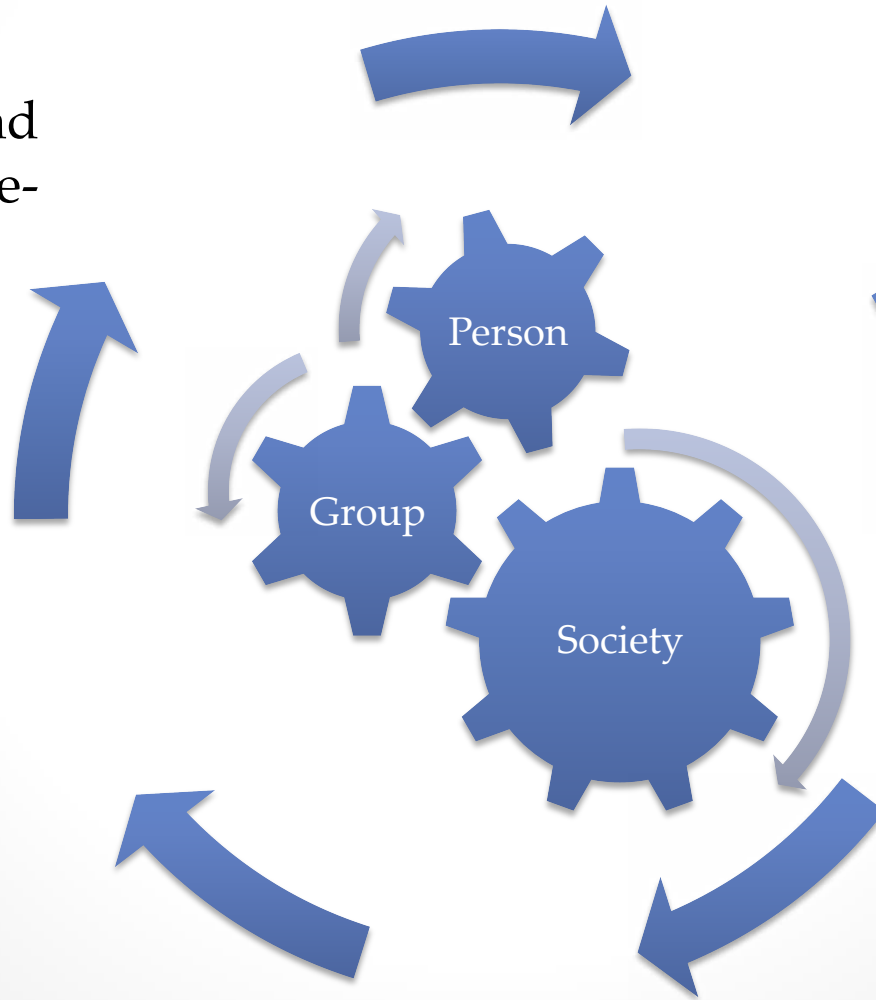


# Emplacing energy conflicts

Strength and variety of place bonds (Vorkinn and Riese, 2001; Devine-Wright, 2013)

Bonds between person and place

Normative beliefs about dwelling and belonging (DiMasso et al., 2011)



Symbolic meanings of land/seascapes (e.g. Woods, 2003; McLachlan, 2009; Leibenath & Otto, 2014)

