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Social acceptance: beyond criticism and critical, a call for experimental ontology

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Abstract

This chapter looks back at our own research practice about the social acceptance of renewable energy technologies (RET) and reflects on the articulation between our practice and the way in which we conceptualise social acceptance.

We do so based on our own work about French onshore wind power development over the past fifteen years. We examine the factors that influenced the course of our research work, we retrospectively distinguish between three ways in which we have addressed acceptance issues, and discuss this evolution in relation with the academic field of social acceptance of RET.

This allows us to reflect on the dynamics of this academic field and to conclude that a different relation and engagement of social science researchers with the fieldwork is called for.

Keywords: social acceptance, renewable energy technologies, interferences, co-production, experimental ontology.

Introduction

Research on the social acceptance of renewable energy technologies (RET) started in the nineties, with successive ‘waves’ of research problematising and critiquing the notion (Batel, 2020). While early works uncritically examined this issue with a view to promote acceptance – most often under the heading of the NIMBY notion – social sciences have then challenged the relevance of NIMBY. They argued that the notion lacks consideration for the potential of the ‘social’ to evolve, because it locates the potential for change in the technologies and the potential for resistance in the ‘social’ (Shove, 2010; Batel, Devine-Wright & Tangeland,

2013). As a matter of fact, all developments in RET technologies confirm this criticism : new collectives and new relations emerge with these developments and witness of the potential of the ‘social’ to accompany, if not to take an active part in, these changes. A major issue for the protagonists in these processes - and an actual source for resistance - is how to express the problematic consequences of these developments so as to make these consequences exist as a shared problem, and be addressed (Labussière & Nadaï, 2018).

As suggested in the framing of this part of the book, any research work endorses a specific way of representing the issues that arise in relation with RET development, and it is then interesting to better understand the articulation between research practices and ways of conceptualising social acceptance. This chapter ventures in this direction by looking back at our own research practice in analysing French onshore wind power development over the past fifteen years. Our research work is embedded in what we may call, referring to Bruno Latour, a politics of things (Latour, 2005a, 2005b). Much of our effort has been targeted at understanding the opposition to RET in relation to the politics that underlie their developments by following, describing and acknowledging the way in which many entities – humans but also non humans - are embarked and transformed in the process of developing these technologies. In what follows, we try to reflect on the articulation of this research practice with the conceptualisation of social acceptance, to posit our successive problematisations of social acceptance within the academic field, and to a certain extent, to reflect on the representation of the dynamics of this academic field.

We first examine the factors that have influenced the course of our research work (§.1), we retrospectively distinguish between three ways in which we have addressed acceptance issues, which we successively present (§.2 to 4) before discussing this evolution in relation with the academic field of social acceptance of RET (§.5).

This reflection points at a reformulation of the notion of social acceptance in order to address the web of interferences¹ at play in energy transitions processes. It also points out that

¹ The notion of “interference” brings the emphasis on emerging relational realms induced by energy transition processes. We distinguish between four notions : “interaction” and “interference” , “relationship” and “interrelationship”. To put it shortly, the notion of interaction pertains to analytical strands – such as system analysis - which presuppose the existence of distinct entities and analyse the set of relations between these given entities. Different from this, the notion of interference points out situations in which the parts do not necessarily precede their being part of a common reality. In such situations, the relations are constitutive of the parts, which ontologies then depends on the set of relations at work. Importantly, the becoming of interferences is highly uncertain, as they can evolve towards reciprocal modes of relationships acknowledging the consequences of the process for all the parties – which we term “interrelationship” – or towards ill-related and sometimes conflictual reality.

pretending to do so challenges our position as social scientists in taking part into the field, the temporality and the reciprocity of fieldwork. Hence, challenging the notion of social acceptance is not enough. Shifting to interferences is just but a point of departure towards more engaged research practices.

