

Participatory Innovation:

Storying the Renewable Energy Island Samsø

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Preface

In 1997 Samsø, an island of four thousand inhabitants nestled in the Kattegat Strait between Jutland and Sealand, embarked on a ten-year-long journey toward becoming Denmark's Renewable Energy Island. Denmark's Minister for the Environment Svend Auken returned from Kyoto Climate Talks in Japan eager for Denmark to reduce its CO₂ emissions and show itself as a responsible climate actor. Having abandoned nuclear power in the nineteen-eighties due to the strong Danish anti-nuclear movement, with the oil crises of the seventies attention had turned to the development of wind energy, an industry in which Denmark had become a global frontrunner. The minister announced a competition inviting local island communities to present a realistic plan using Danish renewable technology for how to make a full transition of the island's energy systems to energy self-sufficiency. With no funds attached, all that Samsø won when it was chosen among three other islands and a peninsula was the title of Renewable Energy Island to Denmark.

Ten years later, in 2007, eleven 1-megawatt wind turbines decorate the fields providing the islanders with the electricity they need, and ten 2,3-megawatt offshore wind turbines have been installed to compensate for the islanders' fossil fuel-dependent transportation needs. Especially the ferries and the farmers' agricultural equipment are energy-intensive, but one of the island's two ferries has recently been replaced with a new ferry, powered by liquefied natural gas, the first in Denmark. Sixty percent of the houses on the island are supplied with district heating from the four plants scattered around the island, three of which are straw-fired while the plant on northern Samsø works on solar heat and woodchips from the local forest. The forty percent of Samsø households not within reach of the district heating plants have installed individual heating systems, many of which rely on renewable technologies (see figure 1).

This dissertation is composed of five stories about Denmark's Renewable Energy Island Samsø. Ranging from the local to the global and back to discussions of local rural development, of being peripheral and central, ambitious and down-to-earth, concrete and abstract, each story, in article form, builds on the others, adding new perspectives to the above account of an island which, despite having been scrutinized by interested parties for close to twenty years, has never received an in-depth treatment like the one presented in this thesis. Conceived as an article-based dissertation, it is not, however, my ambition to tell *the* comprehensive story about Denmark's Renewable Energy Island. And I would refrain from being so bold as to claim that such a totalizing view of any phenomenon is within reach or desirable (Law 2002). There will be many more stories to tell. But, with all articles emerging from the same data material and shedding light on just one case, the stories told here do combine to draw an internally consistent picture of an experiment in what I have termed *participatory innovation*.

Overview of papers and status of publications

1. *Demonstrating Doability: The Networking Practices of a Danish Renewable Energy Island*

In second review, Demonstrations Journal.

2. *Transition Stories and their Ethnographic Counterparts: Samsø's Renewable Energy Transition*

Submitted to Science as Culture.

3. *Management Through Hope: An Ethnography of Denmark's Renewable Energy Island*

In second review, Journal of Organizational Ethnography.

4. *Authoring Participation*

Revise and resubmit to Nordic Journal of Science and Technology.

5. *Nearshore Wind Resistance on Denmark's Renewable Energy Island: Not Another NIMBY Story*

Accepted for publication, Science and Technology Studies.

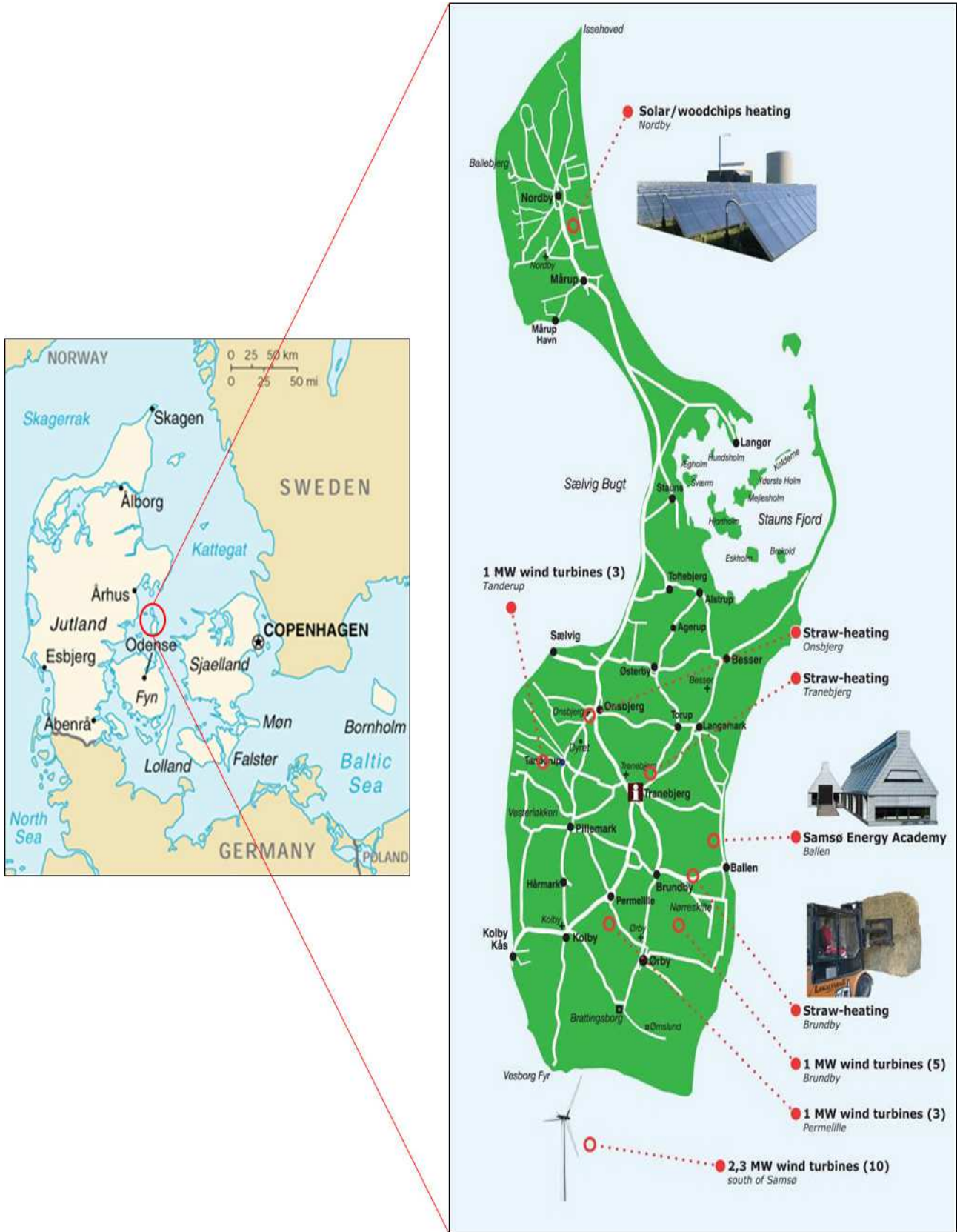


Figure 1 Samsø in Denmark and map of Samsø's RE technologies. Source: RE-Regions

Acknowledgements

I would not be a very good sociologist of associations if I did not acknowledge the long line of people and the networks that have grown out of our engagements which have participated in bringing this project to fruition. For so readily allowing me to participate in their work I thank in particular Michael Larsen, Malene Lunden, Søren Hermansen and the rest of the people at Samsø Energy Academy. For so generously opening their working lives to me, I hope they will be able to identify with the text while also finding something of interest in it.

Back on the mainland, in the Department of Political Science I want to thank my supervisor Jens Hoff for his belief in me and his unwavering support. And I thank the PhD group for making the process a lot more fun. Of the PhDs I would particularly like to thank Christian Elling Scheele with whom I wrote my first articles, the political theory group (Ditte, Signe, Theresa, Hans, Esben, Benjamin) for reading Dewey with me, and Alexei Tsinovoi for always insisting on being Political with a capital P!

This work is indebted to several other research environments, especially the Centre for the Study of Invention and Social Process (CSISP), Goldsmiths, University of London. Here, I am incredibly grateful to Noortje Marres for her willingness to seriously engage with my texts and her ability to push my analyses and arguments forward. For making my stay at CSISP possible I gratefully acknowledge the financial support from Augustinus Fonden, Knud Højgaards Fond, Oticon Fonden and Samsø Fonden. In the Technologies in Practice research group at the IT-University of Copenhagen, where I have spent quite a lot of time and have felt incredibly welcome, I would especially like to thank Anne Kathrine Pihl Vadgaard, Lea Schick, Rachel Douglas-Jones, Brit Ross Winthereik and Christopher Gad. For offering his help at pivotal times I thank Anders Blok. I had inspiring, fun and sometimes stressful times playing around with the term ‘political STS’ with the WGPS group (Anne Kathrine Pihl Vadgaard and Andreas Birkbak), so a great thanks to you.

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Part 1: Dissertation framework

1. Introduction

“This is an island and therefore
Unreal”

(W. H. Auden, *Letters from Iceland* 1937, in Lezaun 2011)

Søren Hermansen: “The islanders don’t like new things. We are sceptical people.”

Visitor: “But the Renewable Energy Island project, that was new!”

Søren Hermansen: “The Renewable Energy Island project wasn’t new. It built on well-known principles of self-sufficiency, good housekeeping, harnessing local resources. It wasn’t wave technology!”

(Conversation, Samsø 2013)

This dissertation is about a demonstration experiment in local green energy transitions. It is about how the Danish island Samsø accomplished a community-based energy transformation¹ and how Samsø managed to break the isolation that is the island condition and become a well-known demonstration project. An island surrounded by water must work hard to create the conditions that will allow its experiences to proliferate. But Samsø succeeded not only in becoming self-sufficient with renewable energy, but also in becoming influential. From Japan to EU institutions, the White House and Danish ‘Climate Municipalities’, Denmark’s Renewable Energy Island Samsø is a rolemodel, a frontrunner and signpost for the energy transitions to come.

Samsø exists in the tension described by the two quotations above, one is from a poem, the other a snippet of conversation between the local Samsø project director and a visitor. At once down-to-earth, practical and pragmatic, and a meeting place and role model of idealists and climate change activists from all over the world dreaming of a more sustainable future, Samsø connects poles: pragmatism and idealism, hope and practicality, future and past. It is this tension that this dissertation navigates.

The thesis is based on five months of fieldwork carried out in the fall of 2013 and early summer of 2014 on Samsø. Following the two extensive periods of fieldwork I

¹ I will use the words “transition” and “transformation” interchangeably.

kept in contact with Samsø Energy Academy, the environmental consultancy where I had a desk and spent most of my time, joining the staff for meetings, seminars and conferences on Samsø, in Copenhagen and Aarhus until the conclusion of my PhD. The Energy Academy emerged from Samsø's Renewable Energy Island (REI) project in 2007 as an organization engaged in three tasks: disseminating knowledge about Samsø's accomplishments in Denmark and abroad by welcoming visitors and by travelling near and far. The Energy Academy receives up to five thousand annual visitors, and the Academy's director Søren Hermansen, a well-known figure in the 'climate business'², has for the past several years spent more days travelling than at home on the island. The Energy Academy furthermore organizes new climate- and energy-related initiatives on Samsø in collaboration with Samsø Municipality and, as a third main task, acts as a consultant and partner to EU projects³, island states in the South-Pacific⁴, American islands and cities⁵, Japanese decision-makers⁶ and diverse educational programmes in sustainability⁷.

I went to Samsø to study a *community-based, bottom-up, democratic, participatory* energy transition. These were words I used in my original PhD project proposal. Other terms I frequently used at the beginning of this project were *climate change, green energy, sustainability*. This swarm of ill-defined words is characteristic of the field of social scientific energy and climate change research, just as they were an expression of the exploratory point of departure for my investigation. I knew Samsø as Denmark's Renewable Energy Island, a project that distinguished itself on several accounts from other local Danish climate change-related projects, such as Agenda 21 initiatives and Transition Towns. Firstly, Samsø's REI project was not initiated or managed by Samsø

² In 2008, for example, Hermansen was named one of *Time Magazine's* "Heroes of the Environment" (Walsh 2008).

³ E.g. Promise IEE Island Project

⁴ Lynge Jensen 2001

⁵ E.g. Renewable Energy Vermont and Fund for Maine Islands

⁶ Søgaard and Dalgaard 2011

⁷ Nordisk Pilotuddannelse

Municipality, as has become custom in Denmark where seventy-two percent of municipalities have adopted climate action plans (Hoff and Strobel 2013). Instead, an organization was created to facilitate the REI project which consisted of representatives from the island's major interest groups: the business council, the farmers' association, the municipality and a grassroots organization representing the citizens (a detailed story of the REI project follows in chapter 2).

This attention to balancing the interests of the island community is reflected, secondly, in the orientation of the REI project toward strengthening this island community (through local job creation, increasing demand for local products, encouraging profitable local investments in RE technologies, etc.). The local project developers did not approach the project as a climate or energy project but as a means with which to “establish a platform of citizens capable of taking responsibility for their own community” (Hermansen, interview). This contrasts the more narrowly defined run-of-the-mill municipal-led project which tends to frame project goals of installing RE technologies or reducing CO₂ emissions as the ultimate aims of the project. There is a long way from educating ten ‘climate families’ in Ballerup Municipality (Papazu, 2015), organizing a ‘climate party’ in Skanderborg (Møllenbach and Hornbæk 2015) or subsidizing energy-saving refurbishments in private households in Middelfart (Tjørring and Gausset 2015) to subjecting an island community of four thousand people to a total reorganization of the island's energy systems leaving no household untouched.

Thirdly, in noting the difference in scope between these projects, I became interested in the fact that whereas municipal and national climate action plans in order to make the climate governable (Rice 2010) tend to take as their starting point greenhouse gas inventories detailing the CO₂ emissions of activities such as transport, agriculture and energy (see e.g. the Danish Energy Agency 2013), Samsø avoided this tendency. Here, CO₂ is but one frame among several others employed to embed the REI project in specific contexts and to provide it with measurable results. The REI project made Samsø CO₂ neutral; or, to be ‘precise’, it made Samsø CO₂ negative. Since 2007 the island has

been generating more electricity from renewable energy (RE) sources than is consumed. With eleven onshore wind turbines covering the islanders' electricity needs, ten offshore turbines were built to compensate for the emissions from the still-carbon dependent transportation sector. With the offshore wind farm, the islanders' CO₂ footprint is negative twelve tons per inhabitant (Spear 2014), something the Academy director Hermansen laughs about at home ("That number is absurd, I'm well aware! We know that we're one hundred percent CO₂ neutral, but to say that we're one hundred and forty percent CO₂ negative, that's kind of a random number – how do you calculate that?" (fieldnotes)), but he nevertheless includes it in his talks about Samsø as part of (one of) the grand narrative(s) of Denmark's Renewable Energy Island.

It was this ambiguity of the REI project that drew me to Samsø. An ambitious climate project that takes its grand achievement of CO₂ 'negativity' with a hint of irony and a grain of salt. A large-scale RE project led by a group of local non-experts. A traditional farming and tourism community willing to undertake a society-wide energy transition over ten years; a transition fundamentally changing not just the idyllic landscape, the fields, the rolling hills and sea view, but also the ways in which livelihoods are supported, local businesses organized and homes provided with electricity and heating. Kaleidoscopic, Samsø's energy transition seemed hard to pin down, and I had to surrender to the fact that whether Samsø's REI project is a climate or energy project, a project in community-building or local development or something else entirely could not be meaningfully decided. Reading the articles, the reader will notice how the emphasis, the themes and problems shift. On Samsø, it became clear to me that the REI project contains all these elements at once, and that the island representatives' ability to draw on different frames or contexts depending on the shifting audiences is vital to Samsø's success as a demonstration project. And possibly also to Samsø's success at becoming Denmark's RE Island in the first place. As such, Samsø can be viewed as an 'experiment in contexting' (Asdal and Moser 2012), where 'context' is understood not as something pre-given, something that lies beyond, out there, waiting to be discovered, but as the

continuous activity of *making contexts* “together with the objects, texts and issues [and, may I add, people] at stake” (Asdal and Moser 2012: 303).

The notion of contexting is in line with the ontological argument at the heart of Science and Technology Studies (STS) about reality as ‘worlds-in-the-making’ (Asdal and Moser 2012: 293), not pre-given but continuously enacted, coming into being through the making and breaking of relations between human and nonhuman actors. Grounded in STS – in a branch of STS, more specifically, which focuses on the multiple ways in which worlds, futures, knowledges, networks emerge through practice (see Mol 2002, Law 1999, Latour 2005c) – the dissertation approaches Denmark’s RE Island as an object of concern, the boundaries and contexts of which are ever-changing, dynamic, irreducible (Latour 1988), a working hypothesis and indeterminate phenomenon, rather than a fixed entity.

The overarching analytical contribution of this project is the development through the five articles about Samsø’s energy transition of a practice-based understanding of what the fundamental reorganization of the energy systems supporting our societies and lives entails, demands – and promises. My attempts at scratching the surface of Samsø’s transition story have not been made to knock Samsø off its pedestal; that is not where my intervention lies. On the contrary, the aim with my empirical investigation has been to enrich and deepen our understanding of the pragmatism, the tailored strategies for managing different people, interests and materialities, that is arguably an inherent element in any fundamental societal change. I thus offer a much needed pragmatic – a non-idealist, practice-based and empirically grounded – account of the RE transition.

In the articles, the RE Island is allowed to move and fluctuate, to assert itself in numerous ways. A central argument – commonsensical to STS theorists but perhaps less so to other social scientists engaged in energy and climate research – is that RE transitions set in motion and create connections between a multitude of spaces of action: financial, political, technological, social. Community-based RE transitions are co-

constitutive processes leaving no domain untouched. No financial injection or technological innovation alone can ‘spark a green energy transformation into being’ (to paraphrase Marres 2005). Instead, it requires the alignment of numerous previously separate registers (Marres 2011: 519), or, as Bennett would put it with inspiration from Deleuze, accomplishments such as these bring human and non-human parts together in “agentic assemblages” (Bennett 2010). This fundamentally experimental disposition of the RE transition – understood as an indeterminate process the consequences and results of which cannot be foreseen or calculated⁸ – calls for an approach to the analysis that is fundamentally empirical and allows the empirical material to come into view as distributed, dynamic and often surprising constellations. The tools or ‘thought resources’ (Gad 2009) to facilitate such a position are found within the field of STS, which does not provide comprehensive theories aimed at explaining the world, but rather ‘theories in minor key’ (Stengers 2005: 186). Philosopher of science Isabelle Stengers describes this approach as “ ‘thinking par le milieu’, using the French double meaning of milieu, both the middle and the surroundings or habitat. ‘Through the middle’ would mean without grounding definitions or an ideal horizon. ‘With the surroundings’ would mean that no theory gives you the power to disentangle something from its particular surroundings”(187).

Samsø is perhaps *the* obvious case of a climate project that has succeeded in making a difference not just within the bounded territory of the project site but in various geographical and thematic localities worldwide. Accomplished and successful, Samsø’s achievements have rarely or never been contested or thoroughly interrogated and investigated. I intend to open the black box (Latour 1999) of the Renewable Energy Island so that we may come to appreciate Samsø not just for its CO₂ reductions but for what it can teach us about the distributed and highly heterogeneous nature of community-based RE transitions. STS is well equipped for this. In prompting us to question empirically phenomena which are commonly taken for granted, new

⁸ I will return to this notion of the experiment in chapter 3.

perspectives on Samsø emerge. In order to get there we simply need to take the empiricism of STS seriously. This empiricism has prompted me to ask questions about the contingent relations between the local and the global (paper one), between success and failure, hope and despair (paper three), between past and present (papers three and five). All questions pertaining to the reality of community-based local energy transitions, on Samsø and beyond. With STS, I aim to articulate a mode of inquiry adequate for generating new and in-depth insights into the ecological crisis and our down-to-earth experiments with meeting the challenges it poses.