Place as centre of meaning

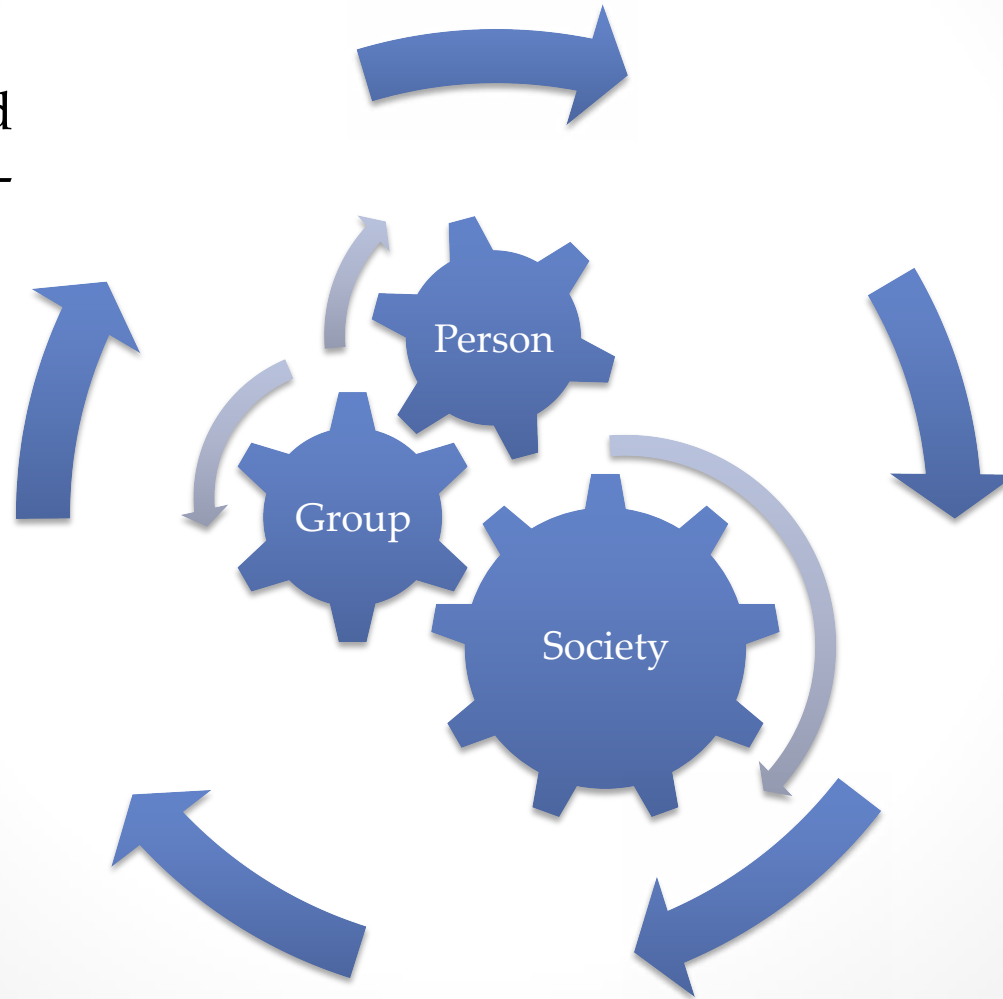
Place/Technology 'fit' (Devine-Wright, 2009; Cresswell, 1996)

# Focus on person-place bonds

Strength and variety of place bonds (Vorkinn and Riese, 2001; Devine-Wright, 2013 )

Bonds between person and place

Normative beliefs about dwelling and belonging (DiMasso et al., 2011)



# Strong person-place bonds leads to objection?

- Typically quantitative methods, divergent findings:
- **Negative relation** between strength of attachment and project support (e.g. Vorkinn and Riese, 2001; Devine-Wright and Howes, 2010; also Bidwell, 2013 but general attitudes)
- **Positive relation** between strength of attachment and project support (Devine-Wright, 2011)
- **No relationship** (Devine-Wright and Howes, 2010; Read et al., 2013; Carlisle et al., 2014)
- **Both positive and negative** observed in comparative studies of proximate coastal towns (Brownlee et al., 2015)
- Insufficiency of this approach – confusion over nature and target of the bond - how it is measured - narrow view of place attachment (multiple varieties of people-place relations, Lewicka, 2011) + neglect of the 'fit' (or lack of) between technology/place meanings

# Example 1: varieties of local attachment (Bailey et al., 2015)

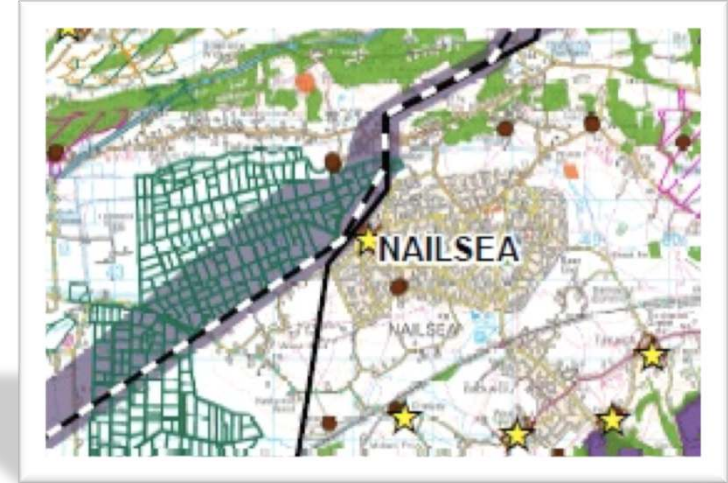
- Aims:
- To broaden the approach to local place attachments by moving from analysis of strength of place attachment (a uni-dimensional approach from weak to strong) to multiple varieties of strong and weak attachments to place.
- To connect up different ways of relating with a place, constructions of particular landscapes, and responses to siting proposals.



