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Perspective

Elusive publics in energy projects: The politics of localness and energy democracy



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ABSTRACT

In order to have the assessment of the local impacts of energy projects, decision-makers need to separate a local public from the wider public. From the starting point that 'publics' are so-called imaginaries, this perspective paper argues that the operationalisation of publics tends to impose concerns, motivations and capacities upon the members of both publics, expecting local publics to consider specific concerns, while wider publics are expected to attend generic interests. Moreover, methods to invite members from a local public to speak out on the acceptability of an energy project tend to ignore the heterogeneity and dynamics of the 'public', compromising the democratic legitimacy of an assessment made by such a local public.

1. Introduction

In the context of the energy transition, large-scale energy projects are or have to be developed that have sincere effects to people living in their vicinity. One may think of solar PV cell installations, wind turbine parks, high voltage lines, geothermal exploration sites as energy technologies that come with such direct local impacts [1]. Given their scope in terms of investment, regulation and technology, such projects usually require a coordinated planning process for which the responsibility lies with a network of public and private actors, which will be denoted as 'decision-makers' here. These decision-makers need to know what the assessment of the community directly affected by a project is in order to fulfil procedural requirements and to warrant its legitimacy [2,3]. This implies that such a community has to be articulated as, what will be called here, a *local public*, which in turn can be asked about its assessment. Such a local public becomes separated from a *wider public* that consists of the broader population that is considered to be affected by the project in an indirect way.

The problem is that both local and wider 'publics' are intangible phenomena in their very essence, only existing as *imaginaries* that need to be operationalised to serve administrative needs or other practical purposes [4–6]. Following the convention introduced by Michael [7], the inverted comma's are dropped when 'publics' are operationalised into empirical *publics*. The validity of an assessment by a public can only be conditional: a decision-maker needs to know about the assessment of a 'public', without ever knowing who or what this 'public' is.

In general, the construction of local vis-à-vis wider publics involves

three interconnected steps that are distinguished here for analytical reasons:

- 1) A *boundary* needs to be established to separate the different publics, so to allow a decision-making process regarding the assessment of direct effects.
- 2) The wants or needs of the publics have to be transformed into a *singular expression*.
- 3) The public has to be enabled to *forward its assessment* about the project to the decision-makers.

These three steps will be covered in the subsequent sections of this paper. Crucial is that the construction of a boundary between a local and a wider public, as well as their further substantiation, *organises expectations* about the concerns, motivations and capacities of the members of both publics [cf. 8]. Moreover, the need for articulating the assessment of a public as a singular expression tends to contribute to homogeneously conceived publics, restricting the plurality and diversity of assessments within these publics.

The contribution of this perspective paper is the connection that is made between insights derived from broader political philosophy and emerging literature on energy democracy [9,10], energy citizenship [11,12] and energy publics [13,14]. In this, the notion of 'social imaginaries' plays a decisive role, these are seen as the way in which people "imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations which are normally met, and the deeper normative notions and images which

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underlie these expectations” [15]. Regarding these imaginaries, the idea of the ‘public’ figures as a defining aspect of collective self-understanding: it allows individual citizens to consider themselves to be part of a greater whole and it permits the belief that they contribute to collective decisions by taking part in deliberative processes and elections [15,16]. This self-understanding of ‘publics’ develops in a dialectic interplay with existing regulatory and material contexts [cf. 17], and with authoritative decisions. The construction of an empirical public can be seen as a manifestation of such a decision, and as such it enables and constrains the capacity of a ‘public’ to maintain a collective self-understanding.

2. Constructing boundaries

In order to separate a local public from the wider public, decision-makers need to draw a boundary between those people that are directly affected by the project and those who are not [6,14]. To understand the separation of these two publics, the notions of *publics-in-particular* and *public-in-general* as introduced by Michael [7] are helpful. In this, *publics-in-particular* can be “broadly defined as those publics that have an identifiable stake in particular [...] controversies (p. 623)”, while the *public-in-general* “can be regarded as an undifferentiated whole [...] that is itself characterized globally in terms of some key dimension (p. 620)”. The argument made in this paper is that the wider public is usually conveyed as a *public-in-general*, while a local public is seen as a *public-in-particular*.