Importantly – and puzzling to the field of STS which, however empirical its aspirations, tends to take as a starting point and basic assumption that technology and science are central elements of any interesting case – the story I tell is not so much a story about techno-science⁹. It is a story about innovation in community-making *through* the implementation of technology. That climate change, windmills and renewable energy became important to life on the island was, in a way, a matter of coincidence. RE technologies, I argue, only became relevant on Samsø when they became the means through which island life could be secured and improved. This is not to claim that the RE technologies were simply ‘rolled out’, that their implementation was unproblematic or uninteresting. But windmills and straw-based district heating had already, on a much smaller scale, been introduced on Samsø by locals in the eighties and nineties. During the seventies’ oil crises, the Danes, with no nuclear power due to a strong anti-nuclear movement, had turned to the development of wind energy, and with legislation favoring locally and communally owned projects, community-based wind guilds and rapid technological developments lay the foundations for the well-known Danish wind success story (Schick 2015, Karnøe 2013, Garud and Karnøe 2003).

⁹ As a consequence, I do not engage with STS-related theories about technological innovation and the uptake of new technologies as I consider these too narrowly focused on the dimension of technology to fit the complex case of the REI project (to name a few, these include David Hess on technology-oriented social movements (Hess 2007), Geels’ theory about sociotechnical transitions (Geels 2005), Bijker et al. on the social construction of technology (Bijker, Hughes and Pinch 1987) and social practice theory (Shove, Pantzar and Watson 2012, Shove, Walker and Brown 2014)).

Wind technology, therefore, was never considered a foreign element on Samsø, and the implementation of the specific technologies only posed minor challenges and was not the crux of the project. What the REI project demanded, however, was for the islanders to accept the project as a means of creating a more viable community. The promise of the project was to diminish the ontological insecurity of island life (due *not* to fear of the consequences of the ecological crisis but to constant threats of unemployment and marginalization (Jørgensen et al. 2007)). Simply accepting Samsø's REI project as an energy or climate project focused on the implementation and uptake of RE technologies would be to reduce the complexity of the case, which exactly the field of STS has the tools to bring out, as I will argue and demonstrate.

My argument for Samsø's relevance is thus not derived from Samsø being a case of *technological* innovation. My argument lies in the potential for the case to reconfigure what we understand as 'innovation' in a broad field of energy and climate change research that has perhaps been too narrowly focused on technology. By studying this case, I hope to show the potentials for *societal* or *participatory* innovation that can be built into local energy transitions, insofar as such transition processes manage to make the development, the concerns and needs of the collective central and resist prioritising technological innovation over the collective. I follow Brown in claiming that "most STS scholars have devoted far more conceptual scrutiny to science and technology than to politics or democracy" (Brown 2015: 4). This thesis seeks to address this imbalance. My analyses show the centrality of "the social processes" to community-based transition processes (a popular expression borrowed from my informants, encompassing, here, a wide range of aspects such as public involvement, scalability and storytelling involving, of course, aspects that in my view are not purely 'social'). The analyses demonstrate, furthermore, the project developers' ability to create something new (the RE Island) out of well-known elements: well-tried RE technologies, community-ownership, citizens' meetings. The innovation may be modest (see Watts 2014), the results nonetheless significant. This is the main argument I pursue in this thesis, reflected also in the title

Participatory Innovation, which refers to this ability of the island actors to foster change and reinvigorate a hard-pressed local community through processes prioritizing people and the strengthening of the local community over flashy new technologies and the best technical solutions.

This dissertation is then also about the constructive potential of climate change (Hulme 2009) to foster local development and community-based innovation, not motivated by fear of sea-level rise but by the possibilities that can be built into climate and energy projects for improving living conditions and deepening local democracy¹⁰. If climate change can rightly be defined as a ‘tragedy of the commons’ (Hardin 1968)¹¹ – a situation in which a common resource is depleted by self-serving individuals due to a lack of regulation – caring for the commons has the potential to bring together the concern for the environment with the concern for the community. This potential is the nexus of the dissertation, and it prompts us to ask inherently political questions about RE transitions: How are public participation and acceptance secured? What are the consequences of large-scale RE projects for local communities? Which evolving forms of participation and representation result from such projects?

This study, moreover, seeks to contribute to the discipline of political science. Written in a political science department that cannot be said to give strong attention or priority to the challenges of what may be broadly termed the ecological crisis of our time (Narud 2015), this thesis – investigating what it takes to reorganize a community with this demand for change toward more environmentally sustainable ways of living in mind – contributes to filling this research gap within political science. A quick look at the American Political Science Association (APSA)’s programme for the 2015 annual

¹⁰ A statistical study recently published in *Nature Climate Change* makes a similar point: in order to motivate climate change action, the potential “co-benefits” of this action for the local community should be stressed, as co-benefits can motivate people “across ideological divides” (Bain et al. 2015).

¹¹ Against this commonplace view, however, some have convincingly argued that climate change is rather ‘a tragedy of the few’, since it has been shown that just 90 companies have caused two-thirds of man-made CO₂ emissions (Heede 2013, Scavenius 2014).

meeting (a yearly international conference attracting political scientists from all over the world, despite its America-centric name) reveals that out of the fifty-five divisions structuring the conference only one has climate, energy or environment in its title, namely the division “Science, technology and environmental politics”. Falling under this division are a number of panels the themes of which relate to environmental politics, such as “public opinion, information technology, and environmental attitudes” and “determinants of national environmental performance: cross-national evidence” (APSA). The attention to individuals (attitudes, opinion, political psychology and communication) on the one hand and the concern for the national and international levels of analysis as well as for the objective measurement of performance on the other leaves little room for reflection on the fundamentally *political* questions posed by the ecological crisis, such as ‘Can we continue living without fundamentally reorganizing our societies e.g. in terms of our energy systems?’ and further, ‘On which societal level should this reorganization take place and how can such restructuring be carried out without challenging the democratic community?’ Asking questions that challenge and reimagine rather than restate the status quo is part of STS’ contribution to political science.

Against this critical reading of the current state of political science, the APSA programme may also be read as a signal that there is indeed burgeoning interest within the international political science community in issues related to our ecological crisis, with political theorists “theorizing the Anthropocene” and political sociologists discussing the impact of social movements and political communities (APSA). Taken as such, the contribution of this thesis to political science is to accentuate and articulate already existing, slowly materializing concerns and emerging research interests through an STS-informed intervention. This, then, is a further ambition of the project: to demonstrate how STS can contribute to the political science discipline. As of now, political science lacks the tools for a serious engagement with the contemporary global environmental crisis, while at the same time, as noted, STS displays a tendency to pay more attention to technology than to politics. As such, I wish to demonstrate how the

two may enrich each other (and I am not the first to do this, see e.g. Bennett 2005, Latour 2007, de Vries 2007).

For now let me briefly note two accounts on which I believe STS has something to bring to political science. Firstly, as noted, political science lacks the intellectual and methodological resources necessary to capture new and ongoing critical developments such as the environmental crisis. With theories that accept as unexamined starting points certain ideas about the world developed at earlier points in history, political science risks confirming old truths which are no longer, and perhaps never were, valid depictions of reality. Secondly and more specifically, STS-informed notions of politics can bring to political science an empirical attitude to politics that centers on ‘material politics’, focusing on the role of objects and practices in bringing new realities into being and shaping and expanding the political collective, or, simply, democracy. This argument is developed in chapter four by bringing together insights from STS writers with post-structuralist political thinkers such as Agamben, Žižek and Mouffe.

Clarifications: Theory, methods and contributions

Storytelling as appreciative engagement

For the sake of clarity, in this section I will note some of the basic theoretical and methodological underpinnings of this thesis, some of which will be elaborated in greater detail in the chapters to come. One of the central words in the title of this dissertation is ‘storying’. At this point, the reader will already have encountered the word ‘story’ several times. While I have taken the liberty to call each of my articles about Samsø stories, the articles themselves build on stories encountered in the field, whether experienced first hand, told to me by my informants, read in project documents or found in the extensive media coverage of Samsø¹². *Storying*, then, is the activity of constructing and telling

¹² While I am aware of writings in political theory engaged with the concepts of storytelling and narratives (e.g. Bennett’s ‘onto-stories’ (2001) and Panagia’s ‘narratocracy’ (2009)), I use the colloquial term ‘story’ deliberately to refrain from adding extra theoretical layers and baggage to a concept that I want to give a freer rein. Grounded in context and practice, an empirically based concept, the meaning

stories, thereby creating the object around which the stories revolve, and it is an activity that I share with the actors in my field, be they people, documents, reporters or the RE technologies, which are powerful storytellers in their own right. It is this activity that brings the Renewable Energy Island into being in the shapes it is given by myself and others. These stories do not remain on the paper; they are not tied to the text. They perform the world they describe (some more forcefully than others; while some turn into ‘discourses’ or ‘grand narratives’, other lead less conspicuous lives, e.g. in academic journals, in the depths of the Internet or as half-forgotten anecdotes). The stories about Samsø are not equal; they differ in status, in genre, and in effects. They are created with different ends in view, arise from different contexts, and some stories have a hard time co-existing. Following John Law, “multiple storytelling makes rhizomatic networks that spread in every direction”, decentering the object of interest, the Renewable Energy Island (Law 2002: 5).

By employing the terms ‘stories’ and ‘storytelling’, moreover, my own connectedness, my implication with the object of study, an inescapable condition of the storyteller, becomes clear, and it makes this project affirmative and appreciative rather than critical. Criticizing the object of study from the outside becomes untenable (Law 2002: 7) and composition replaces critique. Latour: “While critics still believe that there is too much belief and too many things standing in the way of reality, compositionists believe that there are enough ruins and that everything has to be reassembled piece by piece” (2010: 475-76). While the endeavour of carefully investigating and ‘reassembling’ a phenomenon will almost inevitably generate new insights which by certain actors may be perceived as critical, what I seek to do, ultimately, is explore and lay out the case of Samsø with the purpose of giving an account of a community that has managed to imagine and create a future that is not only brighter from the local Samsø perspective than it would have been had it not been for the REI project, but which is also a valuable

of the term ‘story’ is allowed to fluctuate throughout this dissertation, to be explicated on a case-by-case basis.

vision for the world outside Samsø which seems to be roaming around in the dark searching for new ways of living and acting together.

Three basic stories about ANT

Closely related to this exposition, and to elaborate on the brand of STS practised here, the theoretical resources mobilised are drawn from Actor-Network Theory (ANT), encompassing both the ‘classic’ ANT originally launched and championed by Bruno Latour, Michel Callon and John Law and later theoretical developments which have become known as ‘post-ANT’ (Gad and Jensen 2010, Law and Hassard 1999). Let me elaborate, if only briefly, on some of these theoretical sensibilities and the ways in which they go somewhat against the grain of what traditional political science and social theory in general have led us to expect (see also Papazu 2012: 31-35).

There are three short stories here. The first relates to how ANT is not, actually, a social theory. Rather, the social or society – how it hangs together, what it is made of – is what must be explained, and the metaphors of ‘actor’ and ‘network’ serve as heuristic resources for this purpose. As Latour puts it, “the presence of the social has to be demonstrated each time anew” (Latour 2005c: 53). This means that we have to discard any *a priori* explanation or theory, any presentiment of how society works and why people act the way they do. In the place of Durkheim’s ‘social facts’ that made the social into a domain of research in its own right under the heading of sociology (Latour 2005c: 13), and Bourdieu’s rules of the game (what he named ‘doxa’ and ‘illusio’) controlling the unknowing individual (Schinkel 2007) Latour puts the tiresome tracing of associations, the incessant endeavour of describing; an activity of the researcher which itself participates in bringing into being that which is described, tying researcher and research object inextricably together, thus negating the privileged position of the researcher vis-à-vis her study object.

The second short story of ANT turns on its vehement disregard for the distinctions and dualisms characterizing our ‘modern’ understanding of the world

(Latour 1993). In taking a flat ontology as its starting point, ANT does not deny the existence of power structures, of differences in size, scale and impact, of actors being governed by structures beyond their control or the existence of purified registers of ‘nature’ and ‘culture’, respectively. But all of these must be allowed to emerge as empirical discoveries; they will be results of the analysis, phenomena identified in practice. They do not precede analysis, because they are all to be viewed as accomplishments, specific and local, as products of specific actor constellations, of relations that might have been otherwise and that are prone to change. This makes empiricism “the name of the game” in STS (Latour 2005c: 146), contrary to mainstream social theory that tends to start from theory rather than the empirical data.

A third and last story to be briefly touched upon here is about the key role awarded to objects in ANT, and in STS generally speaking. By bringing in the pipette and the microbe (Latour 1988), the gun, the speed bump (Latour 1993), the electricity smart meter (Marres 2011), even the tea kettle (Marres 2012c) and thus lifting the mundane, everyday material matters of fact into sociological analysis and transforming artefacts into matters of concern (Latour 2004), writers in STS challenge the “object-avoidance” (Latour 2005a: 5) typically encountered in social and political theory. Latour:

“From Hobbes to Rawls, from Rousseau to Habermas, many procedures have been devised to assemble the relevant parties, to authorize them to contract, to check their degree of representativity, to discover the ideal speech conditions, to detect the legitimate closure, to write the good constitution. But when it comes to *what* is at issue, namely the object of concern that brings them together, not a word is uttered. In a strange way, political science is mute just at the moment when the objects of concern should be brought in to speak up loudly” (2005a: 5-6)

With an acute sensitivity not just to the procedures, rules and discourses but to the techniques, the materials and issues that engage people in action, STS provides us with a more inclusive framework for our political and sociological analyses. One that, by adding hitherto foreign and omitted elements to our frames of analysis, may enrich and even innovate our understanding of society.

Despite this grounding in ANT, fans of the explicit tracing of actor-networks will likely be as let down as the tech nerds by this dissertation. There will be no mention of ‘obligatory passage points’ or ‘intermediaries’ (see classic ANT studies such as Callon 1986); rather a set of internalised, implicit sensibilities, my approach to studying Denmark’s Renewable Energy Island has been guided by the relational ontology of ANT, which tells the researcher to identify and describe the building blocks of the realities being traced and investigated.

A note on knowledge formation

Supplementing each other, each paper brings into play different concepts from the ANT repertoire: material participation, issue networks, the sociology of public demonstrations, controversy analysis and storytelling, to mention some central analytical resources (as these are discussed in the papers, they will not receive individual exploration in this introduction). The data was generated before I knew that these were the lenses I would apply to the materials. Naturally. What I looked for in the field, the analytical logics that guided my explorations, were not specified prior to the investigation, as I employed a pragmatic attitude to knowledge formation, according to which the proposed method of “fruitful social inquiry is a method which proceeds on the basis of the interrelations of observable acts and their results” (Dewey 1927: 36, see also Dewey 1938). Empirical tools of inquiry rather than *a priori* hypotheses or theories about causality guided my explorations.

I paid attention, for instance, to the role of materiality; as noted one of the central tropes of STS. While the RE technologies found all over the island naturally

count as materialities, other material artefacts (e.g. maps, PowerPoint slides, animals) and material settings (Samsø local archive, the Energy Academy itself) played into my analyses. I was attentive to central events, to the surprising or disconcerting analytical moments that carry the potential to open up the field to new insights (Verran 1999, Winthereik and Verran 2012), and to seemingly uninteresting everyday activities. I was interested in connections, negotiations, networks, and practices; the elements that have put Samsø in a position to act and create results. There were aspects, further, which interested me to a lesser degree. These include the detailed technical, financial and legal settings of the RE projects. On these perspectives I am conscious of being unknowledgeable. They do not fall outside of an ANT framework; my reason for excluding these is purely due to practical considerations. Delimitations had to be made. I have, moreover, not sought to achieve an in-depth understanding of the islanders' individual attitudes or meaning-making toward RE technologies or climate change in general or studied whether their energy consumption behaviour and attitudes have changed as a consequence of the REI project. This omission *is* due to my theoretical sensibilities, more specifically to ANT's built-in disregard of individual choice: if relationality is a guiding principle, and if one takes empiricism seriously, the inner workings of the individual become irrelevant because they become unknowable. Centrally, in ANT there is no such thing as 'individual action'; in fact, the individual *as such* is viewed as "implausible" (Latour 2005c: 200 note 266), since actions, relations and effects are all we can know and these are inescapably *collective* in nature (Latour's analysis of Louis Pasteur, the French biologist forcefully illustrates this argument (Latour 1988)).

Concretely, the process of data collection that is the foundation of this thesis centers around two periods of fieldwork on Samsø, September-November 2013 and May and June 2014. My base was the Energy Academy, with which I have kept in contact and visited several times since the conclusion of my core fieldwork, making it an engagement that has lasted from the summer of 2013 until today, two and a half years later. Besides being present, observing, 'shadowing' (Czarniawska 2008) and participating

at the Academy almost as a colleague, I studied documents, participated in relevant meetings on the island and conducted around thirty interviews with central islanders and Academy personnel.

Put squarely, the contribution of this thesis is three-pronged. First, I introduce this specific version of STS to political science. Second, I demonstrate the affordances of a single-case study as a knowledge-generating device that can be calibrated and put to work in both empirical and theoretical settings. Third, I discuss politics, local democracy and participation from this at once empirical and theoretical perspective that brings together political science with STS, opening up for new perspectives on the role of participatory democratic processes in community-based RE transitions. Taken together, by bringing STS and political theory into conversation with one another and focusing on this meeting and the specificities of the empirical case rather than on e.g. telling a story of technological innovation or of an energy or climate project in a more narrow sense, this thesis is about *participatory innovation*: it is about how a seemingly limited RE project can set in motion processes that transform more than just energy systems.

Overview of chapters and articles

The five chapters making up the frame of the articles follow the logic of this three-pronged approach. They provide an introduction to the analytical-theoretical issues and the empirical field that make up the foundation of this project. They do so by introducing the case and the methodology of the case study (chapters two, three and five), my take on STS and my empirically induced approach to questions pertaining to politics (chapter four). These introductory chapters should be read as a meta-reflection on the research project and process and its logics and will take up broader, cross-cutting discussions. The purpose is not to examine the individual concepts informing the articles. The five papers following the introductory chapters make up the body of the dissertation, all single-authored and based on my fieldwork on Samsø.

I open the story of Samsø by situating the island as an accomplished, internationally oriented networker. In **paper one**, *Demonstrating Doability: The Networking Practices of a Danish Renewable Energy Island*, I account for how Samsø has managed to achieve international renown through its Renewable Energy Island project, thus escaping its peripheral position in the world. Addressing the ways in which Samsø has become a well-known ‘demonstration island’, I combine digital methods of inquiry on the Web with fieldwork data to map and discuss the networking practices which have helped Samsø to become known nationally as well as internationally. The article suggests that while Web-based activities are central, actors like the Renewable Energy Island representatives are as dependent as ever on work-demanding practices such as travelling, project participation and giving presentations.

While this first article demonstrates Samsø’s relevance as a case of a local energy transition that has ‘gone global’ and continues to demonstrate the doability of sustainability initiatives, **paper two**, *Transition Stories and Their Ethnographic Counterparts: Samsø’s Renewable Energy Transition* dives head-first into the stories of and the storytelling about the Renewable Energy Island project, problematizing what we can know about the processes that led to the project’s accomplishment in 2007. By contrasting the grand narrative of Samsø’s trajectory toward project completion, an accomplished ‘transition story’, with ethnographic stories from the field, an analysis of the storytelling practices of the Energy Academy staff brings us closer to an understanding of the RE Island as a demonstration project that continues to be done in the stories told about it. While conducting an analysis ‘in good faith’ (e.g. Verran 2001), I seek not to debunk but to enrich the stories about the REI project – a move that might be necessary if Samsø is to keep its position as a frontrunner of local energy transitions rather than be relegated to a rolemodel of the past.

A further ambition of paper two is to move in on the fundamental question of ‘How did Samsø manage to become energy self-sufficient?’ This is a question that motivates many people’s interest in Samsø, and **paper three**, *Management Through Hope:*

An Ethnography of Denmark's Renewable Energy Island, is motivated by this same question, only approached from a different angle, through a meeting I participated in about a new windmill project. Having witnessed the failed attempt to engage the islanders through this meeting, I had to ask myself what made this meeting different from the assemblies on Samsø in the nineties, which without serious controversy led Samsø to its status of RE Island. Adopting the notion of hope as an empirical concept from STS researchers Isabelle Stengers and Casper Bruun Jensen, I employ the failed windmill meeting as a tool to 'open up' the past to closer analysis through its contrast in the present. The analysis leads me to argue that the RE Island project developers practised management through hope or 'hope management', while the municipal climate and energy coordinator who arranged the meeting I participated in saw himself as working with 'change management'. This modern 'change management' attitude conflicts with the practices of the REI project developers, who created a project that succeeded in accomplishing its goals of changing the island due to its openness, its rootedness in the island community's past, and the project developers' ability to speak to a down-to-earth variety of hope.