# Varieties of place relations (Lewicka, 2011)

TYPE OF RELATION	DESCRIPTION
Traditional Attachment	Taken-for-granted, unselfconscious emotional bond with a place associated with previous generations
Active Attachment	A self-conscious emotional bond - an interest in the goings-on of the place and active involvement in community activities
Place Relative	An ambivalent but conditionally accepting attitude towards the place where you live
Place Alienated	A dislike or estrangement of the place where you live
Placelessness	Indifference to where you live – feeling no particular need to form emotional bonds or identify with place

# Case study 1: Nailsea, SW England



- Proposals for a new 400kV power line (approx. 60km long) to connect a new nuclear plant at Hinckley Point, Somerset, to the grid near Bristol.
- First proposed in 2009, currently under review.
- Siting concessions: (1) undergrounding 8km through Mendip Hills (2) removing 65km of existing 132kV line (3) undergrounding a second line past Nailsea.



# Understanding local responses

- 2010 survey of local residents (n = 503) found a significant positive relationship between the 'active' variety of place attachment and objection to the power line proposals (Devine-Wright, 2013)
- Follow up qualitative research (n = 25, 2013) aimed to deepen analysis of all five varieties, examine these in the context of residents' life courses, as well as their views of the power line proposals
- Qualitative material analysed using Thematic Narrative analysis (Riesseman, 2008) – coding aimed to elaborate narrative accounts of relations to different residence places over the life course and subsequent 'life-place trajectories'

# Patterns of biography, meanings and response 1

Residential Biography/ Narrative theme	Relations to Nailsea & surrounding countryside	Stance towards power line proposal
<ul style="list-style-type: none"> <li>Life-long residence in Nailsea (strong autobiographical insideness)</li> <li>Grew up in Nailsea, moved away, then returned to 'home' place</li> </ul>	<ul style="list-style-type: none"> <li><b>Traditional attachment</b></li> <li>Accustomed to existing electricity infrastructure (132kV)</li> <li>Powerlines represented as 'familiar'</li> </ul>	Acceptance
<ul style="list-style-type: none"> <li>Moved to Nailsea as adults from similar (semi-rural) types of place</li> <li>Active bonds to prior residence places + value proximity to nature</li> <li>Actively sought to move to Nailsea</li> </ul>	<ul style="list-style-type: none"> <li><b>Active Attachment</b></li> <li>Powerline seen to 'industrialise' the surrounding countryside, which is seen as 'natural' and 'scenic'</li> </ul>	Opposition

- **Traditional Place Attachment** (Life-long residence in Nailsea, or grew up, moved away and returned)
  - *'...having lived here for so long, and having grown up here, the pylons were always there...we'd play under them in the fields, we'd go for family walks and pass by them, so they were always there, **and you get used to them being there...** so no, it's (HPC power line proposal) not going to have a huge impact on the countryside' (Rachel).*
- 

- **Active Place Attachment** (Moved to Nailsea as an adult from similar places)
- *'...it's going to **be incredibly ugly, and out of proportion, and industrial** and all the things that you don't expect to see in the countryside ... it's going to be out of character with the whole of the surrounding area' (Gabby).*



# Patterns of biography, meanings and response 2

Residential Biography/ Narrative Theme	Relations to Nailsea and surrounding countryside	Stance towards power line proposal
<ul style="list-style-type: none"> <li>Moved to Nailsea as adults from different types of place (large towns and cities)</li> <li>Experienced discontinuity in settlement type moving to Nailsea</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Place Relative/ Place Alienated</b></li> <li>- Representations of countryside or powerline less important</li> </ul>	<p>Opposition:</p> <ul style="list-style-type: none"> <li>- Procedural Injustice</li> <li>- Distributive Injustice</li> </ul>
<ul style="list-style-type: none"> <li>Moved to Nailsea as adults</li> <li>Very high residential mobility</li> <li>Indifference to residence places across life course</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Placelessness</b></li> <li>- Representations of countryside or powerline less important</li> </ul>	