1. Analytical threads

Different factors may influence the way in which we, as researchers in social science, construct our research questions and programs and, henceforth, frame our conception of people's relation to new energy infrastructures. In this section, we sum up the evolving French political context regarding the development of wind energy in France, under which we developed our research program since the year of 2005; we point to a few factors, which we think influenced the course of our research program ; and propose to sketch this program through three analytical threads.

Our research program on French wind power started with the analysis of the first French parliamentary debate (Nadaï, 2007a) concerning this development and the rising opposition to it, five years after the adoption of national feed in tariffs for renewable energies. We then followed during ten years the evolution of this policy. We emphasized an inherited centralisation of energy policy and infrastructures, an early economic policy framing - feed in tariff being its pivotal instrument -, a reliance on private wind power developers, and a defiance of national politicians towards the capacity of local authorities to regulate the spatial development of renewable energies (Labussière & Nadaï, 2015). It was only at the end of the last decade – marked with a major concertation process about environmental issues, the ‘Grenelle de l’Environnement’ (2009) – that RET development became part of the national energy objectives. All of this contributed to a lack of articulation of renewable energy development with local territories and to an early local opposition to it. On average, about half of the administrative decisions about French wind power projects have been opposed to in court, either by developers (when administrative authorisations were refused) or by opponents (when administrative authorisations were granted). Acceptance issues have gained political recognition since 2005 in France.

Attempts at opening this development to political processes on a local scale through spatial planning (Wind Power Development Zones) had a short life (2007-2013). Early on, this device was pointed at by developers as an additional barrier to wind power development. It was also sued in court by opponents in an attempt to stop the development of wind power,

before being eventually withdrawn from the national policy package under the pressure of green and RET developers' lobbies.

In 2015, the energy transition law (FR, 2015) marked a turn in French energy policy, by invoking the key role of local authorities and territories in the development of climate energy transition, and by opening possibilities for local actors to step on the financing of local energy projects. Financial participation and citizen investment became recognised by policy makers as potential means to foster the local acceptance of renewable energy projects. As a result, renewable energy acceptance is mostly addressed at the current time in terms of financing of renewable energy projects, with different options being considered: crowdfunding, citizen investment, and the development of RET projects by local authorities.

Issues of social acceptance of renewable energy projects have thus been framed in different ways by French policy makers – through economic incentives, local planning, regional planning, participative financing.

As researchers in social science, who were partly funded by public policy programs, we faced these evolutions both as issues and political framing. While most of the calls for research under which we got financing left us pretty free of our analytical framing, the academic requirement to regularly – hence, swiftly - publish has probably been the most impacting requirement on our explorations, as it imposed a pace that did not necessarily allow time for deep critical reflexivity. Such reflexivity had to be gained and constructed through time, along opportunities for publishing, and with the hint of academic networks, and fieldwork encounters. Opportunities for publishing often had to be seized in the flow and came as moments of guided re-elaboration of already undertaken case studies, as crystallization of understandings. Academic and theoretical affinities have been decisive, if only because they steered encounters.

As far as our past publications about French wind power development witness it, our academic affinity has been with what we could name relational approaches – i.e. approaches that do not take individualities or entities as given and stable, but rather as in-the-making through processes and relations. This meant to follow, describe and acknowledge the way in which processes of developing renewable energies embarked entities – humans and non humans – and changed ways of relating with / among them. While this resumes an enduring line of concern in our analyses of RET development, the theoretical strands we conveyed in the analysis have evolved. Part of them have been key references along the way, such as Akrich (1989), Latour (2005b) or Simondon (1989) relational approach to technology. Others have being called for in specific works or on specific objects, such as: non representational

approaches to analyse the spatial/ landscape planning of RET (Deleuze, 2005 - map/tracing, sign ; affect/ethos) ; and pragmatist sociology to analyse the democratic dimension of energy transition processes (Dewey, 1946 - public, problematicness; Marres, 2007, 2012 - issue making, material participation).