Following two articles focused on this activity of opening up the past to my investigation of Samsø's energy transformation, **paper four**, *Authoring Participation*, changes pace slightly to discuss another aspect of the story of Samsø, namely questions of public participation. I argue that on Samsø during the REI project the participation of the public was viewed as indispensable to the realization of the RE projects. Public participation did not, as is commonly seen, function as an add-on to a top-down development process. Public participation was part and parcel of a process which put means before ends (see the discussion of STS and politics, chapter four). Following a theoretical discussion of the STS-related field of public participation, I turn to Marres' and Gabrys' notion(s) of material participation, which locates participation in everyday practice and work rather than in deliberation and debate. I analyse the development of district heating plants on Samsø in the nineties and the 'lay' islanders' roles in these

projects, arguing that to a large extent the islanders' practical and material engagements with the REI project were what brought it into being and that the Samsø community was shaped and changed accordingly.

In the last paper, **paper five**, *Nearshore Wind Resistance on Denmark's Renewable Energy Island: Not Another NIMBY Story*, I stay with discussions of public participation, support and opposition to RE technologies as I turn to an analysis of the Mejlflak project, an ongoing controversy surrounding plans of a near-shore wind farm to be built near Samsø by external developers. In this paper, motivated by my initial surprise that the inhabitants of Denmark's RE Island are currently fighting a new wind project, I offer a criticism of the Not In My BackYard (NIMBY) literature as I argue for a more situated understanding of opposition to RE projects. The paper takes its main theoretical cue from Gomart and Hajer's call to open up political questions to empirical inquiry and pay special attention to the material settings in which political issues unfold. This theoretical approach allows me to provide a sympathetic analysis of the islanders' resistance and, on a more general note, to demonstrate the malleability of resistant publics. As the setting of the controversy changes from one format of publicity and participation to another, so do the responses and reactions, even the composition, of the public. A public is not a fixed entity that cannot be swayed or transformed. On the contrary, publics are ever-changing, and so are the issues they engage with. This points to the potential of learning inherent in all controversy. Furthermore, it illuminates the kind of work it took for the REI project developers to not just avoid public controversy during project implementation, but to transform the island community into a more viable society taking the responsibility for its future into its own hands.

To provide the empirical background for the articles, the story of the RE Island project especially focused on the early, formative years is presented in the following chapter, **chapter two**. While the papers all touch on aspects of this story, none tells it as comprehensively as these pages do. What is presented here is simply a composite

narrative constructed from the sources available to me, and it is not an innocent story. It is a carefully constructed narrative about a society in transition and, as such, it is a piece of political communication pieced together over the years to work outside of Samsø. As I discuss in detail in paper two, the multiplicity of storytellers, the political objectives of the island actors in terms of securing support and attention from the surroundings, the years that have passed since the late nineties and the patchy character of the archive material available make for a complex backdrop to my articles. Adopting the STS-informed notion of multiple ontologies (Mol 2002) and acknowledging that other narratives of the RE Island exist parallel to the one presented in chapter two, this is simply my way of introducing the REI project to the reader. This is how I wish the reader to see Samsø's journey toward becoming Denmark's Renewable Energy Island; this is what I think the reader would benefit from knowing before reading the rest of the thesis. Several other accounts engaging with Samsø's energy transformation can be found in popular books and newspapers (see e.g. Turner 2008, Spear 2014, Hermansen and Nørretranders 2013, Cardwell 2015, McKie 2008).

The chapter should give the reader a sense of the character and development of the REI project that is the crux of this thesis. In order to understand why the island actors took on the REI project and how island life was reimagined and revitalised through this island-wide community-based RE transition, the reader should note that the islanders were not uncritical toward RE technologies prior to the REI project. In fact, the islanders went from abstract scepticism toward windmills, specifically, to actively endorsing concrete RE projects. A 'reverse NIMBY', so to speak. Note also the locally situated micro processes at work in the local project developers' enrolment of the islanders in the RE projects, and the way in which networks of islanders representing island interest groups came together in the organization of the REI project in ways often characterized as 'energy democracy' (e.g. Kando 2014). Furthermore, I hope that these pages will convey to the reader the down-to-earth atmosphere that pervaded the transition process.

From here, **chapter three** picks up with an empirically informed discussion of Samsø's status as a laboratory, a demonstration project, a test site and a model. The chapter touches on the different modes of generalization that are employed by island actors as well as academics such as myself when discussing the relevance of the RE Island case.

The first part of **chapter four** lays out the (meta)theoretical foundations of the thesis, introducing the specific field of STS which my work builds upon as 'empirical philosophy' concerned with ontological investigations of reality as it comes in multiple, unpredictable forms. Such a starting point demands a strong empirical commitment to the study of practices and the multiple realities our materially situated practices give rise to. In the second part of the chapter, I build on this empirical-theoretical entanglement of STS to argue for a more practically and empirically engaged notion of politics, the political and the democratic community, with the American pragmatist John Dewey's writings running as a connecting thread through the chapter.

In **chapter five**, the last chapter before the articles, I present the methodological foundations, considerations and choices of my project, describing my fieldwork practices of observing, participating, interviewing, reading documents and co-constructing the realities I investigate. I aim to show, furthermore, how evaluative criteria of 'transparency', 'flexibility' and 'surprise' must take the place of standard research criteria such as 'reliability' and 'validity'.

First, let us visit Samsø, the Renewable Energy Island to be, in the year 1996.

2. Becoming Denmark's Renewable Energy Island

Part one: The beginning

“Samsø dodges new windmills”. This is stated in a short article from April 1996 in the local newspaper *Samsø Posten*¹³. The article expresses both triumph and relief that Aarhus county, to which Samsø is assigned, has decided that no large wind farms will be built on the island. The chairman of Samsø Municipality's technical and environmental committee comments that while smaller mills by private estates might still be built, no mills bigger than ordinary farm equipment will be erected on Samsø.

Samsø Posten, half a year later (September 1996): “Renewable Energy Island. Politicians are considering proposal”. The article continues: “Self-sufficiency through renewable energy? That doesn't sound too bad. The municipal council is currently reviewing the possibilities of joining a project initiated by the Ministry of Energy...”. The article lists different renewable technologies, including windmills, solar heating systems, straw-fired district heating plants; a list that takes its point of departure in the energy sources already available on the island: sun, wind, straw, biomass. The project, it is emphasized, will benefit Samsø's general development – a constant concern, being a remote island with a declining population and few jobs. None of the former reservations against windmills are to be found; the Renewable Energy Island (REI) project is an interesting opportunity for Samsø.

In those final years of the nineties, Samsø was in a state of crisis. The island's slaughterhouse, one of the largest employers on the island, was closing, and hundred people faced unemployment. Islanders telling me about that time describe the closure in dramatic terms: it was as if an atomic bomb fell on Samsø; it was as if Samsø itself was to close down; or, in the words of the then mayor, “Samsø might as well have sunk into the ocean; that is how we felt back then”. The REI project presented itself at just the

¹³ *Samsø Posten* articles related to the REI project can be accessed on www.energiinstituttet.dk; write "Samsø Posten" in the search field. The articles have been grouped in PDF files according to year (1996-2000).

right time. The fighting spirit has always been strong on Samsø, the former mayor tells me: “When the Minister of Business visited Samsø in the nineties, she said, ‘When we politicians hear about a problem on Samsø, we look at each other and say that we’ll probably soon hear about a new project. It has always been easy to simply give you a few millions to get the project off the ground, then watch you run with it’ ”.

Part two: The initiative

How was Samsø introduced to the idea of becoming Denmark’s Renewable Energy Island, an EU policy concept related to “the ambitious EU-White Paper: ‘Energy for the future: Renewable Sources of Energy’ ”, adopted in 1998, denoting ‘pioneer communities’ aiming at achieving one hundred percent self-sufficiency through renewable energy sources (Energistyrelsen, 1998)? The initiative came from a local master smith whose keen eye for business had earned him the nickname ‘the goldsmith’ on the island.

The smith, now in his eighties: “It was an incredibly exciting thing to kick-start back then! In 1996-97 I was head of the business council on Samsø where representatives of the island’s businesses met each month. I knew Planenergi, Samsø’s energy supplier in Aarhus, from earlier projects as I had previously been involved in wind projects on Samsø [the smith had been a leading force in building Samsø’s three cooperatively owned windmills in the nineteen-eighties as well as a district heating plant]. Someone from Planenergi called me up and told me that Svend Auken, the Minister of the Environment at the time, was looking for a renewable energy island. I went straight to the council and said: ‘Friends, we are going to make Samsø self-sufficient with renewable energy!’ The manager of the slaughterhouse said, ‘The smith is going crazy, we could never do something like that!’ But the mayor, who was also a part of the council, was quick to see the possibilities for local job creation, which was also my sole interest as head of the business council and master smith. When we set up Samsø’s first

district heating plant in the nineteen-eighties it generated employment for my firm, so the possibilities were easy to see.”

With the major players on board, Samsø entered the competition issued by the Ministry of the Environment with the purpose of becoming Denmark’s Renewable Energy Island. A consultant, an engineer from the mainland, was hired to develop the pre-project study on the basis of which the winner would be chosen. Samsø competed with three other islands and one peninsula: Bornholm, Ærø, Møn and Thyholm. Each was given 125.000 Danish Kroner (EUR 17.000) by the Ministry for the development of the pre-study. After the appointment of the Renewable Energy Island, no more funds were promised, and the island would have to stand on its own feet.

Part three: Nomination and organisation

In November 1997, Samsø was appointed Denmark’s Renewable Energy Island at a press conference in the Ministry of Energy and the Environment in Copenhagen. The islanders behind the development of the project travelled to the city, “a delightful group to look at”: Birgit [representing the island public as chairwoman of the ngo Samsø Energi og Miljøkontor] in her Samsø jumper with motifs from northern Samsø and the mayor in his characteristic suspenders and gold chain. “But it went well”, Birgit told me. Sven Auken, the minister, presented the winner: “The race was incredibly close, but we chose Samsø because they have submitted a convincing project proposal supported by the relevant interest groups on the island. The island is popular with tourists, and the location in the middle of Denmark is just right. Everything speaks to the fact that Samsø will be able to create a significant international demonstration project and a show window for Danish energy technology” (Bünger 1997a).

Moreover, Samsø was chosen because the island’s level of energy self-sufficiency of twelve to fifteen percent mirrored the national situation at the time, facilitating comparisons and adding to Samsø’s suitability as an experimental site. Other contributing factors were the involvement of and collaboration between the island’s

industry, municipality, organisations, the energy supplier and citizens, and the fact that the project proposal presented a mix of known and new technology (Bünger 1997b). In order for the selected island to showcase Danish technology and function as a demonstration project, it was demanded that well-known technologies (wind power, bio- and solar energy were mentioned explicitly in the Ministry's proposal) play a central part in the project proposal.

The unique organisation of central island actors in Samsø Energiselskab (Samsø Energy Company), established to facilitate the REI project, also figured in the ministry's evaluation of the project. In Samsø Energiselskab the business council, the farmers' union and Samsø Municipality were each represented with three members, while Samsø Energi og Miljøkontor (Samsø Energy and Environment Office), the oddly named grassroots organization representing the general island public, was represented by four individuals to secure the democratic foundation of the project. While it is easy to point out central figures without whom the projects could not have been realised, when consulted several islanders point to this organizational structure as the key to the REI project's success. With Samsø Energi og Miljøkontor strongly represented, business interests which might have turned the public against the project were not allowed to dominate.

None of the members of Samsø Energiselskab had been involved in a project of this size or character before; in this sense they were all amateurs. The company set up a secretariat and hired the engineer who had helped develop the project proposal. Samsø's energy utility company ARKE (today NRGi), a large firm based in Aarhus, initially wanted to play a central role in the project, but the islanders wanted to define and plan the project themselves. The only external actor central to the development of the REI project was the engineer, who after being hired by the project moved to Samsø. He took care of the technical dimensions while Hermansen, today the director of the Energy Academy, then a farmer and teacher, was hired as the island's 'energy counsellor' to manage what is commonly termed 'the social aspects' of the project: getting the island

public to accept and contribute to the REI project. The project's successful realisation is often attributed to the complementary skills of this dynamic duo as well as to the construction of Samsø Energiselskab.

A simple, handwritten note, undated and passed on to me by the then mayor along with press releases, newspaper cuttings and government records of the decision process – documents he has kept among his personal belongings for nearly twenty years – offers a glimpse into the way in which the REI project was consolidated and conducted, and the centrality that was attributed to Samsø Energiselskab:

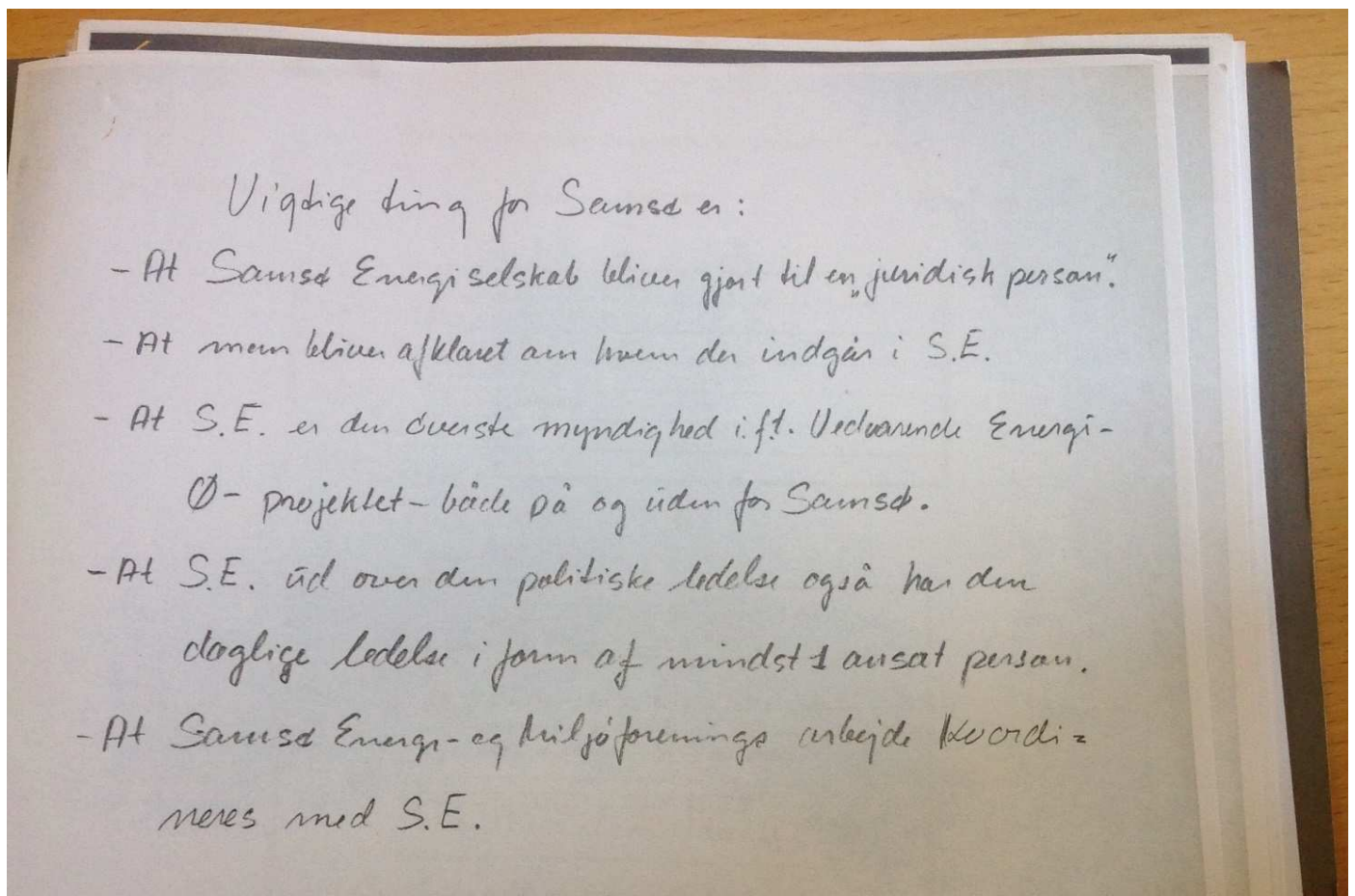


Figure 2 Photo of the original note. Below, the author's English translation.

Important things for Samsø:

- That Samsø Energiselskab is made a 'legal entity'
- That we come to a conclusion as to whom to include in Samsø Energiselskab
- That Samsø Energiselskab is the supreme authority in the Renewable Energy Island Project – both on and outside Samsø
- That Samsø Energiselskab apart from the political management also handles the daily management of the project in the form of at least one paid employee
- That the work of Samsø Energi og Miljøkontor is coordinated with Samsø Energiselskab

With this coordination device in place, the project had a clear and cooperative leadership profile with no one group able to dominate. When Samsø representatives travel to Japan and elsewhere, such coordination is referred to as 'Energy Democracy'.

Part four: The Masterplan, financing and ownership

The 'Masterplan', as it is called, is the key report detailing the plan for "a total conversion of Samsø's energy supply system to renewable energy sources during the course of 10 years" (Energistyrelsen, 1998). The energy technologies proposed in the masterplan to cover heating were: four district heating plants, one of which would be straw-fired, one would be based on woodchips and solar energy, and two would be powered by a combination of biogas, waste disposal, energy crops and surplus heat from the ferries. To produce electricity the plan originally proposed to build 15 land-based wind turbines, 15 offshore wind turbines (to offset fossil fuel-based transportation), 15 household wind turbines, two large biogas plants, five farm-based biogas plants and 70 smaller solar cell plants (Samsø Energiselskab et al. 1997).

After the 10-year period, the following had been implemented: three new district heating plants, two of which were straw-fired (same as Samsø's original plant which preceded the REI project) and one powered by woodchips and solar panels; eleven land-based wind turbines and ten offshore wind turbines (as powerful as the originally proposed fifteen offshore and fifteen onshore mills). In essence, the projects realised were the ones based on well-known technology while the experimental and more

demanding forms, such as producing biogas or harvesting the surplus heat from the ferries, were abandoned early on. The experiments were primarily included in the project proposal to show ambition but were not essential elements in achieving the goal of energy self-sufficiency. Keeping it simple meant that the technologies were not very technically demanding or overly complicated and could be established and maintained almost exclusively by local workers. Going with well-known technologies furthermore involved fewer risks; an essential factor in convincing the islanders to support and invest their money in the project. By today, 43 percent of the islanders' heat consumption is based on district heating, approximately half of the year-round houses have installed RE systems to meet household heating demand, and the local electricity production more than covers the electricity consumption (Hermansen et al. 2007).

Regarding the financing of the project, according to the ten year evaluation report produced by the Energy Academy, "it is difficult today to calculate exactly how much money has been invested, because many citizens have invested in individual [household] units. A qualified guess is the best we can offer; let's say four hundred million DKK (53.3 million EUR). The direct public subsidies granted the district heating projects, the offshore wind farm and the private energy projects add up to thirty million DKK (four million EUR)." (Hermansen et al. 2007: 48). This means that each islander invested on average one hundred thousand DDK (14.000 EUR), which was made possible by the island bank's cooperativeness: the bank created loan packages enabling prospective shareholders to borrow money to buy one, ten or thirty shares in the collaboratively owned technologies. Four thousand seven hundred shares in the windmills were sold, each at a price of 3150 DKK (422 EUR). "Even people who did not have a penny to their names were able to set up a deal for a bank loan", an Energy Academy employee tells me in an interview. The investments had a short payback time and were good business for banks and investors in the long run.

Not all the RE technologies are cooperatively owned. "Samsø's district heating systems and wind turbines are organised in many different ways, including several

different forms of ownership. This was not a specific goal set in the project, but the specific practical possibilities of each sub-project led to different solutions, and left us with a myriad of different ownership models specific to each renewable energy installation” (Energiakademiet 2015). Following this pragmatic approach, one district heating plant, one offshore wind turbine and two land-based windmills are owned by local cooperatives. The rest are owned by the farmers who own the plot where the onshore windmills are based; five offshore mills were bought by Samsø Municipality in support of the project; a few are owned by larger private investors and by the cooperatively owned regional utility company NRGi (previously ARKE). This mix of ownership technologies made the REI project realisable, flexible, and complex, and it secured local ownership. While the cooperatively owned RE technologies are generally highlighted, the farmers who have made individual investments of millions of Danish kroner, many of which have completely turned their businesses around, focussing on electricity production and e.g. selling their livestock, have also been actively engaged in the project from the onset.