In the construction of publics, formal restrictions of a technical nature can play an important role. For instance, in the Dutch context the possibility to submit ‘perspectives’ is an important formal procedure that allows citizens to express their concerns about proposed policy projects. These ‘perspectives’ are points of view that need to be taken into consideration in the formal environmental assessment report.¹ With regards to decisions about wind turbines for example, citizens may submit perspectives about that decision *only* if they live within a radius that is less than ten times the height of the turbine’s tip. If you live somewhat further away, a perspective will not be taken into consideration – even though a 200-meter high turbine can be perfectly visible from more than two kilometres.

In the Dutch context, the membership of a local public also determines *which types of concerns* may be expressed, because submitted perspectives will be exclusively taken into consideration if these concerns apply to the local impacts of these projects. If not, they will be discarded. This happened for instance in the case of shale gas exploration in the southern part of the Netherlands, where citizens could only formally express complaints about the impact of the construction of an exploration site, but in the context of this procedure they could not speak out on the overall desirability of shale gas explorations [1]. While such a regulatory procedure is highly decisive for the outcome of the project, it prescribes local actors to represent local, that is particular, concerns, and as such they are excluded to forward wider sets of concerns [18].

The Dutch situation may be particularly rigid in its attribution of motivations and concerns, and other institutional settings will most certainly differ in their criteria used to separate local from wider publics. Nevertheless, it seems that the construction of a local *vis-à-vis* a wider public often involves demarcations that are based on administrative considerations. In this, the character of the wider public seems to be ill-defined, basically identifying its members as those actors that are *not* members of the local public. Also here is a lack of specificity, and other spatial scales, ranging from regional to international, may be implied – sometimes even simultaneously [19].

Consequently, being a member of the wider public has implications for what you are *not* entitled to, for instance, it may mean that you are

not eligible for direct consultation and compensation like members of a local public [cf. 20]. It may be so that as a member of the wider public you are not allowed to talk about the concerns that are designated to the local public. For instance, when the implementation of a wind project means that a patch of trees in the immediate vicinity has to be removed, Dutch legislation instructs that appeals of members of the wider public cannot be taken into consideration, even though these appeals may refer to a generic value like nature conservation.

In sum, the construction of a boundary between a local and a wider public that is required by regulatory procedures designates motivations about which concerns are to be attended by whom. This issue not only pertains to administrative measures, but also to discursive classifications of ‘publics’ that may be maintained by decision-makers. Most notable here is the case of the NIMBY or ‘not in my backyard’-label: this label raises the suspicion of self-interest, which tends to disqualify the legitimacy of claimants from a local public [8].

The NIMBY-label and the administrative designation of local concerns to local publics can be seen as two sides of the same coin: they concern the expectation held by project developers and decision-makers that those affected by the direct impacts of an energy project are somehow not able to sufficiently consider the wider impacts of that project. An expectation that is doubtful, to say the least: members of local publics may have other concerns than just local ones; moreover, it has been shown repeatedly that ‘NIMBY’ is not a justified description of the positions of local actors [21–24].

Still, the expectations that are imposed upon actors create a reality that is hard to ignore, prompting a local public to develop strategies to bypass standard formal procedures in order to raise attention for the wider concerns. For instance, local NGOs and movements may merge into national NGOs or connect to national social movements, so to gain political leverage [1]. Another strategy that can be observed is that of local authorities residing to activism, making their concerns heard outside of conventional circuits, for instance by seeking media attention or endorse protest movements [25,26].