In the end, this line of works converged with *critical strands* to both social acceptance (challenging the idea that opposition to RET should be reduced/ overcome - Batel, 2020) - and the energy transition (challenging the democratic dimension of energy transition processes - Labussière & Nadaï, 2018), as well as with a *co-productionist* agenda according to which the social and the sociotechnical are jointly produced (Chilvers & Kearnes, 2016). However, the many factors influencing our analyses and the particular organisation and pacing of academic production, make it impossible to delineate clear chronological sequences in the work : publication do not necessarily follow fieldworks in time; occasions for publication (e.g. thematic issues) may influence the framing of case studies; fieldwork encounters can impact the framing of older case studies in new publications ... Rather, we distinguish between three threads of analyses, respectively interested in: i/ the role of planning / permitting procedures and landscape policy in wind power development; ii/ the way in which different entities, humans or non humans, are acknowledged (or not) in the development of renewable energy projects; iii/ the way in which resources, space and time are constructed in energy transition processes, resulting in certain political framing of – and a democratic deficit in - energy transition processes.

While this is based on reviewing our own work, it of course partly echoes results that have been pointed out in social acceptance research with different frames and terms (Ellis & Ferraro, 2017). The purpose in this chapter is to both point out the factors having influenced our research practices and the articulation between these practices and our evolving conception of social acceptance.

In what follows, we successively present each of these threads and the way in which they frame tensions around wind power development (§.2 to §.4), before discussing the ways in which social acceptance has been (implicitly) thematised and displaced in our work as well as the relation of our work to the academic field of sociological analysis of social acceptance.

2. Thread 1: Acceptance as a consequence of spatial planning (representations - milieu)

This line of analysis is interested in the role that spatial planning plays in the emergence of tensions around wind power development. It has been initiated in the early phase of our

research work, partly because of our background – one of us had a background as a geographer with an interest in the role of aesthetics and forms in spatial planning (Labussière, 2011), the other as a landscape architect with a recent interest in STS and the emergence of form in landscape projects (Nadaï, 2007b) - partly because the development of French wind power was triggering landscape, heritage and planning issues (Cf. §. 1).

Early field encounters were decisive in steering our attention to such issues. In 2007, the French Ministry of Culture had gathered in Paris, for a crisis meeting, all of its local branches for heritage protection. Wind turbines threat on heritage landscape, because of their far reaching visual presence in the countryside, had become a key issue. The administrative officer in charge of the protection of the Chartres Cathedral (Eure et Loir, France) presented a bright red urchin-like scheme figuring the dramatic State failure to protect the cathedral (a national heritage, at the centre of the urchin) from the visual interferences of wind turbines (located as dots in radiating red cones). The dotted red radiating scheme was materialising both the visual governmentality of French landscape (cones radiating for the cathedral, to be protected from visual intrusion) and its failure to govern (the decentralised presence of wind turbines in the yet unqualified landscape of the countryside). This setting was so telling that it triggered, for us, an in-depth, theoretical and empirical, inquiry into the making / unmaking of what we ended up naming a ‘State landscape’ – a formal, visual and centralized administrative tradition of landscapes protection, that was challenged by the emergence of wind power (Nadaï & Labussière, 2015). Why and how this was so, became a research concern. A parallel fieldwork, in the Aveyron department (Nadaï & Labussière, 2009), also witnessed the failure of normative planning processes. Administrative top down sieve map planning in South Aveyron had steered wind power developers towards areas judged less sensitive as to their heritage or environmental dimensions. This raised local concern about what was perceived as a spatial / environmental disqualification, if not injustice, and triggered the emergence of a local opposition to wind power in the concerned areas.