- Alienation or relativity/Discontinuity in place of residence/Opposition to powerline
  - ‘...it seems very much like a *faite accomplie*, there isn’t so-called consultation, **it isn’t consultation, it’s lip service**, it’s a paper exercise, the decisions have already been made and they’re going to do what they’re going to do’ (Claire).
- 

- Placelessness/High residential mobility/Opposition to powerline
- ‘...we’ve got this massive great grid line which is going to really spoil our landscape, but it’s not for the benefit of this area. Apart from a few specialist jobs at the actual power plant [the proposed Hinckley Point C power plant], there might be construction jobs but **it’s going to bring nothing to the towns** of Bridgewater or Nailsea once it’s completed’ (Martin).

# Summary

- People relate to place in diverse ways.
- Diversity explained by life course (quantity of residence places + continuity in settlement type).
- Strong objections more likely in ‘actively’ attached residents in comparison to ‘traditionally’ attached.
- Findings link life course biographies, place attachments and place meanings – those who viewed the power line as ‘industrialising’ countryside tended to have moved to Nailsea as adults and were ‘actively attached’.
- Objections prevalent amongst non-attached residents, but based on procedural & distributional justice concerns.
- Findings suggests explanation for anomalous findings in literature.

# Example 2: Place bonds beyond the local (Devine-Wright et al., 2015)

- Limitation of research into place attachment and community acceptance – focus upon *local* place bonds.
- But energy infrastructure projects are *not only local* (e.g. in terms of impacts) (Massey – relational view of place).
- And people-place bonds *not only local* (i.e. attachments and identities at regional, national and global scales).
- Haggett (2008): conflicts over wind farms arise from disjuncture between local costs and global benefits.
- McLachlan (2009): stakeholder discourses about a wave energy project provided contrasting framings of local, regional or national significance.
- Relations between belonging at national and global scales have a significant influence upon climate change beliefs
- (Devine-Wright et al., 2013; 2015).

# Method and context

- National survey (n=1519) conducted in January 2012, with representative sample of UK adult population by age, gender, socio-economic classification and region, according with the 2001 Census.
- Questions probed:
  1. *General attitudes towards high voltage power lines*
  2. *Beliefs about impacts (environmental, social, economic)*
  3. *Acceptance and support of a local proposal*
  4. *Willingness to take protest or support actions*
  5. *Background variables: age, gender, education, length of residence, local participation, political beliefs, environmental beliefs (NEP), materialism*

# Belonging at multiple scales

- *'To what extent do you feel a weak or a strong sense of belonging to the following areas? (Strongly Disagree=1 / Strongly Agree=5)*
  - 'The neighbourhood where you live'
  - 'Britain'
  - 'The Earth/The whole world'

Subgroup of total sample	n
'Nocals' (low on all)	52
'Locals' (higher local belonging)	219
'Nationals' (higher national belonging)	245
'Globals' (higher global belonging)	175
'Glocals' (high on all)	166

# General attitudes

- *New powerlines are necessary for our modern society* – ‘Nationals’ (3.57) higher than ‘Locals’ (3.28) and ‘Nocals’ (3.09) ( $F = 3.35$ ,  $df4$ ,  $p < .01$ )
- *Willingness to accept the increased possibility of blackouts if this reduces the need for new power lines* – ‘Nationals’ less willing (1.92) than ‘Glocals’ (2.34) and ‘Nocals’ (2.34) ( $F = 4.3$ ,  $df4$ ,  $p < .002$ )
- *Support for transition from centralised to decentralised and local renewable energy* – ‘Nationals’ least supportive (3.00), ‘Globals’ most supportive (3.68) ( $F = 7.46$ ,  $df4$ ,  $p < .000$ )
- *Willingness to reduce my use of electricity if this reduces the need for new power lines* – ‘Nocals’ least likely, ‘Glocals’ most likely (2.61 vs. 3.16) ( $F = 3.49$ ,  $df4$ ,  $p < .008$ )