The designation of actors to either a local or a wider public also elicits expectations among decision-makers about *the way in which* concerns and interests are expressed. Members of the local public are expected to have *affective* attachments with their local environment while emotional dispositions can be taken as another reason to exclude local actors from partaking in a wider public debate [27]. Such a dismissal of emotions from the public debate is problematic from a democratic point of view as it may deprive a community from the meanings they give to their local environment and as such feel compromised in their autonomy as communities and citizens [cf. 28]. Such loss is usually *felt* as an injustice, a sentiment that not only mobilises actors to form a community and to engage in the decision-making process, but also to establish an assessment about what is at stake for both the community *and* the wider public [25]. With that, emotionally charged assessments by local public are not just inevitable, they are also legitimate [29].

3. Deliberative preferences versus liberal interests

The starting point that the ‘public’ is an imaginary implies that the notion of ‘public preference’ is an imaginary as well; it allows members of the ‘public’ to talk about itself as being able to express what it wants in a coherent way. Political theory presents two routes to establish a singular expression of a ‘public preference’ [cf. 30]: a first route features the public preference as the aggregation of individual preferences; the second route is based on the idea that the public preference only transpires at the collective level, and in itself is independent from the simple aggregation of preferences [31,32]. These two routes are respectively derived from a ‘liberal’ account of publicness in which the ‘public’ is seen as the gathering of individuals, and a ‘deliberative’ account, which assumes that a social collective transfers a shared identity to its individual members [33,34]. In the context of national politics,

¹ See: <https://wetten.overheid.nl/BWBR0003245/2017-08-30#Hoofdstuk7>.

these two accounts are both present in a dialectical fashion allowing the political system to be adaptive to changing demands and circumstances and granting citizens the capacity for both individual freedom and collective empowerment [35,36].

The separation between a local and a wider public may weaken this dialectical tension, which has to do with contrastive conceptions of society that underlie the liberal and deliberative accounts of the 'public'. The liberal account of publicness assumes a city-based society in which people do not necessarily know each other, but still have get along in a peaceful manner [37]. The deliberative account, on the other hand, assumes a small-scale society in which people are capable of achieving consensus by means of face-to-face interaction [cf. 38,39]. Following these geography-based societal models, the liberal account of politics focuses on the role of *conflict resolution* by mandating representatives that safeguard rights and pursue policy measures that are backed by majority vote [35]. In a deliberative discourse, the *affective* relations that are built with one's social environment figure as the basis of political association [cf. 40] – which explains the role of emotions in local public as has been introduced above. Moreover, this discourse holds that by *deliberation and meaningful interaction*, members of a community can come to collective decisions [41].

The expectations about the motivations and dispositions of members of local and wider publics may be explained, at least to a certain extent, by the maintenance of these geography-based separations. Local publics are considered to involve specific and local concerns, that, as such, elicit the use of participatory methods which allow for deliberation [9]. In contrast, wider publics, in their undifferentiated form, are more easily seen in liberal terms, as may be indicated by the emphasis on formal procedures and impersonal interests [cf. 42]. The distinction between publics-in-general and publics-in-particular made above accentuates this separation, contrasting *specific preferences* of a local public with *general interests* of the national public.

The particular-general opposition reminisces the way in which expertise is reserved to authorities, while local actors only have 'lay' knowledge. This assumption prompts decision-makers to employ a 'knowledge deficit' model of participation, expecting the local public to conform to the interests of the wider public once it is correctly informed about what is at stake [43]. This deficit model not only ignores the capacity of citizens to acquire general knowledge, it also denies the epistemological value of 'lived' forms of knowledge that build on contextualised experience [44,45].

4. The interdependence of projects and publics

As John Dewey [46] stated, 'publics' emerge in reaction to the 'issues' that affect them as a collective [also see: 47,48]. This implies that there is no pre-existing social collective that can be identified, invited and consulted. In other words, there is no such thing as a representative sample of a 'public', instead it can be said that in many cases, projects *make* publics, as they figure as issues around which a group of people mobilises itself as a 'public'. Given this relation between projects and 'publics', decision-makers in energy projects should be prepared for engaging with emerging groups, both inside or outside a participatory setting, as well as with existing groups that have a certain stake or interest that is affected somehow by the new energy project. In short, there is a patchwork of 'publics' that have different roles and that have different relations with the new energy project [49,50]. This means that it is naïve of decision-makers to expect a singular local public to come with a coherent evaluation of the acceptability of the project, instead there will be different groups that may have different assessments and that may express their assessment in a plurality of ways [51].