Working at the crossroad between critical geography, landscape studies and STS, we followed a ‘constructive’ approach (Latour, 2003) attentive to the way in which landscape/space was represented and circulated (graphic forms, material supports) in spatial planning. The focus on the relation between the material (un)making of landscape in planning and the rise of local opposition to wind power, was a way to point out factors behind opposition to wind power (‘bad’ planning). It also shed light on the relation of co-emergence between the technology and its human-non human ‘milieu’ (Simondon, 1989; Akrich, 1989). This consideration was progressively sharpened by analysing a case of successful wind power planning (Narbonnaise,

South West France) (Nadaï & Labussière, 2013), which had allowed for a rebound in wind power development, after a local moratorium had been put on this development because of local tensions. The case study proved that, symmetrically, a potential for change and wind power development could emerge from planning processes that were attentive to the milieu (rather than to a predefined norm). This analytical line was further amplified by comparing cases studies and emphasizing the importance of weaving together current socio spatial configurations with inherited ones (Labussière & Nadaï, 2014).

Along this thread, the underlying narrative is that social acceptance, even if not explicitly flagged in these analyses, resulted from reciprocal alignment between the technology and its milieu through attentive enough landscape planning processes or RET policy frameworks. While dialoguing within an academic strand interested in the role of spatial planning (Strachan et al., 2012), space and place (Devine-Wright & Howes, 2010) for wind power development – and thus pertaining to a “criticism” of social acceptance (Batel, 2020) – this thread of analysis, was also feeding a co-productionist agenda (hence ‘critical’), be it only because of its reliance on Simondon notion of milieu.

3. Thread 2: Acceptance as part of the construction of a relational potential (actants – milieu)

The second line of analyses has been more directly interested in the fate of those which/who are embarked in the processes of wind power development. Rather than looking at the work of (mis) alignment through certain mediations – such as planning and landscape representations – the analysis aimed at targeting more directly those humans or non humans that were affected and contributed to the (non) development of specific wind power projects: birds in one case study, villagers in the other.

Once again, this line of analysis has been strongly suggested by field encounters. In 2006, as we were analysing the innovative wind power planning process in the Narbonnaise, we interviewed a local bird watching NGO, which had just undertaken field experiments with a wind power developer. The project was located in a European migratory corridor at the French-Spain border on the Mediterranean shore (Languedoc-Roussillon, France). It involved a collaboration between the local branch of the French bird protection NGO (LPO) and a wind power developer (Nadaï & Labussière, 2010) in order to adapt the siting of an existing wind farm (repowering) to bird migration. Existing wind turbines were turned into a type of lab-scape: bird watchers hid behind the turbines, observed and followed individual birds in their crossing through the existing wind farm, gauging their individual cognitive/strategic

ability in flying through it. Both the reshuffling of bird classifications (according to crossing ability rather than to statutory protection) and the drawing of individual bird trajectories allowed for the mapping of migratory micro-corridors, which paved the way for wind farm siting proposals judged compatible with bird migration. By focusing on individual stories so as to capture birds' intelligence, this experiment endowed birds with new capacities and opened a new potential for sharing the wind. In this process, entities were requalified and performed differently: birds became more skilled (wind farm compatible) and the wind farm became more compatible with migrating birds. By focusing on human - non human relations (affect, animal charisma), the analysis brought forth the ontological dimension of the process and its potential to give rise to renewed compatibility between wind power development and bird protection (human-non human assemblage).

The second case study followed the progressive structuring of a network of opponents to a local wind power project in a village located in the Parisian basin (2003-2009) (Nadaï & Labussière, 2017). The analysis traced issues as they emerged in relation with the project and its interferences with shared landscape resources (a local 'plain') that were collectively managed (land consolidation association) and used at the village level (Sunday walk). Relying on pragmatic sociology of issue making and public formation (Dewey, Marres), it followed a collective of opponents in the making. It showed the ways through which part of these villagers, which at the outset were not opponents to wind power *per se* or to the project, progressively became opposed to the way in which it was developed. We showed that the incapacity of permitting and policy institutions to acknowledge the collective trouble raised by the project (unravelling of village life, divisions within families, stalling of social activities ...) mirrored a narrow framing on renewable energy resources, as wind speed and private land. This case study thus pointed at a failed wind power potential: opposition to wind power resulted from a lack of attention to relations, and especially to the collective dimension of certain resources.