# Perceived local impacts

- Environment:
- Reduce landscape quality: n.s. (all means above mid-point)
- Impact negatively on wildlife: 'Glocals' higher than 'Nationals' (3.60 vs. 3.22) ( $F = 3.34$ ,  $df4$ ,  $p < .01$ )
- Health:
- Endanger people's health from magnetic fields 'Glocals' higher than 'Nationals' (3.64 vs. 3.04) ( $F = 5.01$ ,  $df4$ ,  $p < .001$ )
- Economic
- Negative (reduce property values, damage tourism): similar, except for 'hinder sale of property' - 'Glocals' higher than 'Nocals' and 'Globals' (4.09 vs. 3.63/3.69)
- Positive: provide jobs – n.s., provide income to local municipality and landowners – 'Glocals' higher than 'Locals' and 'Nationals' (3.74 vs. 3.24/3.24)

# Local acceptance

- **Local acceptance:** n.s. (all means below midpoint)
- **Local support:** approaching significance ( $F = 2.32$ ,  $df4$ ,  $p < .056$ ) with 'Glocals' lowest (2.43) and 'Globals' highest (2.71)
- **Willingness to act in support** of local power line (sign a petition, write a letter): 'Glocals' least in disagreement (2.10) ( $F = 6.59$ ,  $df4$ ,  $p < .000$ )
- **Willingness to protest** 'Nocals' least likely (1.79); 'Glocals' and 'Locals' most likely (2.91/2.62) ( $F = 11.24$ ,  $df4$ ,  $p < .000$ )

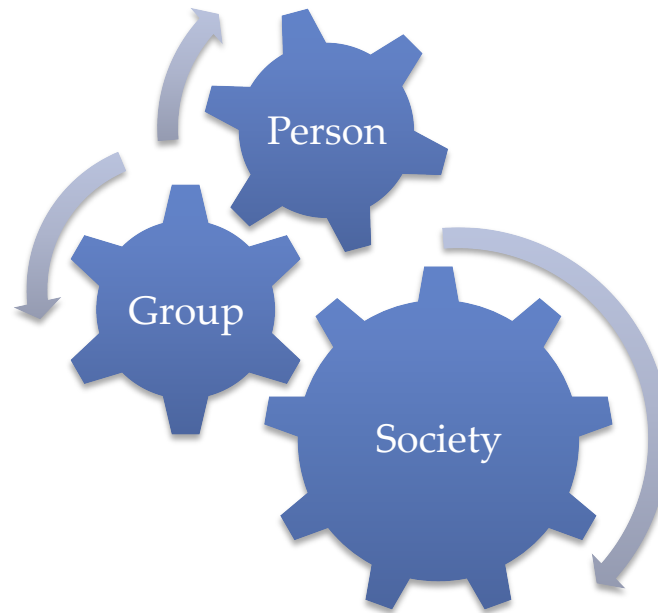
# Underlying characteristics

- Gender (n.s.)
- Age ('Nocals' & 'Globals' more likely younger; 'Nationals' & 'Glocals' more likely older);
- Education (n.s.)
- Length of local residence: 'Nocals' & 'Globals' shorter (<2 years); 'Locals' & 'Glocals' longer (>20 yrs).
- Involvement in the local area: 'Locals' and 'Glocals' highest; 'Nocals' lowest.
- Values:
  - Political beliefs ('Nationals' more likely vote Conservative; 'Globals' more likely vote Liberal and Labour; 'Nocals' least likely to vote)
  - Environmental beliefs (NEP): 'Globals' highest, 'Nationals' lowest
  - Materialism: 'Globals' lowest, 'Nocals' highest

# Summary

- Local place bonds *not* the whole story ...
- Intriguing differences based upon ways of relating to place at local, national and global scales.
  - Individuals with stronger national identities most positive about grid lines, least likely to perceive negative impacts
  - Individuals with stronger global identities most supportive of decentralised and renewable energy
  - Individuals strong on global *and* local identities most likely to see negative local impacts and most willing to protest
- But exploratory - suggests value of future research to replicate and extend these findings.
- Future research could adopt this approach in researching local case studies of actual proposals (also wind farms and shale gas fracking).