These considerations contrast with the tendency of decision-makers to establish an empirical public by selecting a set of members from the community, which seems to be based on the assumption on the one hand that a local public is a public-in-particular and the need on the other hand to have a singular assessment. This creates a range of issues.

Firstly, as is indicated by Wynne [43], such a selection is usually based on a voluntary basis, either by a dedicated or an open invitation, while it is questionable whether such an invited public can act as a satisfactory representation of the community at large. A first problem here is that an invited public brings about a new group, with its specific internal group dynamics that may affect the opinions, preferences and beliefs of its members. Most basically, an invited public gives rise to a new, distinct collective that cannot be straightforwardly related to the community at large [cf. 32]. Moreover, the voluntary nature of invitation might attract the most vocal members of the community, which raises questions about those people who are not or do not want to be involved, for how can their points of view be accounted for? In energy projects, decision-makers sometimes speak about the 'silent majority' and the desire to identify this group of actors [cf. 52,53]. However, the term 'silent majority' indicates a misapprehension of the imaginary status of the 'public' in the sense that it assumes a 'public' before there are issues that pertain to it. Also, given the consideration that such 'publics' emerge in reaction to a proposed project, their initial stance tends to be negative while sometimes being reconsidered later on. The nature of 'publics' as well as their assessments are intrinsically dynamic.

A caveat that plays a role here is that the imaginary of the 'public preference' is usually operationalised as a static entity. Surveys, elections, focus groups, etc., that may be seen as methods to elicit a public preference generate an answer with only a limited temporal validity. Given the dynamic nature of 'publics', preferences may change over time, which is particularly so in the realm of technology, as people get used to certain technologies and build new practices around them [cf. 28,54]. As such, static accounts of the 'public' reinforce the difficulty to arrive to a legitimate assessment.

It also needs to be added here that the term of 'invited publics' indicates that there are also *uninvited* publics, groups of people that express their assessment about the energy project outside of participatory settings [8,43,55]. Here, we may think of protestors or activists, but with regards to energy projects it is also interesting to look at other roles that actors from local communities play [49]. For instance, actors increasingly express their preferences by developing new ways to produce or consume energy, which can also be seen as an activity that expresses a certain preference [56]. A focus on mere participatory arrangements that assume invited publics misses out the opportunity to identify alternative forms of assessment by affected 'publics' [also see 17,57].

The bottom line here is that there is no singular expression of the 'public preference', and the reliance on static and partial methodologies obscures the imaginary status of the 'public'. Simple procedural arrangements will not work out for the reasons explained in this paper: the 'public' comes in contrastive conceptualisations. This makes it necessary to accept conflicting views and normative diversity [18], and methods that take the heterogeneity of 'publics' into account [for instance see 51,58].

5. Contributing to energy democracy

Decision-makers involved in energy projects face the dilemma of having to know how an 'public' evaluates the direct and indirect impacts of such projects, while never knowing who or what this 'public' is. In this, decision-makers are often composed out of networks of actors that come from different institutional contexts, which necessitates the operationalisation of empirical publics in order to allow for project coordination [25]. One of the main aspects of this operationalisations is the separation between a local and a wider public, which in many cases involves artificial criteria, while there seems to be little possibility of members of either public to adjust the demarcation or to revoke the expectations that are imposed upon them. Members of local and wider publics are predominantly restricted to respond within the scope of given attributions of concerns and motivations.

The limited possibility to renegotiate the demarcation between a

local and a wider public can be seen as a serious challenge to the democratic quality of decision-making in energy projects, which requires the capacity of 'publics' to develop a collective self-understanding in a reciprocal relation with authoritative decisions and existing regulations. In short, a fixed operationalisation of 'publics' tends to conflict with their intrinsic heterogeneity and dynamics and undermines the advancement of an energy democracy with regards to large-scale projects.