Part five: Public resistance and support

The technical ‘Masterplan’ was communicated to the islanders in several meetings, which started one or two years into the project, when the most fundamental technical details had been settled. The story about how the islanders’ initial support for the REI project was secured has become something of a classic, well-known to most people who know about Samsø. The energy counsellor, the current Energy Academy director, was met by a lot of downturned thumbs at the first public meetings about the project. The smiths, for instance, reacted with scepticism toward the news that the REI project developers were planning to replace the old oil-fired burners in the islanders’ homes, which the smiths used to service, with individual RE technologies or district heating pipes. How would they continue their business under these new circumstances? The counsellor initially did not have an answer prepared; in his own words, he was so enthusiastic about turning

Samsø into an Energy Island that he had thought the project would be welcomed with an enthusiasm that mirrored his own. The Copenhagener who had recently taken up residence on Samsø was all for the idea and eagerly showed his support at the public meetings, feeding the islanders' scepticism: the green project was irresponsible gambling with people's money, a romantic idea they could not support.

The counsellor had to reconsider his tactics. Before the next public meeting, he called up the smith and talked to him about the possibilities inherent in the project. The counsellor together with the engineer had prepared some calculations enabling him to tell the smith about all the new heat exchangers and pipes he would get to install. And he would be offered further training so he could service the RE technologies as well. The smith did his own calculations and accepted. He was in, and he promised to show his support at the next meeting.

The counsellor then asked the smith to point out other actors central to making the district heating projects work. 'We need a few farmers to deliver the straw for the burning. The chairman of the civic organisation and Karen from the nature conservancy association need to get on board. And the principal of the continuation school and some other workmen.' The counsellor called them all up and asked them to join the next meeting and the working group that was forming. Then he called the Copenhagener and asked him to conceal his enthusiasm for now. He was scaring off the locals.

At the meeting, the engineer presented the numbers and calculations and skillfully answered the incoming questions. Then the counsellor's strategy was put to the test: would people show their support and sign up for the project work? After a long wait, the smith finally raised his hand: "I think what we need to do now is start working on the district heating project. We can't rely on oil forever." The locals started joining in. The strategy had worked. "The locals took over the project that day. They became a *we*, and our project became their project... To this day, no one complains about that time when they decided to join 'the smith's' initiative" (Hermansen and Nørretranders, 2011: 125-30). In this way the project developers learned that there had to be a business case,

that each project needed to be endowed with a ‘what’s in it for me’ or a ‘what’s in it for the community’ logic. The green ideas were not automatically accepted by the workers and farmers on Samsø.

This was in 1999, but before the projects started rolling, there was a period following the nomination in 1997 when the public was not directly involved. Technical calculations, plans and preparations were made, but no practical activities were making the REI project visible to the island public. People were getting discouraged and some perhaps started to fear that things were happening behind their backs. Resistance grew, as is evident from the debate in the local newspaper and a report prepared by Geography students from the University of Copenhagen which showed that the public knowledge, accept and participation in the REI project were low in 1998 (Busk and Ebdrup 1998), a year following Samsø’s nomination as Denmark’s RE Island.

In the beginning of 1999, Samsø Energi og Miljøkontor held a big public meeting inviting all islanders to ‘Café God Energi’ (Café Good Energy), which had the purpose of creating an open space for “discovering our common vision for the energy project’s contribution to Samsø’s long term survival and the next wise steps in the short term” (Møller, Schmidt and Nielsen 1999). Through this setup, the islanders were finally invited into the process and asked to participate and co-develop the project. One hundred and fifty people showed up. One of the organizers told me in an interview: “It looked like a friendly get-together, coffee and cake were served, but it was a very controlled process with carefully planned questions and so on. A very important seed was sown regarding the rolling-out of the coming heating plants and windmills. The Masterplan was never presented at that meeting although it lay underneath it all; we wanted people to discuss Samsø’s future and discover the value of the REI project in the process”.

Another commonly practiced ‘meeting technology’ was the kitchen meeting, private meetings held on friendly terms between the project developers and islanders central to the realization of the RE projects. The mayor, in an interview: “I knew that we

had twenty dynamic farmers and ten good business people, so when we ran into problems and needed their help, I knew that if I went out and talked to them, in the way that you and I are talking right now, over a cup of coffee or a beer in the kitchen, they would come up with ideas and offer their help and support. This way, we always knew very quickly which projects we could find support for”. Knowing the resources in the local community and keeping it informal and personal paved the way for the many smaller and larger RE projects which made up the island’s energy transition.

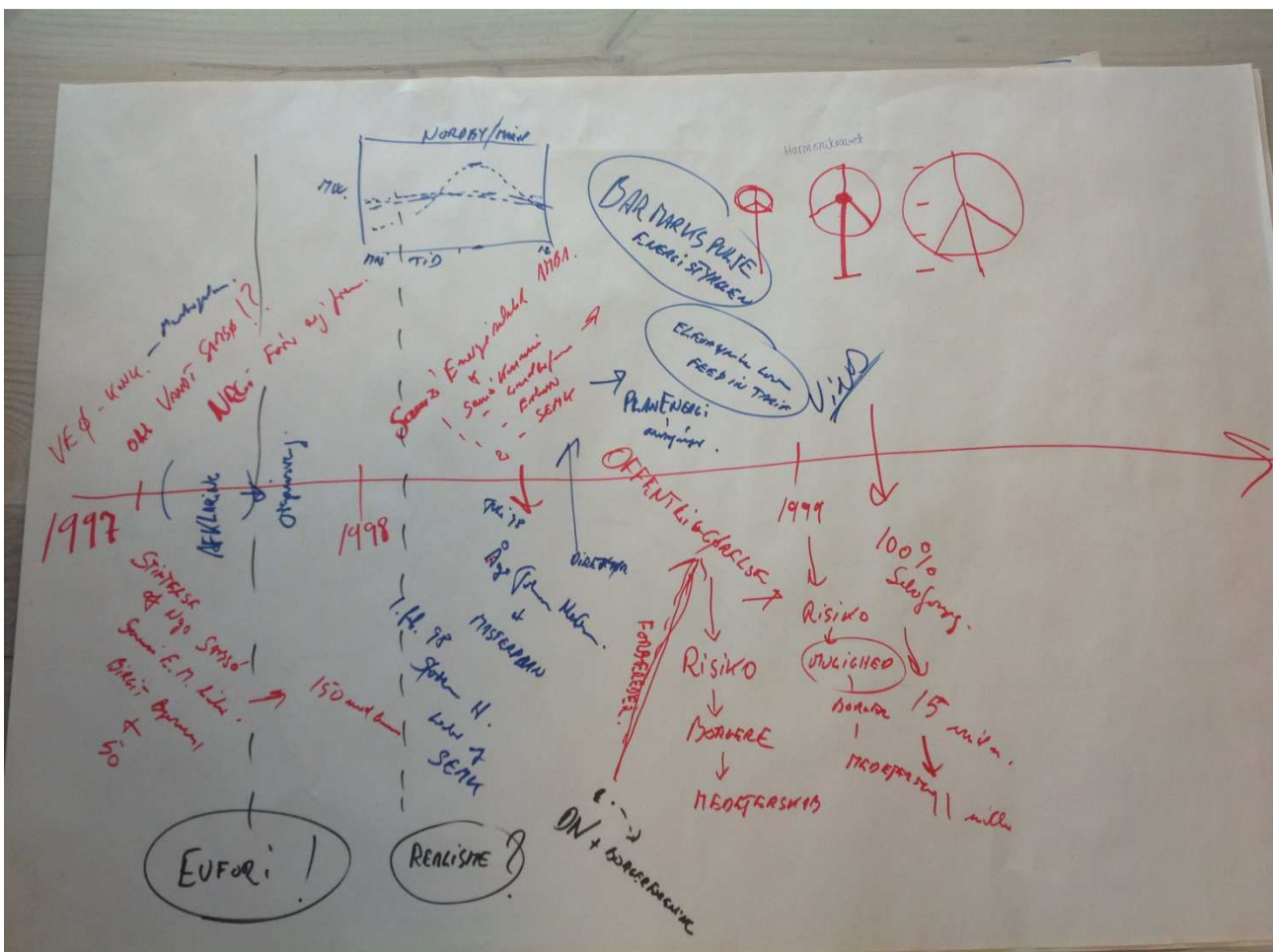


Figure 3 An alternative and more messy way of telling the story. Hermansen’s timeline (drawn as he told the story to me in one of our interviews) of the REI project from 1997 onwards with a focus on the first three-four years, including different wind turbine designs, a graph of yearly energy consumption on northern Samsø, and keywords such

as ‘euphoria’, ‘realism’ and ‘risk’ → ‘opportunity’ → ‘co-ownership’. Photo taken by the author, November 2013.

I will leave the Renewable Energy Island story at this point, though many more aspects could be covered and many more stories told. The papers develop more detailed accounts of some of these. In the next chapter I will discuss what it means to be an island, a demonstration island, and a model, and the chapter will, as noted, touch upon the question of generalizability. In taking these steps, the chapter essentially discusses and demonstrates, by drawing together and interweaving the empirical with the theoretical, the relevance of a single-case study as a knowledge-generating device doing work on several fronts: empirical, theoretical-conceptual, analytical.

3. The island laboratory

“An island is certainly an intrinsically appealing study object. It is simpler than a continent or an ocean, a visibly discrete object that can be labelled with a name...”
(MacArthur and Wilson, *The Theory of Island Biogeography* 1967, in Rainbird 1999)

“Ever since Charles Darwin studied the finches of the Galapagos Islands in 1835 it has been recognised that islands can serve as large-scale laboratories for the investigation of biological processes”.
(Cliff and Haggett, *Island Epidemics* 1984, in Greenhough 2006)

What is an island? If you look up *island* in the Oxford English Dictionary you get a straight forward definition:

“**Island.** A piece of land completely surrounded by water.”

If, however, you are interested in what, according to Rainbird, is the most common western perception of an island, *insularity* is the word you need to look up:

“**Insularity.** **1.** The state or condition of being surrounded by water. **2.** The condition of living on an island; hence, narrowness of mind or feeling, contractedness of view.”
(Rainbird 1999: 217)

Islands tend to be perceived as insular and isolated, but simultaneously as sites of promise and potential. Due to their condition of isolation, their simplicity and seclusion make them “spaces that echo the ideal conditions of the laboratory” (Greenhough 2006: 226). These island laboratories need not, as the quotes above indicate, be oriented toward natural science. Also political, social and technological processes may be successfully demonstrated on the island (see e.g. Feyrer and Sacerdote 2009, Palsson and Rabinow 1999). The island is the perfect test site, detached by definition from the

surroundings to which it can be compared. The Danish Ministry of Energy specifically called for an island to *demonstrate* Danish RE technologies and participatory processes to the world (Bünger 1997).

The notions of demonstration and innovation (as it appears in the title of this dissertation) are intimately connected. The demonstrator, the participant in a demonstration, is an overtly political actor, a political subject addressing perceived injustices through public protest. But the scientific demonstration, a method through which the truth of scientific innovations can be proved to an audience of witnesses is equally, in the STS literature, understood as a political act (see Shapin and Schaffer 1989 for the seminal example and e.g. Rosental 2013, Barry 2001, Marres 2013). Following Barry, demonstration “whether it is understood in a technical or a political sense, is, or can be made to be, a political matter. On the one hand, because there is a politics of who can, and who should be allowed and trusted to witness a demonstration... On the other hand, public demonstration is political, because the telling of a truth in public can never be described as disinterested – it is always intended to have effects on, or challenge the minds, or affect the conduct of others” (1999: 76-77). By taking on the status and role of demonstration project, Samsø becomes a political actor concerned with assembling a public around its example. Samsø’s innovation, as noted, is not a technological one, strictly speaking, but it is still a demonstration of what can be attained through the deployment of technological solutions. What the Samsø actors seek to produce and demonstrate is new knowledge about the space of possibilities for local communities facing environmental change and socioeconomic challenges.

The perception of Samsø as an area especially well suited for experiments and demonstrations of various kinds is often expressed by the islanders themselves. The owner of a local tourist attraction:

“The island can be used as a demonstration project in so many ways! It’s a way to profile Samsø. It’s this bounded area which makes it possible to demonstrate

new solutions to how you produce renewable energy or work with sustainability or build a new swimming facility. Samsø's history is very special, exactly because it's always been this delimited area"¹⁴ (Nov 2013).

The islanders' attitude toward their 'island condition' is ambiguous. To begin with, as is evident from the islander quoted above, there is a sense of pride connected to being a *Samsing*. Furthermore, in order to become Denmark's Renewable Energy Island and in the development of the project proposal, Samsø played up its island status, including in the project proposal only RE technologies which could be made to function through and rely on local resources and local labour. Becoming energy self-sufficient might imply a wish to *disconnect* oneself even further, to sever ties to the mainland and the rest of the world, going 'off-the-grid'. But, contrarily (as discussed in more detail in paper four), the aim of the REI project has to a great extent been to *strengthen* Samsø's ties to the mainland; to become less peripheral in a country where centralization is an ever larger threat to small communities facing depopulation, unemployment and the closure of vital local institutions such as schools and emergency rooms. With words borrowed from the sustainability literature, the islanders wanted to strengthen their community's resilience not, as one might expect, toward sea level rise or electricity black-outs, but toward what they experience as their socioeconomic vulnerability. As the chief executive of Samsø Municipality formulated it in a seminar, "We can't exist as an island community if we're not completely entangled with Danish society. Instead of breaking loose, we need to strengthen our connections" (May 2015). The REI project put Samsø on the national

¹⁴Among the Danish islands, several distinguish themselves by having embarked on ambitious climate and energy projects, such as Samsø's rival in the REI competition, Ærø, which brands itself as a 'Smart Energy Island' (TV2 Fyn 2014) and Bornholm, which is currently involving two thousand out of its forty thousand inhabitants in a smartgrid project as part of the larger EU network EcoGrid EU (EcoGrid Bornholm 2015). Samsø, moreover, a farming community, is known nationwide for its 'Samsø potato', a variety of early spring potato originally developed by a local farmer, as well as (according to the locals) for being the first in Denmark to artificially inseminate cows, and the first to eradicate bovine tuberculosis.

map, “uniquely connected” rather than isolated, as ethnographer Laura Watts writes about the related case of the Orkney Islands (2014: 66). It is in this tension between localism, insularity and connectedness, between attachment and detachment, that Samsø as Denmark’s Renewable Energy Island exists.

This characteristic has implications for our understanding of Samsø as a case not of environmentalism or idealism, but as a pragmatic example of a community under pressure, which has managed to turn the global ecological crisis into a tool for self-preservation and for forging new connections in Denmark and abroad. Theoretically, this points us in the direction of a relational-constructivist approach, one that allows us to investigate the dynamics that went into the making of the Renewable Energy Island and to inquire into the relations that have formed between Samsø and its surroundings as a result of the REI project. This theoretical approach, in which I take as my point of departure the empirical philosophy of (post-)ANT (Mol 2002), will be laid out in the next chapter.

The island as test site

In spite of its conventional appearance the Norwegian merchant ship M/S *Balao* was an ‘experimental ship’ (Lezaun 2011). Built in the 1970s as a general purpose cargo ship, it was later rebuilt to accommodate new, democratic forms of work organization challenging the traditional hierarchical structures of the offshore and onshore workplace. On *Balao*, social as well as physical structures were redesigned to create a ‘sustainable work democracy’. Decisions regarding work tasks were made on a week-to-week basis in small groups involving low- to high-ranking employees sharing responsibilities and participating equally. M/S *Balao* was stripped of status indicators. Whereas the employees with the lowest jobs would traditionally be lodged toward the bottom of the ship, in the dark near the engine room, while officers of higher ranks would occupy the spacious and light upper floors, on the *Balao*, the living quarters were standardized with cabins of roughly the same size and decor. The experiments in democracy conducted on

the ship were considered successful, but somehow the results failed to travel and inspire. In his conclusion, Javier Lezaun reflects on the nature of the demonstration experiment or public demonstration: “the challenge is always how to create the conditions for the dissemination, amplification or proliferation of affects generated in political laboratories” (576).

One of the central questions of this thesis is how Samsø managed to break the isolation that prevented M/S *Balao* from succeeding as a demonstration project. A ship and an island, both surrounded by water, must work hard to create the conditions that will allow their experiences to proliferate. The techniques developed by the staff of the Energy Academy to accomplish this are analysed in paper one. Being a demonstration island or a test site implies a degree of isolation; the test site must be discernible and different from its surroundings. Ties must be severed, an interplay between attachments and detachments set in motion (Jensen and Winthereik 2015) bringing new relations into being. There is freedom built into being a test site; not knowing where the experiment will take you but learning as you go allows you to define your own criteria of success and failure, the experiment being so new, so innovative, that even the central question of ‘what is this a test site for?’ can be left open¹⁵. As I argue in paper one, the openness of the Samsø case is a strength when it comes to the proliferation of the experiment. Whether a climate or an energy project, an experiment in democracy, management or rural or island development is never fixated, and this versatility makes Samsø relevant to various contexts all over the world, continuously forging new connections despite the fact that the REI project was concluded in 2007, close to ten years ago. The steady stream of visitors to the island’s Energy Academy and the fact that new media articles

¹⁵ There is an interest in STS in what you might call social science experiments, such as experiments in participatory formats (e.g. Lezaun 2007, 2011, Jensen 2005) and participatory, green initiatives (e.g. Marres 2013). What characterises these experiments is first and foremost their open-endedness and potentials for learning; they allow for “exploring and testing forms of life” (Marres 2012b: 76). This, naturally, sets them apart from the natural science experiment, also a long-time interest within STS (e.g. Shapin and Schaffer 1989), as a scientific method.

continue to be written about Samsø's experiences testify to this (see e.g. Cardwell 2015, Spear 2014, Maach 2013).

As opposed to the scientific laboratory which might make claims (however unacceptable to STS) to being apolitical, this type of test site is political beyond discussion. With the decision to enter Samsø into the REI competition, the island entered a reality already established and codified according to a language of environmental governance and became part of a transnational network. The concept of the 'Renewable Energy Island' was established internationally as well as regionally within the EU in the nineties (Energistyrelsen 1998), and a global network of RE islands still exists (GREIN: Global Renewable Energy Islands Network) as part of IRENA, the International Renewable Energy Agency, an intergovernmental organisation "that supports countries in their transition to a sustainable energy future" (IRENA.org). The concept of the Renewable Energy Island is a policy tool, a technology of government in the Foucauldian sense, with in-built rationalities which the Samsø actors accepted to take on, turning the island into an experimental test site committed to becoming *at least* CO₂ neutral (Foucault 2007, Asdal, Borch and Moser 2008). There is nothing radically new to this way of assigning statuses and tasks to places and thus creating sites of experimentation to do the bidding of governing authorities; it is quite commonplace in mainstream environmental governance (see e.g. the Danish municipal Climate Communities project (Danmarks Naturfredningsforening) and the Rockefeller Foundation's 100 Resilient Cities project (100 Resilient Cities)). What makes Samsø interesting to me is not so much the critical political perspectives inherent in this (easy-come nation branding, possible obscuration of governmental responsibility by assigning responsibility to smaller units, etc.)¹⁶, but rather what Samsø did with this status of demonstration island, and how the title has transformed Samsø.

¹⁶ As I show in paper one, in Denmark Samsø is best known for its potatoes and tourism. The argument that the Danish state might have stuck Samsø with its green responsibilities and now flags Samsø around the world as the symbol of 'green Denmark' thus avoiding central action does not go very far. Since the first project years, the Danish state has not paid much attention to Samsø.