In both case studies, the focus was on the construction (or lack thereof) of specific relations. Both case studies foreground an ontological dimension of wind power development processes: identities, roles and capacities to influence the course of RET project development are distributed by and through these processes. The case studies flag relational potentials for change in the (un) making. Acceptance (issue) is thus conceived as the outcome of the construction (or lack thereof) of this relational potential. As much as thread 1, this thread is both 'critic' and 'critical' to social acceptance. Yet, it is much more explicit in its ontological lessons, because it makes clear the transformations that entities undergo through RET

development processes and the related potentials for contribution (or not) to these processes they are given (or not). In so doing, such a perspective echoes analyses in the field of participation, which emphasize the construction of publics by participatory settings (Lezaun & Soneryd, 2007; Laurent 2011).

4. Thread 3: Acceptance (issue) as an expression ('problematicness') of interferences

The third thread of analysis, more recent, has built on the former two. It was very much triggered by fieldwork encounters in Aveyron – meeting with overwhelmed opponents - which pointed out a type of democratic deficit in the way RET was developed. Democratic deficit meant here that the parties affected by this development did not have adequate access to the arenas in which the decisions about this development were made. Moreover, both the Aveyron and the Seine-et-Marne case studies pointed at the relation between the way in which the energy resource was framed as naturally given (wind speed) and appropriable by anyone who could invest in / develop a technological artefact (turbine, solar panel...), regardless of the collective dimension of other resources engaged (land or landscape uses, effort spent in coordinating shared visions about where to develop these new energies ...), and the rise of acceptance issues.

Building on pragmatic thinking, in particular that of John Dewey (1946) about 'publics' as political moments and collectives, and its extension to issue making and material participation (Marres, 2007, 2012), the idea was to focus on the relationships between *all* the entities convened (intentionally or unintentionally) in energy transition processes and explore the transformative (or disruptive) scope of the corresponding relational assemblages. Building on a large set of case studies, we proposed to distinguish between transition *trajectories* and the *processes* that underlie them and condition their deployment (Labussière & Nadaï, 2018).

"Trajectories" are devised in advance, through actors and categories of action that have been formed and stabilized – often involving modelling exercises and technology based visions in the field of the energy transition. Different from this, "processes" refer to a multiplicity of entities that participate in the construction of these trajectories, sometimes at the level of RET projects, without necessarily having control over them.

For instance, the development of a new wind farm may cause discontinuities in experiences (e.g. impeded animal migrations, fragmented agricultural communities, distant co-visibilitys and changed perception of heritage elements) which, if not perceived and dealt with, give rise to potential inequalities. Building on thread 2, the analysis thus approaches the transition as a period of "ontological trouble" according to which not all the entities involved in the

processes are called upon to "transition" with the same opportunities for being taken into account (Cf. the contrast between the Narbonnaise and Seine et Marne case studies). These entities find different existences in energy transition processes according to the degrees to which they are concerned, impacted, involved, acknowledged, and redefined with or without their consent. Following Noortje Marres, such an approach to potential endows the collective qualification of problems ('problematicness') with a central role in the formation of material 'publics' and of their capacity for action.

Based on this observation, the challenge is no longer to operationalize trajectories in order to reach predefined potentials. It is to acknowledge and assess the "interferences" that these trajectories generate, which in turn allows for the analysis of the (non) emergence of shared transition potentials. The question of "interferences" thus becomes the focal point of the inquiry and the concern for symmetry – i.e. acknowledging all the parties convened into the process, addressing them with the same analytical lens, and giving the same status to failed and successful options – is the analytical key to understanding the democratic dimension of the process.