These considerations prompt researchers to develop new insights that help decision-makers to address this democratic challenge. An improved understanding of the nature of the problem should be developed, in ways that respect the intangibility, the heterogeneity and the autonomy of 'publics', both in their local and in their wider manifestations. This means that we need systematic accounts of the way boundaries are established and maintained in different institutional contexts, as well as we need analyses about the constraining effects that these boundaries have on members of the constructed publics. Furthermore, questions need to be addressed about how 'publics' and their assessments evolve over time. Next to opening the black-box of 'publics', also the workings of decision-makers deserve more scholarly attention, especially regarding the way in which a network of actors can be coordinated without necessitating pre-given operationalisations of local and wider publics. Following the call made at the end of the previous section, answers to these questions will allow researchers to explore new formats for operationalising 'publics' in ways that do justice to their status as imaginaries.'

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References

- [1] U. Pesch, A. Correljé, E. Cuppen, B. Taebi, E. Van de Grift, Formal and informal assessment of energy technologies, in: L. Asveld, R. van Dam-Mieras, T. Swierstra, S. Lavrijssen, K. Linse, J. van den Hoven (Eds.), *Responsible Innovation 3: A European Agenda?* Springer International Publishing, Cham, 2017, pp. 131–148.
- [2] R. Wüstenhagen, M. Wolsink, M.J. Bürer, Social acceptance of renewable energy innovation: an introduction to the concept, *Energy Policy* 35 (5) (2007) 2683–2691.
- [3] P. Devine-Wright, S. Batel, O. Aas, B. Sovacool, M.C. LaBelle, A. Ruud, A conceptual framework for understanding the social acceptance of energy infrastructure: insights from energy storage, *Energy Policy* 107 (2017) 27–31.
- [4] G. Walker, N. Cass, K. Burningham, J. Barnett, Renewable energy and socio-technical change: imagined subjectivities of the public and their implications, *Environ. Plan. A* 42 (4) (2010) 931–947.
- [5] A. Maranta, M. Guggenheim, P. Gislser, C. Pohl, The reality of experts and the imagined lay person, *Acta Soc.* 46 (2) (2003) 150–165.
- [6] J. Barnett, K. Burningham, G. Walker, N. Cass, Imagined publics and engagement around renewable energy technologies in the UK, *Public Underst. Sci.* 21 (1) (2012) 36–50.
- [7] M. Michael, Publics performing publics: of PiGs, PiPs and politics, *Public Underst. Sci.* 18 (5) (2009) 617–631.
- [8] M. Aitken, Why we still don't understand the social aspects of wind power: a critique of key assumptions within the literature, *Energy Policy* 38 (4) (2010) 1834–1841.
- [9] B. Van Veelen, Negotiating energy democracy in practice: governance processes in community energy projects, *Env. Polit.* 27 (4) (2018) 644–665.
- [10] B. Van Veelen, D. Van der Horst, What is energy democracy? Connecting social science energy research and political theory, *Energy Res. Soc. Sci.* 46 (2018) 19–28.
- [11] P. Devine-Wright, *Energy Citizenship: Psychological Aspects of Evolution in Sustainable Energy Technologies, Governing Technology for Sustainability*, Routledge, 2012, pp. 74–97.
- [12] M. Ryghaug, T.M. Skjølsvold, S. Heidenreich, Creating energy citizenship through material participation, *Soc. Stud. Sci.* 48 (2) (2018) 283–303.
- [13] G. Walker, N. Cass, Carbon reduction, 'the public' and renewable energy: engaging with socio-technical configurations, *Area* 39 (4) (2007) 458–469.