When Søren Hermansen, the director of Samsø Energy Academy, gives his lectures all over the world, he sometimes mentions, as noted in the introduction, that Samsø is *one hundred and forty percent CO₂ negative*. Normally no one questions this figure, but once, Hermansen told me, a Hungarian mathematician approached him after a talk inquiring about the number. With Hermansen unable to provide an explanation that satisfied the inquirer, the mathematician instead told him a joke. A man is sitting in a hot air balloon, lost. He sees someone on the ground below him and asks him, Excuse me, can you tell me where I am? The man on the ground contemplates this and finally answers, Yes, you're in a hot air balloon.

What made the mathematician think of this joke? Hermansen himself laughed but did not elaborate when I put the question to him. Perhaps he focused on the 'hot air' part of the joke. To me, the joke can be read as a comment to the detached position of the demonstration island. Being a test site is at once a self-referential and an extrovert position. Your success depends on your ability to communicate your results, learnings and experiences to others, which is where Lezaun's merchant ship failed to perform convincingly. But, as noted, with the experimental site being detached from that which is already known, the actors are free to define these learnings. There is no pre-defined yardstick with which to measure the success of something that is truly 'new' or 'innovative'. Apart from the main project goal of energy self-sufficiency, formulated by the Ministry of Energy in 1997 and met already in the beginning of the 2000s with the establishment of the offshore wind farm, what makes the REI project successful? Being not CO₂ neutral but one hundred and forty percent CO₂ negative has been made one such signpost of success. While Hermansen is not afraid of admitting that the number is "absurd", the figure has become one of the tools aiding the island actors in making Samsø relevant in the global climate debate. These lines in a magazine article illustrate the point, as they underline the status of 'fact' ("the bottom line") that has been granted to this figure:

“The bottom line: Samsø is 140 percent carbon negative, while virtually the rest of the universe except for off-the-grid pockets in a few communities and the solar-powered International Space Station is carbon positive to the tune of adding 27 billion metric tons of CO₂ to the atmosphere each year.” (Williams 2007).

However powerful, this ‘fact’ of carbon negativity is anchored in storytelling and demonstration. It is communicated in lectures, in films and texts, which, as noted, function as public demonstrations the purpose of which is to construct and convince their audiences of the truth value of that which is demonstrated. Who transmits the message and this person’s powers of communication tend to be essential to its reception. Lately, Samsø Energy Academy has been working to free itself from this dependency on the story and the storyteller, attempting to create a more ‘abstract’ version of the Renewable Energy Island. An Academy project manager here formulates the hope that this new version of the RE Island might be more potent than the stories in inspiring *action* elsewhere:

“The story, the narrative, can create a distance. Because times change, and most of this happened in the nineties. So we need a tool which can enable us to speak from a common starting point although we’re coming from different places, so that it’s not the storyteller, the person, that is in focus, but this tool which creates a common place, a new commons, a new *we*. We can’t exist in the shadows of the past anymore, we must move towards the future, where we don’t tell stories and listen to stories and grow big ears, but where we *act* and get powerful feet.” (fieldnotes September 2015).

The making of a model

There is a difference between giving presentations that can be tailor-made for each new setting (the demonstration project and test site), and giving Samsø's experiences model form, which is what the project manager in the quote above prepares the stage for. Making the RE Island into a model – a form much more abstract than the story which lives and breathes its specific, local details – entails making Samsø's experiences applicable to other contexts in a form so simple as to allow the 'Samsø model' to speak to and unite various interests at various sites *at once*, yet still maintain the singularity implied in its being the '*Samsø* model'. By turning the RE Island into a model, the perspective shifts; whereas the story is inextricably linked to and situated on Samsø, a successful model is defined by its ability to escape its situatedness, to shed new light on and be an instrument of change in other contexts. The model, built to escape its own context, offers an analogical form of knowledge (Agamben 2009).

To elucidate through a brief detour to Italian philosopher Giorgio Agamben, the model (or 'paradigm' in Agamben's exploration of Foucault's method) is "neither particular nor general". It neutralizes this dichotomy by managing to be at once an epistemological figure (a simplistic, general concept, 'the Samsø model') and to perform, simultaneously, a decisive strategic function (being a particular empirical phenomenon) (Agamben 2009: 11-31). To illustrate this through terms from the classic actor-network theoretical repertoire, this means that Samsø as Denmark's RE Island has to be *at once* a *mutable* mobile – continuously changing, capable of being an example of community-building in one setting and an ambitious climate project in another – and an *immutable* mobile¹⁷, the model that travels without changing. Quite a feat! How do you manage to be both separate from the world, suspended in a hot air balloon situated nowhere, and an example for imitation, a source of concrete inspiration and stories? How to span

¹⁷ The 'immutable mobile' is a concept introduced by Latour to describe displacement without transformation (of the thing that moves). Its counterpart, the 'mutable mobile', it follows, describes displacement through transformations; a thing that moves due to its ability to change (Latour 1983, 1987, 2005).

from specific to general, when the success of Samsø's REI project is built on ever-changing, flexible, but also quite concrete, down-to-earth criteria (an example of energy self-sufficiency, of 'energy democracy' and participatory processes, of CO₂ negativity and community-building through cooperative investment schemes, etc.)? Samsø Energy Academy's recent attempts at constructing a model so abstract as to maintain this flexibility will be discussed in the remainder of this chapter.

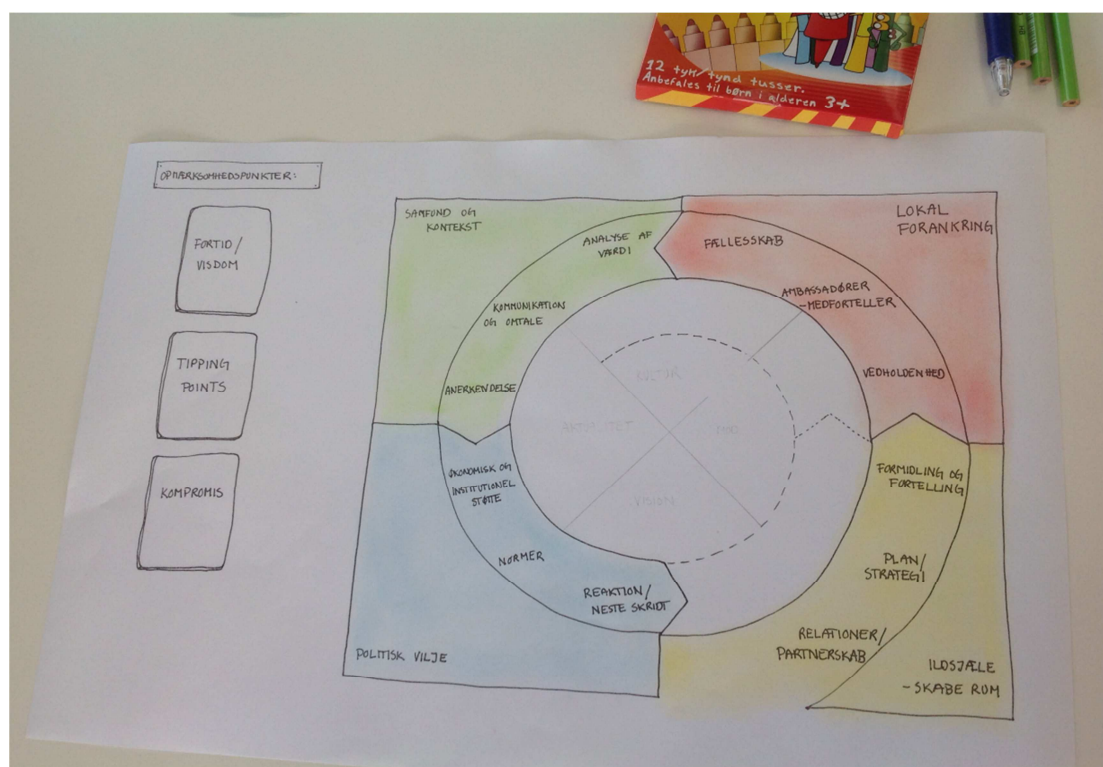
The development of models is a recent interest within Samsø Energy Academy and an activity which I was invited to take part in¹⁸ as a member of the Academy's *wisdom council*, a small group of external actors, academics, journalists and artists (no technical experts or energy company representatives were involved) who as part of the project "Local pioneer communities – a guide for local sustainable development" have been asked to assist the Energy Academy in capturing the fundamental dynamics underlying the REI project's success. As part of *the wisdom council's* first meeting in March 2015 we discussed dynamics and organized the identified factors into models to guide other local endeavours of similar scale. One of these models is depicted below in figure 4. The model's yellow area reads *activists* (in the spiral: relations/partnerships, plan/strategy, communication and narrative). An arrow is built into the spiral signalling that the process starts with the 'activists'. In the red area it says *local anchoring* (persistence, ambassadors/co-narrators, community), in the green *society and context* (analysis of value, communication and publicity, recognition), and lastly, the blue area: *political will* (financial and institutional support, norms, reactions/next steps). To the left of the model, *points of constant attention*: past/wisdom, tipping points, compromise. I will not attempt to further explain or analyse the model at this point; it is a rather nebulous construction kept open to interpretation by design, despite being quite detailed. As noted, openness is part of what will allow the model to travel, if successful.

As an additional exercise we were asked to subject projects of our own choosing to the model, to consider the many steps of the model and move through the spiral: had

¹⁸ In chapter five I develop the methodological framework and explain my role and position in the field.

the project in question proceeded along similar steps, or would it have benefitted from a similar stepwise unfolding? Discussion points could be: was care taken to involve the public as ‘co-narrators’? Was sufficient attention paid to compromise and to lessons from the past? This was just one in several models developed as part of the project and discussed at the meeting. The Academy project managers made sure to stress that “we aren’t making a guide or a tool box. Projects aren’t the same. But the model can spark some considerations even if it’s not ‘one size fits all’ ”.

Figure 4 Samsø model, March 2015. Photo taken by the author.



While it is stressed that all projects are different, the Academy staff members seem conflicted when it comes to questions of the application and generalizability of Samsø’s REI project to other contexts and projects. The director Søren Hermansen gave voice to this ambivalent position in his introduction to *the wisdom council* meeting: “There are many stories in the REI project, and we always take our point of departure in the fact that we’re simply storytellers. But storytelling will eventually reach a point of saturation. We

can show our visitors the wrenches, the hammers and the tools, and they might want to do something similar at home, but we haven't prepared a recipe for them. That's why we need to build models: to show them how to do something similar and to make our story more systemic¹⁹".

Different modes of generalization

As noted, it is not modelling that has made Samsø famous; it is the storytelling, the presentations given at the Energy Academy and all over the world; presentations moulded to fit each audience. Model-building is a new approach. But the notion of a 'Samsø model' is often heard at the Energy Academy. When the Danish government introduced an unpopular public school reform resulting in labor conflict in the fall of 2013, lunch conversations centred around the fact that the government was not following 'the Samsø model', meaning that the government did not take the public seriously and neglected to take the time to hear people out and involve them in the reform process. In this instance, the notion of a 'Samsø model' was used to denote a model of public involvement and local democracy centering on the notion that everyone should have a say in matters relevant to them. Having made Samsø energy self-sufficient with RE technologies without significant public protest and controversy has turned the island representatives into authorities on public participation processes, not just in their own view but in the eyes of the surrounding world as well, as among other things the Energy Academy's participation in numerous EU projects concerned with securing public involvement in RE development processes testifies to (see e.g. Christensen 2014 and the EU project Implement).

This brings me to the question of generalization: an almost obligatory follow-up question to the presentations given at the Energy Academy, just as it is a question commonly put to me in academic contexts. What is the applicability of Samsø's experiences? Or, as it is often put: Can there be other Samsøs? Is this a unique case? To

¹⁹ In Danish: "helhedsorienteret".

me, and in terms of the ambitions of this dissertation, this question is somewhat beside the point. Samsø's relevance as a study object is not grounded in its possibilities for replication; on the contrary, I view Samsø and all its specificities as interesting in their own right. Having studied Samsø, I am certain that similar dynamics will be identifiable in other contexts, but there will also be differences, and these differences, not having studied other similar cases, I cannot know in detail (see Mol 2002: 2 for a similar point). This, however, does not mean that the question is irrelevant. As a well-known public demonstration project – a project that has managed to convince various audiences of its merits and inspire them to pursue similar projects – at least one kind of answer to the question seems straight-forward. Yes, Samsø *is* inspiring similar doings in other locations. But my main approach is to let the island actors make their models and tell their own stories, and I will focus on discussing the question of generalizability from their point of view, as it is, as the activities surrounding model engineering indicate, of some concern to them. While no models for dissemination will arise out of *my* work, the question of the generalizability and relevance of Samsø's experiences in relation to the status I assign to this island as a case of a community-based green energy transition does warrant some discussion.

Approached as an empirical question, two different takes on the question of generalization can be identified as co-existing yet dissimilar logics. One is based on a logic of scalability and comparison and is concerned with whether local RE transitions (or, more generally, community-building activities not necessarily related to sustainability) such as Samsø's are transferable to other contexts. The answer given at the Energy Academy is based on scale: you do not turn Copenhagen or Aarhus, Denmark's two largest cities, into Samsø replicas, but you can take a neighbourhood about the size of Samsø and try to mould it in Samsø's image. Recall Agamben's model, which is "neither particular nor general": Samsø is not treated as if inextricably tied to its local specificities, but neither is it viewed as readily applicable to any other context. But, as the Energy Academy's daily manager puts it, "Gellerup [a vulnerable housing estate],

for example, is also just an island in Aarhus”. There is thus a notion that Samsø’s experiences can be relevant and applicable to areas of similar size. Framing places as islands comparable to Samsø is one mode of generalization undertaken by the Energy Academy actors.

While this first logic relates to the Academy actors’ faith in model-building as described above, a second logic of generalization is based on learning and experience rather than on scale and transferability. This logic is closely aligned with the daily activities of the Energy Academy of receiving visitors and telling stories (see papers one and two). During my first months of fieldwork, while I was still keeping track of the visitors entering the organisation, I encountered people of more than twenty different nationalities. Taiwanese guests came to study the energy systems installed on the island. An American film maker creating a film about sustainability projects in Detroit stopped by, and so did Japanese business managers interested in improving workplace democracy and eager to learn the value of ‘drinking coffee’ with their employees (one of the classic Samsø narratives, see paper two).

The core of this second logic is not quite modelling, nor is it storytelling as such. Lingering somewhere in between, this logic is related to the ability of the demonstration project to spark discussion and reflection, to become “a material instrument of engagement” (Marres 2012: 107). The core of this logic lies in the ongoing endeavour of demonstrating Samsø’s accomplishments as true. But as Barry notes, “[t]elling the truth is always going to be a difficult matter. It is difficult even when the technical and financial resources are readily at hand. It requires work to set up a site where the truth can be demonstrated. It requires the appropriate witnesses to be present. It involves the development of instruments with which the truth can be made visible” (Barry 1999: 87). A carefully orchestrated empirical setting, the Energy Academy welcomes its visitors into an architect-designed building built on ecological principles with PowerPoint presentations, tours around the island and engaged discussions with the staff. The Academy director puts his aspiration into words, stressing how the Academy’s desires go

beyond mere storytelling, how, through the demonstration of the island's experiences as true, the ambition is, ultimately, "to have effects on, or challenge the minds, or affect the conduct of others" (Barry 1999: 77):

"You can question the value of the model, but you can't question the value of the discussion. When I tell the story, it's basically *my* story, but while the listeners can be fascinated, they can still go home and say, 'But we're not them, so how can we use this?' So it's a question of changing the perspective, of making it relevant to other people's contexts, and we can do that through discussions. In that way it's not us telling stories, but we motivate people to tell their own stories. That way we can take it to the next level."

"What is the epistemological and political status of something that has been demonstrated on an island?" Lezaun asks in his article about the Norwegian merchant ship and demonstration experiment (2011: 558). This chapter has taken some steps to demonstrate the affordances of the single-case study as a knowledge-generating device that can be calibrated and put to work in both empirical and theoretical settings. I have attempted to lay out some of the complexities connected to Samsø's status as an island laboratory, an experimental test site and demonstration project, a close to mythical place from which inspirational stories originate, and possibly a burgeoning model of sustainability. In regard to a proliferating, unruly place, questions of generalizability cannot be straight-forwardly answered and should not take center stage, nor should we attempt to solve them once and for all. Instead, I hope this exploration has taken some incipient steps to make clear the grounds of my argument that Samsø is not first and foremost a case of a technological RE transition but an interesting sociotechnical experiment involving a community and an island the status of which seems to be ever-changing.

A further ambition of this chapter has been to draw the reader into the analytical, the theoretical and empirical, logic of this dissertation, which I will now elaborate further. In the chapter to follow I will approach STS and post-ANT not so much as a theoretical framework but as an analytical attitude informing this dissertation. In connection with this, in the second part of the chapter, I will offer an argument that the ‘slow science’ and empiricist attitude of STS has something to offer to the discipline of political science.

4. STS as empirical philosophy

Empirical philosophy. These were two words I used in the previous chapter to characterize the theoretical and, tightly connected with that, methodological approach of this dissertation. STS researcher and philosopher Annemarie Mol introduced the term in her book *The Body Multiple*, a seminal work in (post-)ANT, in which she studied the medical practices of diagnosis and treatment of atherosclerosis in a Dutch hospital (2002). Over the next pages I will try to illuminate and lay out the logic of empirical philosophy underpinning (post-)ANT, before I turn to a discussion of notions of the political in STS and what these might bring to the discipline of political science. The purpose of this exposition is not to provide a comprehensive introduction to the theoretical field of STS, but to put the reader in a position to follow the logic of my analytical approach and my arguments as they are developed in the five papers. Essentially, this metatheoretical section will elucidate and center on the relation between STS and ethnography as captured in the term ‘empirical philosophy’²⁰.

In the following quote from *The Body Multiple* you might recognize the logic which in the previous chapter led me to treat the question of generalization as an empirical one rather than as a concern driving my research. Mol writes: “I wanted my observations to be a means to get to know their [the doctors’ and patients’ at the hospital] standards, rather than an occasion to apply my own” (Mol 2002: 3). I take Mol’s words to mirror the sentiment with which I approached Samsø. I ventured into the field with an ambition to get to know and learn new things about Samsø, the RE Island. As I investigated the practices and the units the relations between which make up

²⁰ In his article *Ethnography and the Development of Science and Technology Studies* (2001), Hess defines the ethnographic STS studies that adhere to the label of ‘empirical philosophy’ as the second generation of ethnographic studies in STS. These tend to be more socially and politically engaged, as well as more constructivist and engaged in activism and intervention, than the first generation of studies which occurred within a current of STS known as the Sociology of Scientific Knowledge, concerned mainly with studying the social construction of science.

the island reality, I attempted to keep my preconceived and theoretically derived notions of e.g. public participation from interfering with my inquiry, so as to allow a situated, specific notion of public participation to arise from my interaction with the field.

This strong empirical commitment is in line with Latour's well-known directive to the practitioner of actor-network theory (ANT) to "follow the actors" and take them seriously, "to catch up with their often wild innovations in order to learn from them what the collective existence has become in their hands, which methods they have elaborated to make it fit together, which accounts could best define the new associations that they have been forced to establish" (Latour 2005c: 12). In this type of research, what counts as empirical data for the researcher to regard as part of her investigations and include in the subsequent writing up of the analyses cannot be known in advance, just as the relevant (and irrelevant) categories or types of data cannot be decided independent of the empirical investigation. You go where the actors lead you, ideally – because this is obviously an ideal of research, something to aspire to – and whatever the actors consider and demonstrate to be part of their practices, their worlds and networks, become relevant to the analysis and should be accepted as empirical data. With Mol, "objects come into being – and disappear – with the practices in which they are manipulated" (2002: 5), and it is the task of the researcher to be alert to and register such movements, rather than to judge an object, practice or actor as *a priori* central, or irrelevant, to the analysis.

In line with this logic of research, anthropologist Martin Holbraad points out that "the most interesting anthropological data are those that cannot be captured by the analyst's default concepts. Alterity, in this sense, becomes central, since we must always begin analysis in the dark, mired in misunderstanding." Taking the actors seriously, to put it differently, means being open to transforming our *a priori* concepts to such an extent that the actors' own concepts come to make sense. This is the focal point of the researcher's analytical work. "Arguably," Holbraad continues, "we have here the makings of a method that may allow us to approximate an understanding of native

concepts and the strange statements that define them – a method I call ‘ontography’ ” (2009: 90; on ontography see also Lynch 2013). The notion of ontography describes a shift in focus from epistemological questions (what can be known?) to ontological questions (what exists?).