Under such an approach, acceptance (issue) endorses a broader and deeper meaning as it is the expression ('problematicness') of interferences or, said differently, the expression of a democratic potential (deficit) in the conduct of the energy transition (Bell et al., 2013; Labussière & Nadaï, 2018). Most importantly, however, while acceptance still relates to alignment and ontological work, turning to interferences broadens the scope of the analysis. Indeed, analysing interferences challenges as well the construction of resources, space and time in energy transition processes, because this construction underlies the potential for participation and change.

This approach also has two major implications for thinking about the energy transition. Firstly, it recalls us that energy is always more than just a matter of energy ; it questions just as much our relationships with biodiversity, landscapes, or spatial planning, and through them the handling of new tensions between development, justice and the environment. Secondly, relationships - which are at the heart of pragmatic inquiry - constitute a critical resource for the transition in that their collective specification and qualification makes it possible to support solutions that bring about social and environmental justice. Such conclusions echo the co-productionist agenda and its recent call for a just energy transition (Jasanoff, 2018).

5. Discussion: interference as hint for different encounters

This chapter proposed to undertake a reflective exercise about our preconception of social acceptance by considering our research practice about the development of wind power and energy transition processes over the past fifteen years.

Attempting to trace back the ways in which we framed the tensions around RET development in France, we have shown that several factors influenced it – including: our backgrounds, our academic networks and, importantly, fieldwork encounters. As one of the authors has written about, the field has a potential to resist our research framing and programming, and the capacity to entice us to explore new tracks (Labussière & Aldhuy, 2012). As far as we are concerned, several encounters have been decisive in the way we evolved our questioning about wind power development.

Important also has been the process of production of research papers, often resulting from academic network opportunities, which enticed us to re-interpret case studies along specific concerns, and makes it difficult to ex-post delineate a clear temporal succession in our research work. We thus distinguished between ‘threads of works’ mirroring the way in which we felt our reflection about the tensions raised by French RET development had progressed. Each of these threads foregrounds a different articulation to which to relate social acceptance and its emergence (or lack thereof): representation and milieu, actants and milieu, interferences. Hence, each of these articulations points to a different problematisation of social acceptance: acceptance (issue) as a result of reciprocal alignment between the technology and its milieu through attentive spatial planning processes; acceptance (issue) as the outcome of the construction (or lack thereof) of a relational potential; acceptance (issue) as the expression (‘problematicness’) of interferences.

As we have shown, each thread is embedded in a definite analytical strand, at the same time that it is both ‘a criticism’ and ‘critical’ to the notion of social acceptance. In the end, even if the ‘critical’ perspective has been said to challenge the relevance of RET development (because of its consequences) when the ‘criticism’ pointed out factors of resistance to it (Batel, 2020), it seems difficult to clearly sort out these perspectives here. The reason for this is that factors of opposition (‘criticism’ perspective) most often result from the ontological consequences of RET development, so that, at least in our research work, pointing out these factors challenges RET development by shedding light on its social and political consequences (discriminations, injustice and lack of democracy). Again, this may be singular to our research practice, and relate to our embedding in an academic field (STS, critical geography) that challenges ontologies (hence, the premise of individuality). As emphasized

by Batel (2020), the ‘criticism’ approach to social acceptance, has otherwise significantly been developed by (social, environmental) psychology, a discipline that works within this premise.

Each thread in our research work echoes works and results pertaining to the academic field of social acceptance. This especially is the case if we include in the definition of this academic field, the works concerned with public participation and the coproduction agenda (Chilvers, Laurent, Jasanoff, Marres). The co-production agenda, though, has several scales of interpretation and operationalization: it points to both the co-production of orders (social and technological) and objects (technologies, individualities). As far as the above witnesses, our research work has mostly proceeded from the latter, through detailed case studies, in order to point to the former ; we did build from Laurent and Marres framing, but not from Chilvers or Jasanoff ones.