- [14] N. Simcock, Exploring how stakeholders in two community wind projects use a "those affected" principle to evaluate the fairness of each project's spatial boundary, *Local Environ.* 19 (3) (2014) 241–258.
- [15] C. Taylor, Modern social imaginaries, *Public Cult.* 14 (1) (2002) 91–124.
- [16] J. Habermas, *The Structural Transformation of the Public Sphere. An Inquiry into a Category of Bourgeois Society*, MIT Press, Cambridge, 1999.
- [17] T.M. Skjølsvold, W. Thronsdon, M. Ryghaug, I.F. Fjellså, G.H. Koksvik, Orchestrating households as collectives of participation in the distributed energy transition: new empirical and conceptual insights, *Energy Res. Soc. Sci.* 46 (2018) 252–261.
- [18] E. Cuppen, U. Pesch, M. Taanman, S. Remmerswaal, Normative diversity, conflict and transitions: shale gas in the Netherlands, *Technol. Forecast. Soc. Change* (2016) (in press).
- [19] M. Van Lieshout, A. Dewulf, N. Aarts, C. Termeer, Do scale frames matter? Scale frame mismatches in the decision making process of a "mega farm" in a small Dutch village, *Ecol. Soc.* 16 (1) (2011).
- [20] J. De Boer, C. Zuidema, A. Van Hoorn, G. De Roo, The adaptation of Dutch energy policy to emerging area-based energy practices, *Energy Policy* 117 (2018) 142–150.
- [21] M. Wolsink, Wind power and the NIMBY-myth: institutional capacity and the limited significance of public support, *Renew. Energy* 21 (1) (2000) 49–64.
- [22] D. Van der Horst, NIMBY or not? Exploring the relevance of location and the politics of voiced opinions in renewable energy siting controversies, *Energy Policy* 35 (5) (2007) 2705–2714.
- [23] M. Wolsink, Invalid theory impedes our understanding: a critique on the persistence of the language of NIMBY, *Trans. Inst. Br. Geogr.* 31 (1) (2006) 85–91.
- [24] P. Devine-Wright, Beyond NIMBYism: towards an integrated framework for understanding public perceptions of wind energy, *Wind. Energy* 8 (2) (2005) 125–139.
- [25] E. Cuppen, S. Brunsting, U. Pesch, Y. Feenstra, How stakeholder interactions can reduce space for moral considerations in decision making: a contested CCS project in the Netherlands, *Environ. Plan. A* 47 (9) (2015) 1963–1978.
- [26] I. Verhoeven, J.W. Duyvendak, Understanding governmental activism, *Soc. Mov. Stud.* 16 (5) (2017) 564–577.
- [27] S. Roeser, U. Pesch, An emotional deliberation approach to risk, *Sci. Technol. Hum. Values* 41 (2) (2016) 274–297.
- [28] C. Groves, K. Henwood, F. Shirani, C. Butler, K. Parkhill, N. Pidgeon, Energy biographies: narrative genres, lifecourse transitions, and practice change, *Sci. Technol. Hum. Values* 41 (3) (2016) 483–508.
- [29] U. Pesch, A. Correljé, E. Cuppen, B. Taebi, Energy justice and controversies: formal and informal assessment in energy projects, *Energy Policy* 109 (2017) 825–834.
- [30] S.W. Rosenberg, *Opinion Formation, Theory of*, (2015).
- [31] C. Taylor, *Philosophical Arguments*, Harvard University Press, Cambridge, Mass, 1995.
- [32] D. Huitema, M. Van de Kerkhof, U. Pesch, The nature of the beast: are citizens' juries deliberative or pluralist? *Policy Sci.* 40 (4) (2007) 287–311.
- [33] I. Berlin, *Two Concepts of Liberty*, Berlin, I (1969), pp. 118–172.
- [34] S.I. Benn, G.F. Gaus, The liberal conception of the public and the private, in: S.I. Benn, G.F. Gaus (Eds.), *Public and Private in Social Life*, Croom Helm, London & Canberra, 1983, pp. 31–65.
- [35] C. Mouffe, *The democratic paradox*, verso2000.
- [36] U. Pesch, *The Predicaments of Publicness. An Inquiry into the Conceptual Ambiguity of Public Administration*, Eburon, Delft, 2005.