The logic of this empirical commitment finds its source in the constructivist roots of STS and thus in the *philosophy* part of empirical philosophy. It is, as previously noted, not a philosophy that puts the lonely human at its center (Gad 2009); humans do not act alone. Instead, questions of interest centre around the interactions of humans with non-human actors, and how these interactions lead to the making of *heterogeneous* and *multiple* realities. Heterogeneous because numerous elements go into the making of these worlds; multiple because reality is not ordered once and for all but done in practice, through materially embedded practices, all the time. As Latour puts it, “there exists no society to begin with” (Latour 2005c: 37). We bring reality into being through our activities – and different activities and practices enact different realities which exist simultaneously.

STS, then, is also a theory about *performativity*: “entities achieve their form as a consequence of the relations in which they are located... [T]his means that... they are [also] *performed* in, by and through those relations” (Law, 1999: 4). These activities can be studied and the ensuing reality/ies described, but we cannot go beyond that which can be empirically known. Where the actors’ trails stop, there must our investigations also stop – another consequence of our strict empirical commitment. This grounding in particular, observable circumstances sets boundaries for what can be analysed and described from an STS-informed perspective and renders standard scientific criteria such as *empirical generalization* unattainable but also irrelevant, as the very existence of any such ‘general’ perspective goes against the performative ontology of STS according to which realities are done and known only through concrete practice.

Still, the empiricism inherent in STS should not be overstated or presented too simplistically. With all the empirical situatedness of ethnographic analysis, the relation

between the empirical and the conceptual can be described as one of “continuous variation” (Deleuze and Guattari in Jensen 2014), a travelling back and forth between the field and the desk, our observations and concepts. Hess describes this as the “stepping in” and “stepping out” process which prevents the ethnographer from “going native”, inserting a distance that is needed in the social scientific analysis of one’s observations (Hess 2001: 10). The way in which I, in paper three, made central the notion of hope to the analysis of a meeting I participated in is a case in point. The concept of hope was brought to bear on the data material because I believe it makes sense analytically as well as empirically, but it is a layer which *I* have added, not something that was discussed explicitly in the material. The type of generalization inherent in this logic is sometimes termed *analytical generalization*, a genre of generalization embedded in its context of origin where what is ‘generalized’ are the analytical points, the dynamics and patterns investigated, the theory developed (Schwartz-Shea and Yanow 2012: 145, Halkier 2008). Connected to this, STS researchers do not claim to be able to, or to strive for describing the world as it *really is*, although ethnography can be said to have “more robust contact points with the real” (Jensen 2014: 194-95). Central also in Holbraad and Lynch’s discussions is this constant traffic between the empirical and the conceptual; a trafficking so intense that the division between the two will ideally be dissolved as empirical concepts are turned into theoretical ideas and vice versa, establishing symmetry between two domains that tend to be kept separate.

The foregrounding of the *practices, materialities, events* (Mol 2002: 13) and the materially situated *settings* which bring together and make visible the ways in which particular realities are built, I believe ran as an undertow in the previous chapter in which I described Samsø as an island, a demonstration experiment and a model. By focussing on the activities of the Energy Academy staff as I outlined their attempts at turning Samsø into a model and their success with making Samsø known worldwide as Denmark’s RE Island, Samsø emerged as an ontologically multiple phenomenon: as a physical place, a set of travelling narratives and a model constructed for purposes of

generalization – all at once. Certainly, one of the challenges of being simultaneously Denmark’s RE Island and a peripheral community on the outskirts of Danish society is to juggle and balance these modes of being. Once in a while they come into conflict with one another, as it happened when the authority of Søren Hermansen, the main representative of the Renewable Energy Island, was questioned by the audience at an election meeting prior to the 2013 municipal election. Hermansen acted as the moderator of the debate between the representatives of Samsø’s political parties. When the debate turned to how Samsø’s future was best secured – whether through investments in tourism and farming or through further investments in RE technologies – the islanders at my table started a loud conversation about the Energy Academy’s work and position on the island, characterizing it as an isolated, unwelcoming institution divorced from island life in general, just as Samsø’s green ‘brand’ (fieldnotes, November 2013). The participants did not feel represented by Hermansen who had been appointed ‘the voice of the islanders’ for the evening. Sometimes realities clash, and what I witnessed was a clash between the reality I was part of at Samsø Energy Academy and the reality of some of the islanders; a clash of seemingly incompatible worlds²¹.

As should be evident already in the term ‘empirical philosophy’, the traditional compartmentalization of theory, method and analysis into separate domains cannot be upheld within an STS framework (although, for the sake of the reader’s general overview of the text, I have attempted to maintain some division between the methods and theory sections). ANT in particular (see e.g. Latour 1993) grew out of a distaste for such artificial distinctions commonly found in the natural sciences and in several branches of the social sciences. Political theorist John Dewey, whose pragmatist thoughts have been a great source of inspiration for STS researchers and political scientists alike, put it provocatively already in 1927: “The backwardness of social knowledge is marked in its

²¹ In the following chapter, which goes into detail with my methods and analytical approach, I will elaborate on the consequences of my choices with regard to my positioning in the field and describe how these have delimited and defined what I can reasonably call my field and, thus, the scope of this dissertation.

division into independent and insulated branches of learning” (Dewey, 1927: 171). Instead of organizing thinking by building boxes, definitions and other abstractions, STS practitioners focus on bypassing and breaking up such distinctions.

One of the central points of STS, one that is intimately connected with Dewey’s theorisations (Dewey 1938), is how knowledge of the world is intimately connected with our methods for generating this knowledge (see Law 2004). With their laboratory studies, Latour and Woolgar demonstrated the fiction of ‘pure’ data and science, describing how scientific facts are not discovered but fabricated through laboratory work, and how ‘facts’ are insoluble from the methods and the social and material entities with which they were produced (Latour and Woolgar 1986)²². It should come as no surprise that this commitment to critically interrogate and describe phenomena and distinctions as constructs rather than givens would in the years to come become fundamental to STS researchers’ own scientific practices.

Philosopher and STS researcher Isabelle Stengers relates the ‘*slow*ciology’ attitude of STS (meticulous, comprehensive, messy, in contrast to ‘fast science’ sociology; Latour 2005c: 122) to what she perceives as the deteriorating state of the world: “It is heard that our ways of life will have to change, and this certainly entails a change in the way we relate to our environment, social and ecological. Can we claim that such change does not also entail a change in the ways our academic knowledge relates to its environment?” (Stengers 2011: 5). Stengers’ call is to slow down the pace of science, to make room for academic attitudes that do not strive for simplification:

“What is messy from the point of view of fast science is nothing else than the irreducible and always embedded interplay of processes, practices, experiences, ways of knowledge and values that make up our common world... [M]essiness is returning with a vengeance. Ignoring it, dreaming of its eradication, we discover

²² For a much earlier but similar point, see also Dewey: “The layman takes certain conclusions which get into circulation to be science. But the scientific inquirer knows that they constitute science only in connection with the methods by which they are reached” (Dewey 1927: 163).

that we have messed up our world. I would then characterize slow science as the demanding operation which would reclaim the art of dealing with, and learning from, what scientists too often consider messy, that is, what escapes general, so-called objective, categories” (Stengers 2011: 10).

With Stengers I wish to disclose, finally, that the empirical philosophy or ‘slowciology’ of STS is not simply an analytical attitude; it is also a political attitude. Samsø’s transformation into Denmark’s Renewable Energy Island was a local project involving four thousand islanders transforming many aspects of life on the island. It was also a national political project initiated by the Danish Ministry of Energy and Environment. And when island representatives travel the world to communicate the central claim of Samsø “that we have to change our ways of behaving in this world” (Stengers 2001: 13) this is equally to be regarded as a political activity. How to describe and understand Samsø’s activities as *political* processes? This is certainly “politics by other means” (Latour 1988: 229), politics outside of the ‘usual’ realm of politics, if we take this to be the formal political institutions. So what kind of politics is this? With STS, this becomes an interesting empirical question. As an analytical strategy, STS puts us in a position from where we should be able to capture the *newness* of such processes, embracing and diving into, rather than attempting to explain away or ignore, the messiness and potential unknowns of the empirical material.

STS and political science

How can the empiricist attitude of STS be related to the discipline of political science? How may STS be put to work in the study of the political? It should come as no surprise that STS has a sensitivity toward politics. Indeed, Mark B. Brown in a recent publication identifies five ideal-typical conceptions of politics in STS and, perhaps more centrally as these ideal types overlap and intermingle to a large extent, makes the argument that “a view of politics as everything that affects the common world tells us little about what

political activity might entail” (Brown 2015: 23). In the following, I will explicate what I take to be the contribution of STS to the study of politics, while attempting to avoid the pitfall of ‘everything is political’. In the process, I hope to make the assumptions about politics underlying this thesis clear. I structure my account around elements of three of Brown’s ideal types, but since the notion of politics developed here is empirically informed and directed by the case of Samsø, the account does not rigidly adhere to any pre-established classifications. What I present here, and this will be especially clear in the final section *Democracy as Collective Self-governance: Reinventing the Island*, is a contextual understanding of politics, one that is developed in the light of the empirical case, not a general theory. As such, this exposition flows out of the empirical philosophy of STS and follows the empiricist logic just described.

It should be noted that the interest of STS in political theory was originally sparked by a critical aspiration to interrogate the relation between politics and science (see e.g. Latour and Woolgar 1986, Jasanoff 1990, Wynne 1992, Nelkin 1971, Collins and Evans 2007). This led to a focus on the production of knowledge and expertise and a concern with the involvement of ‘lay citizens’ in technological decision-making and thus to what Moore calls ‘a participatory paradigm’ in STS (Moore 2010: 794). Put simply, the primary concern of STS researchers interested in politics was with the involvement of ‘lay citizens’ in technoscientific issues. As Moore notes, Latour (2007) “concedes... that STS took its political theory ‘off the shelf’ and unwittingly slipped into a largely uncritical advocacy of participatory democracy as the chief vehicle for bringing the sciences into democracy” (Moore 2010: 795). With Marres’ and Latour’s introduction of Dewey’s pragmatism into their STS-informed political theories (Marres 2005, 2007, Latour 2007) a shift was undertaken, which also constituted a shift away from the strict focus on knowledge, expertise and Science with a capital S. From knowledge controversies and laboratories, Latour turned his attention to “the complex and entangled practices of politics as well as of the sciences symmetrically” (2007: 1) in his “Parliament of Things” (1993, 2004, 2005, Latour and Weibel 2007; see also Bennett

2005). Meanwhile, Marres focused, among other things, on the everyday as a site for material-political engagement and participation, moving, with inspiration from Dewey, “beyond the opposition between technocracy and public participation” (Marres 2007: 766, see also Marres 2012a, 2012b, 2012c, 2011) and onto a different terrain.

The political terrain into which I will dive over the next few pages is even further removed from technoscientific discussions of the involvement of ‘lay citizens’. Participation remains central: on Samsø technoscientific solutions were indeed implemented and citizens involved, but, as I discuss in paper four, *everyone* involved in the project including the project developers (apart from the engineer from the mainland who moved to Samsø and was soon regarded as a local) was a local ‘lay citizen’, not an expert in RE technologies or processes of public involvement. Knowledge, as such, was never a key resource. New skills could always be acquired; there was no threshold for participation. Participation, understood as the willingness on the part of the islanders to invest their efforts into the RE projects, became key to the realisation of the project and a valuable resource in itself (Kelty 2012: 5).²³

This feeds into one of the main arguments of this thesis, namely that an STS-informed analysis of a community-based energy transition need not focus primarily on technoscience but may, and probably even ought to, apply a wider perspective: one that views the processes of change involved in the transition as collaborative efforts in community building, reinventing the community through the reinvention of energy systems. Contrasting Brown who claims that “where there is no conflict and no power, there is no politics” and, consequently, “where there is no politics, there is no need for democracy” (Brown 2009: 188-91 in Moore 2010: 797), I argue that exactly democracy,

²³ Participation, acceptance, public involvement – in social scientific RE research these tend to be grouped under ‘the social aspects’ of e.g. wind power implementation and be keywords central to understanding opposition and support of RE initiatives (see e.g. Aitken 2010, Cotton and Devine-Wright 2012, Wolsink 2007). While I investigate these dimensions in paper five, when I discuss participation (primarily paper four), I tend to relate to a variant of *material* participation (see Marres 2011, 2012), which is a more empirically engaged, ANT-based concept of participation and engagement connected more to practices and actions than to yes/no attitudes toward a specific subject. On Samsø, the public acceptance of the REI project was never problematic *on the whole* (again, see paper five).

broadly understood as collective self-governance (to be elaborated below), is key if we are to fully understand and appreciate the case of Samsø as a process of renewal of the community.

In the remainder of this chapter I discuss the notions of politics which I deem relevant to understanding the case of Samsø, as well as STS and political science more broadly. Setting out, in the first section, from a concept of politics that is empiricist and experimental, the second section moves in on how we can talk about democracy from an STS-informed perspective, while the final section engages in a more empirical discussion of whether and how the Samsø actors' decision to take on the RE Island project constituted 'a political moment'. The headlines of the three sections broadly correspond to three of the ideal-typical conceptions of politics in STS as outlined in Brown (2015).

*An empirical attitude to politics*²⁴

In their article "Is *That* Politics?" Emilie Gomart and Maarten Hajer ask, in line with my own interest, "What is the relevance of science studies for political science?" and set themselves the task of "[m]aking politics into an empirical question". Gomart and Hajer start from the observation that "[c]lassical-modernist political institutions, such as elections and centralized decision making on issues of collective interest via councils of elected representatives, are under pressure everywhere" (34). With reference to Ulrich Bech's interest in the 'subpolitical' processes taking place outside the realm of formal politics, they argue that we are looking for politics in the wrong places and that we can no longer "define *a priori* what is 'politics' " (56). To this line of arguing they add another, inspired by Jacques Rancière, that "the state of flux of political forms, undying contestation, urgent doubts on legitimacy [may not be] the effect of globalization and other phenomena of the new millennium, but rather can be taken to *characterize* democratic politics *per se*", making politics a constant search for "evolving forms of political representation" (35). The two lines of argument lead the authors to conclude

²⁴ In Brown 2015: "Description of boundary-work: science is contingently political" (12-15).

that STS ought to be employed as an “empirical tactic” (54) to achieve a more experimental approach to the study of politics, one that can more aptly capture new and emergent forms of politics. The study of politics, then, should not aim at simply reifying our prior biases, but should seek to produce something slightly different (56). Here, Stengers’ call to ‘dive into the mess’ echoes.

The approach to the study of politics which I will propose, then, is one that is *empiricist and experimental in orientation*. The notion of experimentation relevant here, I believe, deserves some elaboration, because experimentation, as noted in the previous chapter, while related to the experimental method of the natural sciences, also departs therefrom, especially by emphasising *learning* and *surprise* over certainty and objectivity. This distinction goes to the very core of what sets an STS-informed understanding of politics apart from the notion of politics you are likely to encounter within ‘mainstream’ political science. As Jensen notes, in an analysis of the Consensus Conference as a democratic experiment, “the notion of experimentation implies mutual learning and an exploration of the unknown, the result of which cannot be methodically guaranteed” (Jensen 2005: 223). The interest among STS researchers in experiments originally derives, once again, from John Dewey, who was similarly interested in a type of experimental inquiry that both sets out from the rigorous laboratory experiment and distinguishes itself from it. This, furthermore, feeds into the discussion of how social scientific research ought to be conducted, a discussion salient already in the nineteen-twenties. Dewey:

“When we say that thinking and beliefs should be experimental, not absolutistic, we have then in mind a certain logic of method, not, primarily, the carrying on of experimentation like that of laboratories. Such a logic involves the following factors: First, that those concepts, general principles, theories and dialectical developments which are indispensable to any systematic knowledge be shaped and tested as tools of inquiry. Secondly, that policies and proposals for social

action be treated as working hypotheses, not as programs to be rigidly adhered to and executed... The social sciences, if these two stipulations are fulfilled, will then be an apparatus for conducting investigation, and for recording and interpreting (organizing) its results... No longer will views generated in view of special situations be frozen into absolute standards and masquerade as eternal truths” (Dewey, 1927: 202-3).

The reader will notice both the emphasis on experimentation and the call for empiricism in this quote in which Dewey stresses, in line with the empirical-philosophical attitude of STS, the relevance of our theories, concepts and definitions as flexible tools of inquiry rather than as yardsticks against which our empirical objects of study should be measured and given shape (see also Gomart 2004: 95). When applied to the concept of politics, this experimental attitude, which mirrors the methodological attitude I am seeking to live up to in this thesis, tells us to develop an alternative definition of politics, which could go something like this: “what does a setting (practice, form) *do* to those who are engaged in it?” (Gomart and Hajer 2003: 41). This notion of politics is not focused on deliberation, political attitudes or public debate, but rather on how publics (in plural) arise and public participation is enacted through the deployment of settings (often not recognised as political) (see Gomart 2004), technologies and issues affecting citizens in ways which produce engagement (e.g. Marres 2005 and 2011). This is a site-specific but not a site-bounded approach to the study of politics.

So, whereas in political science a democratically legitimate politics is likely to be “a politics in which people are allowed to express their own ideas without being constrained by the exercise of power” (Gomart and Hajer 2003: 42), writers in political STS are more concerned with politics being experimental and surprising and thus capable of opening up new insights into the ways in which politics plays out today. “Only if we are surprised have we succeeded (temporarily) in actually opening up the question ‘what is politics?’ to the extent that the answer might have been unexpected at

the start” (56). In this way, there is an obvious symmetry between the ideal of politics and that of research in STS.

*Politics and democracy as collective world-making*²⁵

Building on the characteristic of STS as empirical philosophy, if realities come in plural and are malleable there will be several points in a process of world-making at which choices are made and directions changed; something which Mol, in suggesting that “the conditions of possibility are not given”, that they can be “crafted”, refers to as “ontological politics” (Mol 1999: 75). Rather than focus on the *who* of politics – “[w]ho participates in designs, experiments and scientific policy?”– Mol, Barry (2013), Marres (2012a) and others understand politics, as noted above, as “inscribed in technologies... and... practices” leading us, instead, to focus on the *how* of politics: “How does a practice engage persons?” and “How do these various performances coexist?” (Gomart and Hajer 2003: 35-36). Understood as a “constructivist alternative to modernist theories of representative democracy and their associated values of rationalism, individualism, and efficiency” (Brown 2015: 15), studies of this kind center on ‘material politics’, focusing on the role of objects and practices in bringing new realities into being and shaping and expanding the political collective, or, simply, democracy.²⁶

With democracy entering the picture again, we can draw inspiration from Dewey, this common reference point for STS theorists interested in politics (see e.g. Marres 2005, Hajer 2009), who argued that “democracy is more than a form of government; it is primarily a mode of associated living” (cited in Brown 2015: 16). This definition of democracy as, essentially, the collective endeavour of living together, or as “collective self-governance” (Brown 2015: 22) is of pertinence to the case of Samsø,

²⁵ In Brown 2015: “Democracy as collective world-making: science generates ‘matters of concern’ ” (15-18).

²⁶ Hajer in his book directed at a political science audience, *Authoritative governance: Policy-making in the Age of Mediatization* (2009), introduces this understanding of politics under the heading of “performative politics”.

where attempts were made to secure the continued existence of the island collective through the inclusion of RE technologies and by taking on the new name and status of ‘the Renewable Energy Island’ label. This political redefinition and expansion of the island collective inevitably involved challenges, in some cases unpleasant, to people’s interests and identities (farmers being responsible for offshore wind investments of €32 million; workers abandoning their previous tasks to take on new work related to the RE technologies) – politics is not pleasant (Mouffe 2005: 17, Brown 2015: 23).

But through negotiations and compromises, the multi-faceted processes of renewal (the renewal of the island community along with its energy systems) were accepted. This was a democratic process not fuelled by power or conflict, but still, I will argue, political, exactly due to the impact of the RE projects on the islanders’ lives. Impacts involving the redistribution of resources and work, the development of new practices, the reshuffling of relations among the islanders, *and*, not to forget, related to the previous chapter, the impact of the RE Island on its wide audiences’ consciousnesses and practices.