# Focus on symbolic meanings



Symbolic meanings of land/seascapes – generally and locally (e.g. Woods, 2003; McLachlan, 2009; Leibenath & Otto, 2014)

Place as centre of meaning

Representation

Distinctiveness

Continuity

Place/Technology 'fit' (Devine-Wright, 2009, from Cresswell, 1996)

# Out of place?



- Several studies show that the locations of energy projects cannot be taken as a 'given' – instead having multiple meanings, often embedded within wider discourses about landscapes or seascapes, and institutional arrangements to regulate these (Woods, 2003; McLachlan, 2009; Devine-Wright and Howes, 2010; Leibenath and Otto, 2014; Devine-Wright and Batel, 2015)
- Objections often based upon claims that rural places are being 'industrialised' by energy projects, founded upon nature/industry dualism:
- *'Two million people ... visit this town every year ... they come for the centre of beauty, they come from largely industrial towns to get away from industrial landscapes, and in this case, to see a beautiful, open, natural seascape ... They don't want to see more industry when they get here'* (Devine-Wright & Howes, 2010)



# Example 3: essentialising technology/countryside meanings (Batel et al., 2015)

- Essentialisation: process by which a given entity, like 'nature' or 'woman', is socially constructed as having a particular, natural and unchangeable essence (e.g. Butler 1990)
- Human geographers have been sceptical of "*the idea that places have single, essential, identities*" (Massey, 1995, 26) - may lead to essentially reactionary practices
- Focus group data from two UK case studies: SW England and Mid-Wales where high voltage transmission power lines currently proposed
- Collected in 2013 from residents of nearby villages

# Case study areas

1. Midwales – to connect with wind farms [Llanymynech, Welshpool]

2. Hinkley Point C – to connect with nuclear power station [Yatton, Nailsea, Portbury]



# Essentialising pylons in the countryside

- *‘Extremely tall kind of like towers which bear no resemblance to the countryside they’re passing through and are imposed on the landscape rather than growing out of it ...’ [Llanymynech].*
- *‘I mean people come here to get away from city life, town life and whatever. If there’s like, stuff like pylons, what they see around where they live, well they’re not really going to come here, they come here they come to get away from that you know, [to come to the] countryside and fresh air’ [Shrewsbury].*

# Emotionality: mixed essences

- M[oderator]: *So what were your first reactions then when you first found out about it?*
- P5: **Disgust.**
- P1: *Absolute **horror** – horror... [Llanymynech1, 31:65-68 ]*
- P5: **Evil** [Llanymynech1, 31:162 ]
- P1: *and you see South Wales Docks and you think ‘Oh my God that’s **horrible**’, go over the other side, look from South Wales back to Bristol and you think ‘**Yuck**, that’s even worse’ [Nailsea2, 30:63]*
- P1: **It looks revolting** it does look **horrendous** [Portbury, 34:48 ]

# Distinctions: 'our landscape' vs. elsewhere

- P5 - *Montgomeryshire is a very rural county (...), very beautiful landscapes rolling valleys and hills um very green*
- P6 - *I think it's like the greenest county in Wales (...) the rolling hills and I've had the experience of living in other areas (...) where are hills and mountains but they are not - you know none of those counties are as green and as rolling as this county [Welshpool]*
- P5 - *(...) it's just pretty flat open countryside*
- P6 - *Precisely yes which is fine isn't it*
- P5 - *less um... obtrusive in that sort of landscape than they potentially would in our landscape [Welshpool]*

# De-essentialisation

- *'Yeah, yeah, I mean some people have this romanticised version of the countryside which doesn't have the industry in it does it? ...but even so there's still quite a lot of industry going on because life has changed ... they've got the industrialisation, they've got the lights and the tractors and so they can keep working... so you know, this new power line, it's not going to change anything, it's not going to affect the outlying area because there's already industry there' [Nailsea].*

# Summary

- Meanings of landscapes & places not fixed or singular.
- Place meanings strategically employed by local residents faced with unwanted siting proposals to present the local area in a certain way
- Supports previous studies that have highlighted how nature/industry dualism presented as incompatible essences in contexts of conflict, with emotional consequences.
- Extends literature by showing ways that people distinguish 'our' countryside from elsewhere to support objections against power line - and propensity to de-essentialise that merits future research.
- Findings underscore need to conceive place in a social, cultural and political context.