- [37] A. Silver, "Two different sorts of commerce" – Friendship and strangership in civil society, in: J. Weintraub, K. Kumar (Eds.), *Public and Private in Thought and Practice. Perspectives on a Grand Dichotomy*, University of Chicago Press, Chicago & London, 1997, pp. 43–74.
- [38] B.R. Barber, How swiss is Rousseau? *Polit. Theory* (1985) 475–495.
- [39] R. Sennett, *The Fall of Public Man*, Faber & Faber, London and Boston, 1993.
- [40] R.E. Goodin, J.S. Dryzek, Deliberative impacts: the macro-political uptake of mini-publics, *Polit. Soc.* 34 (2) (2006) 219–244.
- [41] J. Habermas, *The Theory of Communicative Action: Volume 2: Lifeworld and System: a Critique of Functionalist Reason*, Beacon press, Boston, 1985.
- [42] G. Walker, N. Cass, K. Burningham, J. Barnett, Renewable energy and socio-technical change: imagined subjectivities of 'the public' and their implications, *Environ. Plan. A: Econ. Space* 42 (4) (2010) 931–947.
- [43] B. Wynne, Public participation in science and technology: performing and obscuring a political-conceptual category mistake, *East Asian Sci. Technol. Soc.* 1 (1) (2007) 99–110.
- [44] B. Wynne, Misunderstood misunderstanding: social identities and public uptake of science, *Public Underst. Sci.* 1 (3) (1992) 281–304.
- [45] A. Krzywoszyńska, W. Matt, A. Buckley, P. Chiles, N. Gregson, H. Holmes, J. Mawyin, Opening up the participation laboratory: the cocreation of publics and futures in upstream participation, *Sci. Technol. Hum. Values* (2017) 0162243917752865.
- [46] J. Dewey, *The Public and Its Problems*, New York (1927).
- [47] N. Marres, The issues deserve more credit: pragmatist contributions to the study of public involvement in controversy, *Soc. Stud. Sci.* 37 (5) (2007) 759–780.
- [48] M. Callon, V. Rabeharisoa, The growing engagement of emergent concerned groups in political and economic life lessons from the French association of neuromuscular disease patients, *Sci. Technol. Hum. Values* 33 (2) (2008) 230–261.
- [49] G. Walker, P. Devine-Wright, Community renewable energy: what should it mean? *Energy Policy* 36 (2) (2008) 497–500.
- [50] G. Walker, P. Devine-Wright, J. Barnett, K. Burningham, N. Cass, H. Devine-Wright, G. Speller, J. Barton, B. Evans, Y. Heath, Symmetries, expectations, dynamics, and contexts: a framework for understanding public engagement with renewable energy projects, *Renew. Energy Public* (2011) 1–14 From NIMBY to Participation.
- [51] J. Chilvers, H. Pallett, T. Hargreaves, Ecologies of participation in socio-technical change: the case of energy system transitions, *Energy Res. Soc. Sci.* 42 (2018) 199–210.
- [52] C. Gross, Community perspectives of wind energy in Australia: the application of a justice and community fairness framework to increase social acceptance, *Energy Policy* 35 (5) (2007) 2727–2736.
- [53] N. Hall, P. Ashworth, P. Devine-Wright, Societal acceptance of wind farms: analysis of four common themes across Australian case studies, *Energy Policy* 58 (2013)

- 200–208.
- [54] M. Callon, Techno-economic networks and irreversibility, *Sociol. Rev.* 38 (S1) (1990) 132–161.
- [55] E. Cuppen, The value of social conflicts. Critiquing invited participation in energy projects, *Energy Res. Soc. Sci.* 38 (2018) 28–32.
- [56] U. Pesch, W. Spekkink, J. Quist, Local sustainability initiatives: innovation and civic engagement in societal experiments, *Eur. Plan. Stud.* (2018) 1–18.
- [57] T. Pallesen, R.P. Jenle, Organizing consumers for a decarbonized electricity system: calculative agencies and user scripts in a Danish demonstration project, *Energy Res. Soc. Sci.* 38 (2018) 102–109.
- [58] P.J. Gehrke, Ecological validity and the study of publics: the case for organic public engagement methods, *Public Underst. Sci.* 23 (1) (2014) 77–91.