Democracy as collective self-governance: Reinventing the island²⁷

While Brown makes little reference to post-structuralist political thinking, STS writers Barry, De la Cadena, Candea and others explicitly relate to theorists such as Mouffe, Agamben and Rancière as reference points for their discussions of politics (Candea 2011, Barry 2013, De la Cadena 2010)²⁸. Post-structuralist thought exhibits a deep scepticism toward the existence of non-political spaces. By building on Carl Schmitt, (1932), theorists such as Mouffe (1993), Žižek (1999) and others view politics as the

²⁷ In Brown 2015: “Democracy as collective self-governance: science may become a site of politics” (18-23).

²⁸ ANT being explicitly inspired by poststructuralist thought (ANT has not been alone in conceptualizing the network as an organizing principle of reality, see e.g. Foucault and Deleuze and Guattari’s development of concepts such as assemblage, rhizome, dispositif and apparatus), the differentiation between these ‘paradigms’ should not be overstated, and it is thus quite natural for writers in STS to ‘borrow’ from or seek to refine and take further post-structuralist thoughts.

main principle, the ground of human action, and the absence of politics as instances of depoliticization to be uncovered and criticized (Candea 2011: 312, Eddkins 1999). Candea, criticizing this attitude, argues that this critical sentiment makes political reality into “the ground from which everything (even the supposedly non-political) is made” (313), which goes somewhat against the empiricist aspirations of anthropology and STS (see also Latour, 2004, 2010). This post-structuralist approach to politics is difficult to reconcile with Candea’s empirical interest in the space of the non-political, and it is equally at odds with the empirical approach to politics found in STS. No wonder, then, that Brown whose project it is to argue that politics is *not* everywhere, although “politics can be a pervasive *potential* of every social relation” (Warren 1999: 223 in Brown 2015; 22, emphasis added), does not lean heavily on post-structuralist thought.

I would, however, argue that in order to grasp what it takes for a situation to *become* political, to open up a political space and reach this ‘pervasive political potential of the social’, some concepts are needed which may be meaningfully drawn from post-structuralist theorising, as will be explicated in what follows.

In returning to Gomart and Hajer’s guiding question ‘what is politics?’, I thus find that some post-structuralist inspiration can contribute valuable concepts to open up the empirical question ‘what was politics on Samsø?’. I am thinking of the overarching question of whether and how the islanders’ decision to join the RE Island project and change the island collective can be defined as a political act and, if so, in what sense of the word. The everyday acts, the installation of the technologies and the processes of public participation that followed this decision can be readily captured and analysed as instances of material politics by means of ANT resources (see in particular papers four and five, and e.g. Marres 2012, Barry 2013), but the analysis of this overarching question I believe has something to gain from, specifically, Zizek and Agamben’s thinking.

What I propose here is not some general theory of politics. I propose a temporary, contextually embedded and empirically motivated wedding between ANT and post-structuralist political thought; a wedding serving one purpose: to be able to

better describe whether and how the Samsø actors' decision to take on the RE Island project constituted a 'political moment'. The idea of the political moment is also found in ANT, e.g. in Jensen and Winthereik (2002) who understand political moments "as events that allow work to go on through unexpected re-definitions or translations of situations. As events, political moments are always unexpected or, in a sense, untimely. They come... from 'outside the existing system of thought' " (229). And further, "[t]o capture political moments is to show how power and accountability becomes distributed... by means of translations through material agents... [W]e view these sorts of moments as markers in continually ongoing processes of everyday practice" (230). This notion of political moments as everyday occurrences, as a phenomenon in plural, an integral part of securing the continued life of the organisation, fits better, it seems to me, with the inner workings of the Danish health care sector than it does the empirical setting of the RE Island. To better describe Samsø's transformation as a process of change out of the ordinary, as a truly new decision not part of everyday regularities, our notion of the political moment could benefit from being endowed with Zizek's capital P.

Zizek, in defining the *Political moment*, points us in the direction of politics: "the 'Political' [is] the moment of openness, of undecidability, when the very structuring principle of society, the fundamental form of social pact, is called into question – in short, the moment of global crisis overcome by the act of founding a 'new harmony' " (Zizek 1991: 193-19 in Eddkins 1999: 3). This political moment of openness can only be defined as such, as open, if it is not subjugated to a pre-defined end. Turning to Agamben for an elaboration, politics becomes "the act of making a means visible as such... neither of an end in itself nor as a means subjugated to an end" (Agamben 2000: 116-118, Agamben 2010: 86). And further, "Politics... is the act of making a means visible... intended as the field of human action and of human thought" (Agamben 2000: 115-116). This understanding of politics can in fact be read as being quite close to Dewey's pragmatist political theory which, by employing a deliberately vague language, stresses the importance of problems and attempts at problem-solving as political or

democratic moments, emphasising process and means without formulating any ultimate ends to politics. Such openness is not found in Jensen and Winthereik's political moments the function of which is, through translations and redefinitions, to *avoid* breakdowns of the organizational framework. I would argue that, in the specific case of Samsø, it is exactly in the decision to break with 'business as usual' and try something *new* that we can identify the political moment of openness.

Let us go back to when the smith first introduced the idea to the island's business council and thus introduced a rupture in the pre-defined conditions of island life:

"Someone from Planenergi called me up and told me that Svend Auken, the Minister of the Environment at the time, was looking for a renewable energy island. I went straight to the council and said: 'Friends, we are going to make Samsø self-sufficient with renewable energy!' The manager of the slaughterhouse said, 'The smith is going crazy, we could never do something like that!' But the mayor, who was also a part of the council, was quick to see the possibilities for local job creation..." (interview, May 2014; cited on page 33).

This was where it started, as a new opportunity, a way of responding to the island's crisis and downward spiral (the threat of closure of the slaughterhouse, the general sense of insecurity and uncertainty of island life, as described). This new opportunity for Samsø might not be the *radical*, utopian opening that Zizek describes but is probably conceptually closer to Gomart's understanding of openness and surprise as, in essence, effects of constraints (Gomart 2004, Gomart and Hennion 1999). In arguing that the subject – or, in our case, the community – only emerges as she (the community) "actively submits herself to a selection of constraints" (Gomart and Hennion 1999: 220), this more qualified understanding of openness takes into account the way in which Samsø, a community with a past, enters into a new situation and takes on a new role that

is partially, but only partially, determined from the onset, to emerge as a changed community. From the start, the REI project carried possibilities for Samsø that went well beyond those of a ‘green’ project defined by a ministry far away. Hermansen, the Academy director and project coordinator corroborates:

“In the beginning [of the REI project]... I thought a green project would sell itself. It turned out to be more difficult than that. We had to establish a quorum of citizens willing to take responsibility for their community, we had to learn how to cooperate. ‘What we can agree on’ became our mantra... It then matters less whether the end product is windmills or a new Internet connection or a new ferry” (interview, Nov 2013; cited in papers four and five).

The introduction of the REI project to Samsø became a moment of openness, though it was not ‘predestined’ as such. It might have been introduced to the islanders as a purely ‘green project’ in which the goals of CO₂ neutrality and energy self-sufficiency determined the means. Or the green goals might have been turned into means for an ultimate goal of job creation, more in line with the smith and mayor’s desires. Both of these outcomes would have ‘depoliticized’ the process (see e.g. Eddkins 1999: 9) by closing down and imposing a managerialist, instrumental logic on the project.

In my analysis of the Mejlflak wind controversy in paper five, it is essentially this goal-driven logic which drives the islanders to oppose the proposed offshore wind farm. The project developers justify their project by referring to the political problem of climate change; the ultimate goal is the reduction of Danish CO₂ emissions in accordance with the government’s plans. The means become subjected to this goal, and even the means, a large-scale offshore wind project, are beyond negotiation. The islanders immediately sense this, having been ‘brought up with’ the REI project, which put process – the revitalization of the community, however possible – over goals, as we see in the above quote. Hermansen describes this means-oriented attitude of the REI

project as a learning process, not as something self-evident. The openness that arguably turned the introduction of the REI project into a political moment was not an automatic outcome but in itself a process, experimental in character – recall Jensen: “the notion of experimentation implies mutual learning and an exploration of the unknown, the result of which cannot be methodically guaranteed” (Jensen 2005: 223). Hermansen, again:

“We made energy democracy. We didn’t really talk about climate change, that’s abstract. But we created jobs. If we can’t gather people around the burning platform it’s not worthwhile. Then people will say: ‘We know what we have, we don’t know what’s going to happen.’ On Samsø, we talk about community and the commons as a value. As ‘Community’. It’s a matter of defining the commons, of defining what we are interested in, our common challenges and solutions. Defining the commons means defining the different interests at play and figuring out ways to work together with our different interests” (fieldnotes, Nov 2013; cited in paper five).

Hermansen here talks about “founding a ‘new harmony’ ”, about putting “human action and human thought” first. The result, as I discuss in paper three, was the transformation of the island into a *dream factory*. With the REI project so open as to accommodate the islanders’ various interests and desires, with the citizens engaged in working on their separate RE-related projects, the project coordinators managed to channel the energy into a new hopeful attitude toward island life as well as realise the pre-defined project goals of energy self-sufficiency and CO₂ neutrality. Samsø became an experimental setting, defined by Stengers as “one where the person... is not left alone, authentic, but transformed by what occurs” (Stengers in Gomart and Hajer, 2003: 39-40). This process of transformation not just of the individual but of the island community as such, this renegotiation of island reality was a “Political moment”. To return to Brown, finally, the political potential of the situation was realised (Warren 1999: 223 in Brown 2015; 22).

This brings us back to Dewey's definition of democracy according to which "democracy is more than a form of government; it is primarily a mode of associated living" or of "collective self-governance". This definition of democracy as, essentially, the collective endeavour of living together naturally relates to Dewey's notion of the state as something to be constantly searched for, momentarily stabilized and re-made (a logic echoing in the conceptualisation of the social in ANT, see e.g. Latour 2005c: 37) (Dewey 1927). Did the REI project offer the islanders an opportunity to rethink the collective and remake the community? Through Zizek and others' notion of the Political as the moment of openness succeeded by the founding of a 'new harmony' we may argue Yes. If we define the state as, simply, organized collective decisionmaking power, a reinvention of the state, of Samsø, certainly has taken place, at least insofar as the RE Island project offered an opportunity for the island population to take the future of the community into its own hands. A RE Island was built. Whether island life has become radically less uncertain is a separate question, but the steady, uninterrupted decline in the population speaks its own clear language. The reinvention of Samsø only went so far, the constraints of the island condition perhaps too overwhelming to overcome through the means available.

In sum, while STS and political science may at first glance seem "unlikely bedfellows" (Gomart and Hajer 2003: 35), I think an STS-informed approach to politics can aid us in applying a relational, practice-oriented and, perhaps most importantly, as demonstrated in this last section, an empirically grounded and contextual concept of politics and democracy, thus making the study of political processes more fit for grasping new and emerging challenges and forms of change that might not follow well-known schematics and logics. In the next and last chapter before the papers I turn to an exploration of my research methods.

5. Participatory methods

“Method, as we usually imagine it, is a system for offering more or less bankable guarantees. It hopes to guide us more or less quickly and securely to our destination, a destination that is taken to be knowledge about the processes at work in a single world. It hopes to limit the risks that we entertain along the way... The implication is that method hopes to act as a set of short-circuits that link us in the best possible way to reality... But this, most of all, is what we need to unlearn. Method, in the reincarnation that I am proposing, will often be slow and uncertain. A risky and troubling process, it will take time and effort to make realities and hold them steady for a moment against a background of flux and indeterminacy”

(Law 2004: 9-10).

“Ethnography is a style of research rather than a single method and uses a variety of techniques to collect data. This style of research can be defined as: the study of people in naturally occurring settings or ‘fields’ by means of methods which capture their social meanings and ordinary activities, involving the researcher participating directly in the setting, if not also the activities, in order to collect data in a systematic manner but without meaning being imposed on them externally”

(Brewer 2000: 10).

In this chapter, I discuss some important methodological and empirical conditions and choices behind this thesis. In accordance with Law, I will be offering no ‘bankable guarantees’, no promises that the analyses presented in this thesis are the product of flawless methods which have paved the way for findings accurately depicting reality. Leaving the classic positivist evaluative criteria of *reliability* and *validity* behind (concepts originally derived from the natural sciences to evaluate the relation between the tools and methods of measurement and that which is being measured), as they have grown out of ontological and epistemological presuppositions incompatible with those of STS and other ‘interpretive’ sciences (a collective designation of qualitative research not

positivist in orientation; Yanow 2014)²⁹, instead, in this chapter I offer and strive to live up to a set of alternative criteria, namely *transparency*, *flexibility* and *surprise*. These will be teased out as I examine and describe my fieldwork experience, research design and process of analysis. Specifically, I will draw out three challenges, the **first** relating to the fieldwork situation and the ever-changing nature of the object of study; the **second** to research design and how I decided to rely more on interviews and documents as I encountered difficulties in accounting for the past; and the **third** relating to the process of analysis and how I went about choosing which accounts to construct from the empirical material.

In accounting for my ethnographic fieldwork, my presentation will simultaneously depart somewhat from ‘traditional ethnography’, defined in the second quote above as entailing “the study of people in naturally occurring settings” with a focus on capturing “their social meanings”. While I can go along with the aspiration after systematism and openness as well as with the ideal of thoroughness and the notion that ethnography must be a lengthy commitment – in Hammersley and Atkinson’s formulation “ethnography is a demanding activity” (Hammersley and Atkinson 2007: 4) – ethnographic practice in STS complicates and at least poses friendly challenges to some of these classic aspirations. Most notably, I think, the idea implicit in the opening quote of the researcher finding herself in an already-defined field, setting about “capturing” social meanings also readily existing in this setting independent of her presence, is at odds with the empirical philosophical attitude described in the last chapter. This attitude can be understood as demanding experimentality, invention and *intervention* of ethnographic method, captured by some in the term ‘inventive methods’:

²⁹ To briefly elaborate on this point, as the quote from Law at the top of this page describes, STS and other interpretive sciences do not expect the world to be fixed, singular and existing ‘out-there’ independently of our methods. These assumptions are the preconditions of the evaluative criteria reliability and validity, which are thus rendered redundant, non-applicable.

“Inventive methods recognize specificity by addressing and including ‘heres’ and ‘nows’, but only as they are constituted in relation to ‘theres’ and ‘thens’ that are brought into being by the methods’ own constitutive, self-organizing effects in relation to the context of a problem” (Lury and Wakeford 2010, in Winthereik 2015).

Through our methods we connect places, times, issues and concerns which were previously unrelated. The researcher *intervenes*, she *participates* in constructing new realities; she does not simply record and collect data as traditional conceptions of ethnography would have it. As Winthereik notes, “contrary to the expectation of ethnography as a method that enters a world and analyses it, *inventive methods* are about the ability of methods to connect that which ‘is’ with other times, places and concerns. Methods thus articulate problems that are not problems in exactly the same way in the current situation. This is how the power to intervene in established conceptions of the world comes about” (Winthereik 2015, my own translation). This approach belongs under the heading of ‘the ontological turn’ in STS and anthropology but is also captured in the somewhat broader notion of ‘empirical philosophy’ (for discussions of the ontological turn, see also Jensen and Winthereik 2013, De la Cadena 2014, Holbraad, Pedersen and Viveiros 2014, Woolgar and Lezaun 2013). It is this logic that informs this chapter and which has informed my empirical investigation, my meddling in the affairs on Samsø. Further, it is this logic which echos in the title of this chapter: participatory methods.

Connected to this, if the fieldsite can hardly be said to be a “naturally occurring setting” (Brewer 2000), a discussion of how I have gone about constructing the site or sites of investigation is a natural starting point for this methodological narrative. The foundation of this thesis is the ethnographic fieldwork I carried out on Samsø in the fall of 2013 and early summer of 2014. For five months I assumed the role, essentially, of staff member at Samsø Energy Academy, ‘shadowing’ the project managers’ work

practices (Czarniawska 2008) and participating where and when I could. In the materials I read about Denmark's Renewable Energy Island, the Energy Academy always figured as the fulcrum of the accounts and connecting link between journalists or researchers and the island actors and RE technologies appearing in the news stories and reports. As my interest in Samsø turned around the island's status as a RE Island – the broad questions which interested me initially were how this status was attained and what being a RE Island entails – I decided that the Energy Academy was the central point from where I would explore this reality. From the Academy, and by virtue of my consecutive months of living on the island, I also explored the community more broadly, seeking insights into what kind of community accepts the reconfigurations involved in a society-wide energy transition as well as the status of this 'RE community' nearly ten years after the conclusion of the REI project. Still, due to my position at the Energy Academy and the various choices I made, this is not an ethnography of Samsø as a whole; it is an ethnography of Denmark's Renewable Energy Island Samsø.

I have not chased the Academy employees on their trips around the world telling ever-interested audiences their stories about Denmark's Renewable Energy Island. From early on, I accepted Samsø, largely, as a bounded field-site. With the Academy the engine room and point of departure for both completed and new RE- and climate-related initiatives, by choosing not to follow the Academy actors on their trips around the world but staying, largely, on Samsø, my ethnography became embedded in the material reality of the island, and I avoided the risk of simply reproducing the documents and stories about the RE Island which had initially caught my interest. From my position at the Academy I could seek knowledge about the REI project while observing the work practices at the Energy Academy. I could visit the RE technologies and gain insights into the REI project from the Academy employees, devoid of the gloss that is part of the act of persuasion through storytelling; we were simply discussing their work. Additionally, since Samsø has become something of a magnet, attracting thousands of energy-interested visitors each year, every workday offered new chances for me to engage with

and observe interactions between Academy actors and network partners or spectators. In this way, my fieldwork was certainly not very bounded; the neatly defined boundaries of the island were constantly challenged by the flow and ebb of interested onlookers, press, ‘energy tourists’, partners and travelling islanders with ‘frequent flyer’ passes.

Choosing, however, to stay more or less in one place for the duration of my fieldwork while watching my informants play with the boundaries of the field is also a way to avoid getting lost in the sheer magnitude of data, emerging problems and interesting questions that arise with multi-sited fieldwork (Candea 2007, Marcus 1995). With fieldwork inevitably being a series of decisions and exclusions, choosing the bounded field-site becomes a way of acknowledging and being reflexive about the limitations built into the ethnographic genre of data production. Underlying this concern is also a sympathetic criticism of the holism and desire for totality arguably implicit in the multi-sited fieldwork, as it embodies the notion that if only we multiply our viewpoints and sites of exploration, we will – ideally – achieve full knowledge of our field (see Candea 2007 for an elaboration of this critique). A rejection of such holism, concurrently, has been part of my decision to write up this research as articles rather than as the monograph that would be the traditional means of communicating the products of an ethnographic fieldwork. I do not claim to provide *the* comprehensive account of Denmark’s Renewable Energy Island, nor that I have managed or aspired to include all relevant aspects. Instead, I have constructed accounts, informed by my empirical and conceptual encounters and limited by the series of selections and rejections that inevitably make up fieldwork, that tell of the engagements, concerns, hopes and efforts involved in building RE communities.

Fieldwork, or How to hold realities steady?

John Law is concerned with methods practices and their ability to “not only describe but also help to *produce* the reality that they understand” (2004: 5). While the notion of the performativity of our methods in no way precludes their employment, they do,

according to Law, require some rethinking: “It cannot be the case... that standard research methods are straight-forwardly wrong. They are significant, and they will properly remain so... I am after a broader or more generous sense of method, as well as one that is different” (Law 2004: 4). In this section I will, in the name of transparency, both describe my fieldwork in more detail and discuss some of the complications that led me to give up on ‘standard research methods’ and the hopes and normativities built into them, e.g. with respect to the fantasy of ‘data saturation’.

From my desk in the open-plan office shared among the ten Energy Academy employees I participated in daily lunches and occasional meetings; I solved minor writing and communication tasks and often became a part of workshops and presentations at the Academy when diverse groups of visitors of all ages and nationalities stopped by to learn about the island’s famous energy project. On the afternoon of my first day at the Academy I was asked to show a young Taiwanese researcher around together with an employee who, thankfully, did most of the talking. Within the first week of my stay, my picture was uploaded to the Energy Academy website under ‘employees’. At the Academy I found myself, from the outset, embedded in the rationalities and discourses of the organization, immediately complicit in the Academy’s work and visions (Holmes and Marcus 2008).