# Conclusions

- How best to move beyond NIMBY concept?
  - Adopt more critical approach to the concept of acceptance
  - Engage with fundamental epistemological and ontological matters
- Place bonds not whole story – issues of trust and justice (procedural and distributional) also important in influencing responses – particularly when individuals weakly attached.
- Nevertheless, understanding community acceptance as emplaced local responses – in light of person-place bonds and place/technology meanings – does bring benefits.
- Multi-level approach (personal, group/community, societal) to place bonds and place/technology meanings requires interdisciplinary dialogue.
- Future research needs to work across these levels to provide a comprehensive understanding of conflicts over 'energy landscapes'.

# Thank you

Acknowledgements: to Dr. Susana Batel and Etienne Bailey, to SusGridproject colleagues and participants, and to the funding agencies: Norwegian Research Council and EPSRC

[p.g.devine-wright@exeter.ac.uk](mailto:p.g.devine-wright@exeter.ac.uk)



# Citations

- Agnew, J.A. (1987) *Place and Politics: The Geographical Mediation of State and Society*. Winchester, MA: Allen & Unwin.
- 
- Altman, I., & Low, S. (1992). *Place attachment*. New York: Plenum Press.
- 
- Antonsich, M. (2010). Meanings of place and aspects of the Self: an interdisciplinary and empirical account. *GeoJournal*, 75, 119-132.
- 
- Bailey, E. Devine-Wright, P. and Batel, S. (2015) The role of 'life-place trajectories' in shaping responses to a UK transmission power line proposal. Under Review.
- 
- Batel, S., Devine-Wright, P. and Tangeland, T. (2013). Social Acceptance of Low Carbon Energy and Associated Infrastructures: A Critical Discussion. *Energy Policy*, 58, 1-5.
- 
- Batel, S. and Devine-Wright, P. (2015) Towards a better understanding of people's responses to renewable energy technologies: Insights from Social Representations Theory. *Public Understanding of Science*, 24, 311-325.
- 
- Batel, S. and Devine-Wright (2015) The role of (de-)essentialisation within siting conflicts: An interdisciplinary approach. Under Review.
- 
- Bidwell, D. (2013). The role of values in public beliefs and attitudes towards commercial wind energy. *Energy Policy*, 58, 189-199.
- 
- Bridge, G., Bouzarovski, S., Bradshaw, M. and Eyre, N. (2013). Geographies of Energy Transition: Space, Place and the Low-Carbon Economy. *Energy Policy*, 53, 331-340.
- 
- Brownlee, M.T.J., Hallo, J.C., Jodice, L.W., Moore, D.D., Powell, R.B. & Wright, B.A. (2015). Place attachment and marine recreationists' attitudes toward offshore wind energy development. *Journal of Leisure Research*, 47, 263-284.
- 
- Burningham, K. (2000). Using the Language of NIMBY: A topic for research not an activity for researchers. *Local Environment*, 5, 55-67.
- 
- Butler, J. (1990). *Gender trouble and the subversion of identity*. New York and London: Routledge.
- 
- Carlisle, J.E., Kane, S.L., Solan, D. & Joe, J.C. (2014). Support for solar energy: Examining sense of place and utility-scale development in California. *Energy Research & Social Science*, 3, 124-130.
- 
- Clayton, S., Devine-Wright, P., Swim, J., Bonnes, M., Steg, L., Whitmarsh, L. and Carrico, A. (forthcoming 2015) Expanding the role for psychology in addressing environmental challenges. *American Psychologist*.
- 
- Cresswell, T. (1996). *In Place/Out of Place: Geography, Ideology and Transgression*. Minnesota: University of Minnesota Press.
- 
- Cresswell, P. (2003). *Place: A short introduction*. London: Routledge.