Reformulating acceptance issues as the expression of interferences in energy transition processes, however, should not be regarded as a closure within this agenda. As far as we are concerned with the urgency of environmental issues, following interferences calls for enlarging the requirement for symmetry so as to include ourselves (the observer).

Interferences are not only among and for the others. They cannot be formulated in terms of distant options or alternatives. Following their making calls for attending to the multiple arenas in which ontologies and their politics are constructed and at play, *including that of the social scientists themselves* – a point that Noortje Marres has made very clear with the notion of experimental ontology (2013). Thus, emphasizing the pragmatic heritage of the co-production agenda, carries with it a *methodological displacement that goes beyond the critical perspective and a new departure point in how we address these issues* (Cf. Figure 1). The point is no longer to challenge the relevance of RET development by only shedding light on its underlying politics and consequences (‘critical perspective’). It also is - by including ourselves as sources and ends of interferences - *to reflexively engage with the field and be challenged by it as social scientists, because this paves the way to enlarged experimentations and ontologies, and thus to new possibilities.*

Figure 1 : Overall displacement from ‘pre-conception’ to ‘academic engagement’

Research implication

From pre-conception

Interferences

The ‘technology’ and the ‘social’ pre-exist to their “interactions” ;

Approaches to acceptance

Technology as a potential for change, social as a potential for resistance ; “acceptance” means

	“interferences” are not made visible	taming social passions ; the researcher is an external observer
Thread 1 – representations of landscape and practices of wind power planning	Lived landscapes and local uses ill-named and ill-represented by practices of mapping ; some cases of innovative planning opened to local concerns	“Acceptance” is the result of reciprocal alignment between the technology and its milieu
Thread 2 – ontological issues of wind power processes	Finding out new relational potentials (e.g. changing bird observations / knowledge, micro-siting of turbines) or not (e.g. ignoring landscape commons)	“Acceptance” is the outcome of the construction / taking into account (or not) of relational potentials
Thread 3 – multiplicity of entities convened in energy transition processes	Capacity to acknowledge the various entities concerned, impacted, involved and redefined with or without their consent in a process of transition	“Acceptance” as the expression (‘problematicness’) of interferences
<i>To academic engagement</i>	Following the multiple arenas in which ontologies and their politics are constructed, including that of social scientists	Making interferences explicit is not a closure nor a remedy but opens a potential for collaborative experiments

Pretending to follow interferences, challenges our position as social scientists, the method and the material devices we recourse to in taking part into the field, as well as the temporality and the reciprocity of fieldwork. While such a change has been partly thematised under the headings of material participation and experimental ontology (Marres, 2013; Labussièrè & Nadaï, 2018, p. 22-30 for an application to energy transition issues) much remains to be done about how to operationalize such a change. Interestingly, and echoing to the role of fieldwork in enticing methodological changes, recent research works about what has been called ‘research fatigue’ in the field of energy transition research come as a warning (Walsh et al., forthcoming). ‘Research fatigue’ points out situations in which actors in the field refuse to collaborate with social scientists because they no longer believe in the ongoing politics of ‘the’ energy transition (our experience in Aveyron), or because they do not see the value of the usual talk-leave-and-publish research sequence of social scientists, and probably because of both. Of course, ‘research fatigue’ is not just a symptom manifested by an external body-field but makes ourselves part of the problem. It opens a more general questioning about how we articulate both the field and a global knowledge economy. Hence, what ‘research fatigue’ also carries with it, is a call for a different relation and engagement of social science researchers with the field. Collectively experimenting ways to acknowledge interferences and support emerging publics (e.g. collaborative research, art/sciences experiments) may usefully challenge and invigorate social sciences to contribute to the setting up of more just processes

of energy transition. A challenge that is ahead of us, and to which some works already call us to engage with (Marres, Guggenheim & Wilkie, 2018; Segers, 2019; Wilkie & Michael, 2018).

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