- Dear, M. (1992). Understanding and overcoming the NIMBY syndrome. *Journal of the American Planning Association*, 58, 288–300.
- 
- Devine-Wright, P. (2009). Rethinking NIMBYism: the role of place attachment and place identity in explaining place protective action. *Journal of Community and Applied Social Psychology*, 19, 426–441.
- 
- Devine-Wright, P. and Howes, Y. (2010) Disruption to place attachment and the protection of restorative environments: a wind energy case study. *Journal of Environmental Psychology*, 30, 271–280.
- 
- Devine-Wright, P. (2011) Place attachment and public acceptance of renewable energy: a tidal energy case study. *Journal of Environmental Psychology*, 31, 336–343.
- 
- Devine-Wright, P. (2011). Public engagement with large-scale renewable energy: Breaking the NIMBY cycle. *Wiley Interdisciplinary Reviews: Climate Change*, 2, 19–26.
- 
- Devine-Wright, P. (2013) Think global, act local? The relevance of place attachments and place identities in a climate changed world. *Global Environmental Change*, 23, 61–69.
- 
- Devine-Wright, P. (2013) Explaining 'NIMBY' objections to a power line: The role of personal, place attachment and project-related factors. *Environment and Behavior*, 45, 761–781.
- 
- Devine-Wright, P., Leviston, Z. and Price, J. (2015). My country or my planet? Exploring the influence of multiple place attachments and ideological beliefs upon climate change attitudes and opinions. *Global Environmental Change*, 30, 68–79.
- 
- Devine-Wright, P. and Batel, S. (2015) The influence of multiple scales of belonging upon beliefs about high voltage power lines. In preparation.
- 
- Di Masso, A., Dixon, J., & Pol, E. (2011). On the contested nature of place: "Figuera's Well", "The Hole of Shame" and the ideological struggle over public space in Barcelona. *Journal of Environmental Psychology*, 31, 231–244.
- 
- Easthope, H. (2004). A place called home. *Housing, Theory and Society*, 21, 128–138.
- 
- Flyvbjerg, B. (2006) Five Misunderstandings about Case Study Research. *Qualitative Inquiry*, 12, 219–245.
- 
- Gieryn, T. (2000). A space for place in sociology. *Annual Review of Sociology*, 26, 463.
- 
- Haggett, C. (2008). Over the sea and far away? A consideration of the planning, politics and public perception of offshore wind farms. *Journal of Environmental Policy & Planning*, 10, 289–306.
- 
- Huijts, N., Molin, E., Steg, L., (2012). Psychological factors influencing sustainable energy technology acceptance: A review-based comprehensive framework. *Renewable and Sustainable Energy Reviews*, 16, 525–531.
- 
- Kempton, W., Firestone, J., Lilley, J., Rouleau, T., Whitaker, P. (2005). The offshore wind power debate: views from cape cod. *Coastal Management*, 33, 121–151.

- Leibenath, M. and Otto, A. (2014) Competing Wind Energy Discourses, Contested Landscapes, *Landscape Online*, 38, 1-18.
- 
- Lewicka, M. (2011). On the varieties of people's relationships with places: Hummon's typology revisited. *Environment and Behavior*, 43, 676-709.
- 
- Massey, D. (1995). The conceptualisation of place. In: Massey, D., Jess, P. (Eds.), *A Place in the World? Places, Cultures and Globalisation*. Open University Press, Oxford, pp. 87-132.
- 
- McLachlan, C. (2009). "You don't do a chemistry experiment in your best China": Symbolic interpretations of place and technology in a wave energy case. *Energy Policy*, 37, 5342-5350.
- 
- Read, D.L., Brown, R.F., Thorsteinsson, E.B, Morgan, M. & Price, I. (2013). The theory of planned behaviour as a model for predicting public opposition to wind farm developments. *Journal of Environmental Psychology*, 36, 70-76.
- 
- Riessman, C. (2008). *Narrative Methods for the Human Sciences*. Sage Publications.
- 
- Stedman, R. (2002). Toward a social psychology of place: Predicting behaviour from place-based cognitions, attitude, and identity. *Environment and Behaviour*, 34, 561-581.
- 
- Vorkinn, M., & Riese, H. (2001). Environmental concern in a local context: The significance of place attachment. *Environment and Behaviour*, 33, 249-263.
- 
- Walker, G., Karvonen, A., and Guy, S. (forthcoming in 2015) Zero carbon homes and zero carbon living: sociomaterial interdependencies in carbon governance. *Transactions of the Institute of British Geographers*, doi: 10.1111/tran.12090
- 
- Wolsink, M. (2006). Invalid theory impedes our understanding: A critique on the persistence of the language of NIMBY. *Transactions of the Institute of British Geographers* 85-91, NS31.
- 
- Woods, M. (2003). Conflicting environmental visions of the rural: Windfarm development in mid Wales. *Sociologica Ruralis*, 43, 271-288.
- 
- Wüstenhagen, R., Wolsink, M. and Burer, M.J. (2007). Social acceptance of renewable energy innovation: An introduction to the concept. *Energy Policy*, 35, 2683-2691.