My complicity unfolded on three dimensions. Firstly, I was readily invited into the project organization as someone who could ease the workload of the employees a bit. I would work ‘from the inside’, often representing the Energy Academy in the execution of different work tasks; even presenting my version of the REI story to visiting groups.

Secondly, I intended to write a PhD dissertation about Denmark’s Renewable Energy Island, bringing Samsø to a new audience of academics, something in which the Academy employees have a definite interest, considering their own constant efforts to communicate Samsø’s accomplishments to various audiences (my unproblematic negotiation of access, as it is called, consisted in an email, a phone call and a short

meeting in Copenhagen with the Academy's daily manager a Sunday afternoon in a café, testifying to the fact that the Academy actors, too, could see the advantages of our relation).

Thirdly, in contrast to the traditional ethnographic fieldworker, I was never considered an 'outsider' to the Energy Academy; I was a collaborator, sharing both visions and language with the Academy employees. As Holmes and Marcus note, this attitude and position "transforms the well-established scene of fieldwork as the encounter with the 'other' into a much more complex scene of multiple levels, sites, and kinds of association in producing ethnographic knowledge" (2008: 524). Samsø has become famous for its faith in and practical experiences with bringing the community into the center of processes of change, specifically in sustainability initiatives. I share and believe in these aspirations, just as I view Samsø as a significant example testifying to the doability and realism of ambitious green projects. Furthermore, arriving on Samsø with my sensibilities toward actor-network theory I quickly noticed the weight that the island actors themselves attributed to networks, not least with the establishment of partnerships being one of the three main goals on the Energy Academy's agenda³⁰.

However concentric our interests, the Energy Academy as well as the REI project proved to be moving targets, hard to pinpoint and fixate for longer periods of time. With my engagement with the Academy stretching from the summer of 2013 until the time of writing in the the fall of 2015, this prolonged engagement proved to complicate rather than clarify for me what kind of venture the REI project was. Unsurprisingly, there was no point of 'data saturation', to evoke one of the classic tropes of positivist qualitative research which certainly does not apply here.

A central question that remained unsettled for me was: Was (or is) the REI project a climate project? Concerned with and famous for its CO₂ reductions (recall that Samsø is known for being 'one hundred and forty percent CO₂ negative') I initially imagined the answer to be a simple Yes. But when I at an early stage in my fieldwork

³⁰ The other two goals are becoming a fossil free island by 2030 and counselling and knowledge sharing (Energiakademiet 2015).

asked one of the project managers whether living on an island and thus potentially threatened by sea level rise brought a heightened awareness of climate change and maybe even played a role when the islanders decided to join the Ministry's REI competition, she simply laughed and responded:

“You know what, ten years ago a clairvoyant told me that in thirty years Samsø will be completely flooded. But what I like to call ‘the fear element’ has never played much of a role on Samsø. We see the gradual erosion of our beaches and we've already experienced some sea level changes. I live by the coast and I take walks along the beach every day – but it's not something we think or talk about” (fieldnotes, Oct 2013).

When I originally attempted to persuade the Department of Political Science that my project proposal was worthwhile, I posed the hypothesis that an island like Samsø might be more prone to engage in ambitious climate change-related projects due to its vulnerability to the changes to come. This seemed a plausible suggestion, but it did not hold, it seemed. In addition, even mentioning climate change and CO₂ reductions to visitors was considered ‘poor communication’ at the Energy Academy, too technical and scientific-sounding to be truly engaging to the people who had come to be convinced by the merits of Samsø's REI project. Instead, the processes of community mobilisation and stories about how the RE projects came together in practice were stressed in the presentations given at the Academy.

Convinced of the centrality of the downplay of the climate change argument, I wrote about this especially in paper **four**, which is concerned with how saving the island community not from the future consequences of climate change but from the much more imminent threats of unemployment and depopulation was central to the unfolding of the REI project. In the summer of 2015, however, one year after concluding my primary fieldwork but still visiting Samsø now and then, I learned that the threat of what

climate change might bring was suddenly considered central to the Energy Academy's activities. As I arrived on Samsø that day, I was told that the Minister of the Environment had just left after a project meeting. This new project, a collaboration between the Ministry, the Energy Academy and other partners, was a climate adaptation project concerned with preparing local communities for sea level rise. Remembering how not long ago I had been told that sea level rise was not considered a relevant concern on Samsø, I asked the project managers whether the islanders and the Academy actors are really concerned about this. This time I did not get a semi-ironic answer. The answer was 'Well, yes, naturally', and without much elaboration we went on to other matters. 'If Samsø should not be concerned about sea level rise, then who should?' seemed to be the Academy's new attitude.

I do not believe that this development, this new layer of data, contradicts my analyses; rather, I view this fluidity, this instability of my knowledge, as part of the slippery nature of the world (Law 2004: 2), and as a potentially constructive moment of knowledge formation. Still, and quite obviously, positivist scientific criteria such as *validity* hardly apply here. A logic of *flexibility* has to take its place in my methods' account, in my analysis and in my approach to the data generation process. By flexibility I refer, here, to the ability to remain open to shifts in meanings and relations, even after having written about how the Samsø actors seem *not* to care much about climate change. This is part of the work of treating the object of study as a working hypothesis rather than a fixed and known entity.

My point here, then, is not that the predictions of the climate change models have moved closer in time since 2013 making sea level rise into a salient issue (already in 2012 Samsø Municipality noted that by 2112 the waters surrounding Samsø will have risen up to one meter, causing "great inconvenience and financial loss" (Samsø Kommune 2012)). Instead, echoing the relational logic of post-ANT, as the commitments and collaborations of the Energy Academy shift, so do priorities and

imaginaries, allowing climate change to emerge, all of a sudden, as a matter of concern for Samsø.

According to Holmes and Marcus, this “changing nature of the object of study” follows from the same mode of knowledge production which has caused complicity to replace rapport as the key denominator of the relation between the researcher and the field (2008: 524). What is highlighted by the shift, most significantly, is the fact that the researcher can no longer be thought to figure above or outside the field in a somewhat neutral role, as someone who gains her informants’ trust in order to extract unmediated knowledge from them. Rather, the researcher becomes a figure who participates and intervenes, co-creating knowledge, as I will explore in more detail in the following section. However complicated this new role might be to navigate, this is a productive development, I will argue with Homes and Marcus. In discussing the role of *surprise* in research, Gomart and Hajer put into words the value of a study that allows the nature of the object of study to fluctuate and surprise the researcher: “[S]urprise is not meant as the new, funky transcendent criterion for good anthropology or good politics. Rather it is one legible sign that might suggest that the results of our study are not a simple reification of our prior biases but something slightly different” (2003: 55; see Schwartz-Shea and Yanow for a similar point relating to the logic of abduction, 2012: 27-34).

See table 3 for an overview and short description of the most central meetings I participated in during my fieldwork.

Interviews and documents, or How to account for past events?

Two months into my fieldwork it dawned on me that if I wanted to know about Samsø’s REI project, I could not rely on observations alone. As I discuss in papers one, two and three (most notably paper two), storytelling plays a central role in the activities of the Energy Academy. But I had a wish to go ‘beyond’ the stories, to piece together my own account and understanding of the REI project for my arguments to rest on somewhat

firmer ground as well as to challenge or enrich what is known about the REI project. I wanted my account to be less dependent on the professional Academy storytellers who, as indicated above, would frequently change their stories to accommodate new projects, partners and interests. This ever-changing nature of the REI project I consider an interesting study object in itself, as discussed in paper two, but I had a desire to add to the multiplicity of stories through my own investigations. This caused me to change my initial research design which relied more heavily on fieldwork observations and look for further details about the REI project in two places: in a new digital archive and in interviews. I view the interviews as an integral part of my fieldwork, as a technique which allowed me to move around the island for my many appointments and talk to islanders I did not automatically meet through the Energy Academy. Thus, I have not treated the interviews so much as stand-alone textual documents; I rather view them, simply, as more condensed empirical encounters, little events or intermezzi on days already full of interacting, observing and note-taking.

Doing interviews on Samsø

Overall, I conducted around thirty semi-structured interviews (Rapley 2001) which fall into four rough groups³¹: Energy Academy staff members, islanders engaged in the Mejlflak windmill controversy (paper five), central island actors (such as the head of Samsø Municipality's technical and environmental administration and the administrator of the popular Facebook group 'Help each other on Samsø') and, lastly, actors who were central to the REI project. It is this last category I will focus on here, since this group of interviews was conducted with more purpose and direction in the sense that while the first three categories of interviews served two purposes – to 'get around the island' more

³¹ The categorisation of the interviews into groups is inevitably problematic since Samsø is a small community with everyone engaged in virtually everything that goes on on the island. For example, while only two of my interviews are about the Mejlflak wind controversy specifically, I asked most of my interviewees about this. Consequently, paper five which is about the controversy draws on a much wider base of interviews (and conversations in different settings) than this overview and categorisation conveys.

and to get a better sense of Samsø quite broadly – the fourth group of interviews had an internal logic: I was trying to trace the REI project network.³²

All the islanders I interviewed who had had roles to play in the REI project were used to being interviewed. This was one of the reasons I was initially reluctant to do interviews on Samsø: many had come before me over the years since 1997, leaving the popular interviewees' stories rehearsed and some of the interviewees a bit tired. When a journalist, researcher or student approaches the Energy Academy with an interest in learning about the REI project, the staff readily points the investigator in the direction of the actors they perceive as relevant, and with Samsø being such a small community, the thin phone book contains every phone number you will need. I tried to limit the influence of the helpful Energy Academy employees on my investigation, asking each interviewee to point me in the direction of whoever they considered relevant to my study (the well-known method of 'snowballing'). The circle of central REI actors was not hard to complete by employing the knowledge I already had about the project. First, I interviewed members of *the Energy Company*: the mayor, the head of Samsø Energi og Miljøkontor, the smith whose initiative it was to enter Samsø into the REI competition and who chaired the island's business council at the time. All of them around eighty years old today and their memories of the details of the project failing them, they contributed stories, newspaper clippings and private photographs, and a strong sense of the pride they still take in having played central roles in Samsø's ambitious energy transition.

From there I interviewed Hermansen, the Academy director, about his role as 'energy counsellor' in the project, a position often referred to as *the* central position in the project, as it was his job to secure the islanders' acceptance of and practical support for the REI project. Hermansen's counterpart, the engineer and technical expert who moved to Samsø from the mainland, passed away years ago. His absence undoubtedly plays a role in the fact that the more technical aspects of Samsø's RE transition have

³² See table 1 for an overview of all formal interviews.

become slightly marginalized in my investigation and depiction. I have not had anyone to ask e.g. about how the technical plans guiding the trajectory of the REI project were developed in detail.

I interviewed two farmers in their homes: an idealist – a retired organic farmer who had experimented with producing biogas and building rapeseed oil-fired tractors – and a big windmill investor who had turned the opportunities of the REI project into opportunities for himself, reorganizing his farm so that today he cultivates wind rather than hay on his fields. A third farmer I interviewed inside the district heating plant he oversees, while a fourth, also a big wind investor, I did not manage to arrange an interview with; the berry harvest got in the way in the spring, the Christmas tree harvest in the fall. This fourth farmer was recommended to me as a person who was less interested in the large profits local investors have been able to reap from their windmills and more concerned with the wider environmental, international and political context of RE technologies. Had I been able to get a hold of him, I might have focused more explicitly on the farmers' role in the REI project; but with only one major wind investor interviewed, and someone who tends to express himself in quite controversial turns, I considered my insights too narrow.

A further failed attempt at arranging an interview was with the estate owner, someone who owns so much land on Samsø as to be in an absolutely central position when it comes to the siting of the RE technologies. Without him on board, the southern part of Samsø, land, coast and sea, would be off limits to the REI project. Needless to say, many tough negotiations with the estate owner – whose role is described in most detail in paper three – went into the concrete planning processes of the REI project. The project developers even had to hire a high-end attorney for the estate owner exclusively, to establish a hierarchy and a rule-bound process he felt comfortable with. But I consider this largely hearsay, since he declined my proposal for an interview.

An ongoing concern in my investigation was localising critics of the REI project. This proved difficult, in fact next to impossible, for three reasons: firstly, from reading

the local newspaper from the early years of the REI project³³, I know that most of the local criticism concerned the level of ambition of the project (some deemed it ‘unrealistic’ and too expensive) and the slow pace with which the RE projects were realised after the initial announcement of Samsø as Denmark’s RE island in 1997. Such criticisms, naturally, are no longer relevant as the project goals have long since been accomplished. Previous critics have forgotten, or no longer own up to, their viewpoints. Keen on aiding my search for critics, the Academy staff would come up with people for me to contact, but as it turned out, some were dead, others old and sick, and others still would not admit to having had a critical attitude. Secondly, because the REI project was never controversial on Samsø, there were never many such critics. As discussed in papers four and five, the islanders welcomed the REI project as a way to ameliorate the community’s socioeconomic vulnerability. Thirdly, there may still be critics of the project and of the new RE initiatives, but, Samsø being an island of 3700 inhabitants, these are likely not within the Energy Academy’s network, so I met no one who could refer me to them. I did conduct one interview with an alleged critic, but he and his wife turned out to be enthusiastic about the promise of RE technologies to replace oil and seemed to feel not critical toward the project as such, but rather left out, living in a village where the civic association of the time did not manage to engage the villagers in local RE projects as part of the REI project.

See table 1 for an overview of the most central interviews I conducted during my fieldwork.

³³ This activity I pursued Thursday afternoons in the local public record office’s limited opening hours. I read through all *Samsø Postens* (the local newspaper) from 1996 until 2001, thousands of newspapers, and photographed every article relevant to the REI project. The photographed articles can be found on the digital archive of the REI project, ‘the Energy Institute’ (www.energiinstituttet.dk), the making of which I will describe next.

Assembling a digital archive

At the Energy Academy, a project organisation, everything is a ‘project’, and the construction and development of a digital archive making documents relating to the REI project and the RE-related projects that followed available to interested parties was one such undertaking. Part of a larger plan concerned with ‘rediscovering and re-narrating the REI processes’ (the establishment of a *wisdom council*, described in chapter three, was part of the same project), the purpose of the electronic archive was, according to the Academy’s daily manager, “to digitalize and systematize the documentation of the REI project so that researchers can access data much quicker – also because we want to be more like a research institution” (September 2013). The ambition is to make data accessible, in order to, in the project manager’s words, “escape the mythologisation. We like telling stories, but it’s something else entirely to know what *actually* happened. In order to do that, you need to go to the sources. And, unfortunately, there aren’t many minutes from the meetings from back then, for most of the working groups didn’t have much of a culture of note-taking...” From this it seems that I am not alone with my interest in the REI narratives; I share my interest in the status and nature of the stories with the Academy actors.

In her article “Experimenting with the Archive”, Claire Waterton discusses what she describes as a “move” within STS and social science more generally “toward the exposure of the guts of our archives and databases, toward exposing the contingencies, the framing, the reflexivity, and the politics embedded within them” (2010: 647). These studies, emphasizing “performativity and emergence as integral to the database” (647), obviously have not influenced the Energy Academy actors who, when discussing their archive still display a firm conviction that making data accessible equals making it possible to go beyond or behind the stories, granting the user of the archive access to a ‘truer’, more accurate REI reality. The notion that this more data-informed reality will also be a framed one, only one that is framed not primarily by Academy storytellers but by the functions, categories and contents of the archive, is not entertained in these

discussions. Still, the Academy project developers readily acknowledge that a lot of data is missing from the archive. As the project manager in charge of the project puts it, “We’ve never had an archiving culture in this house. You’re not in a reflexive culture, you’re in a circus tent. So this is something we simply have to learn” (November 2013). Within five years, the project manager asserts, she hopes that “everything” will be available in the archive, that it will be exhaustive. Naturally, however, the documents that were not saved or even constructed ten-fifteen years ago will never be available.

Among the project developers there was some disagreement and confusion as to the nature and intention behind the digital archive. “Is it an archive or a knowledge portal? A knowledge portal is much more open-ended – the archive, that would just be about you. There are so many words in play here: virtual classroom, knowledge bank, forum, institute... I’m confused”, an external consultant inserts at a meeting. The project manager obligingly responds, “Yes. So: what *is* a digital platform?” The programmer: “The least it can be is the Energy Academy’s archive. But it would be great if it could be a knowledge portal where everyone can upload their documents, and they can comment on other uploaders’ documents and maybe meet and create new collaborations”. Leaving the meeting without clarification of these open questions and expectations, and with the documents relating to the REI project and later projects neither digitalized nor categorized but rather constituting an unarranged mess in one of the first floor rooms at the Academy, I was asked to sort the documents together with the Academy director Hermansen. He would know every sub-project and budget and would lead the sorting process, deciding what was to be scanned and uploaded to the ‘digital platform’ and what could be thrown out. Hermansen would try to judge which of the old documents “don’t play a role in the story”, and I would aid him in suggesting what might be thrown out, as he “has a sentimental relationship to all the side stories”. The project we embarked on was one of delimiting, defining and categorising what counts as valuable information in the history of the REI project.

We go about the job, saving most and discarding only the documents which seem to stand alone, unintelligible without related documents to make their subject matter and relation to the REI project clear, or documents containing personal information such as social security numbers. Sorting the papers, old reports, budgets, applications for funds, letters, photographs, press cuttings and folders into piles kept separate from each other by post-it notes denoting themes such as ‘windmill guild’, ‘district heating’, ‘the Energy Company’ (see photo, figure 5), we dwell on the old documents. Hermansen remembers the time in the nineties when he travelled to a Pacific island to help people there install windmills; since then, many similar trips and invitations have followed. And when we come across a large pile of papers completed by hand he tells me about the REI campaign for the elderly, a project I had never heard of before, offering subsidies for energy refurbishment of the old houses, which turned out to be “something very close to social work!”



Figure 5 The making of the archive. Photo taken by the author, November 2013.

We categorise and create order. In collaboration we code the documents of the past; an analytical activity akin to the one I found myself constantly performing in my mind and on paper to make sense of the data generated by my being in the field. The director, in showing me what goes in which pile, what can be disregarded and thrown out, which elements belong in the main narrative and which are mere side stories, is making cuts in my field, co-constructing with me not just the archive but also already the analysis. When we are through the piles, the daily manager comes to check on us: “Isn’t that what they call ‘action research’ these days? Haha.” The director: “That’s what I like about researchers today, they wanna escape the ivory tower and be involved in the daily work!

Isn't that what they call 'phenomenology'?" The daily manager: "That's because it's phenomenal, haha!"

According to Asdal, "[p]aperwork does not simply *describe* an external reality 'out there': Documents also take part in working upon, modifying, and transforming that reality" (Asdal 2015: 1). Through the concrete *paperwork* of curating an Internet archive together we work not only on papers but also on each other, as we work on what will come to count as the World Wide Web generally accessible reality of Samsø's REI history. This afternoon, we have created a laboratory (Latour and Woolgar 1986, Latour 1987). The Academy actors themselves note the complicity and symmetry of the situation; the way in which we take part in collaboratively creating a reality conflicts with the director and daily manager's idea of the researcher as a passive recording instrument, a 'fly on the wall', and this confrontation brings about a joky atmosphere. They notice, suddenly, that I am acting ('action research') and that I am in fact physically implicated in the field ('phenomenology'), not some abstract researcher with her head in the clouds. There is a sense of relief as a perceived distance dissolves³⁴.

I wonder, however, if they realise what this *ontological moment* involves on my part. With the emergence of a jointly curated site in my field and the director's interruption of my, the researcher's, work of classification and ordering, the imagined distinction between raw data (as 'found' or 'collected' in the field) and analysis (taking place at the researcher's desk after fieldwork) is disturbed, complicated along with the idea of the archive as a neutral site which – ideally – will give you access to everything you might think of searching for in an unbiased manner. The implications of such entanglements of realities, roles and of the relation between the field and the desk (see Strathern 1999) I will return to in the following section on analysis and writing.

As I discuss in papers two and three, studying a phenomenon from a distance of more than ten years can be challenging, and this was what led me to conduct as many interviews as I did; I could not gather all relevant data through observations in real-time.

³⁴ The digital archive can be visited on www.energiinstituttet.dk.

But while it is difficult to gain a practice-based understanding of a phenomenon of the past, I do not want to mythologise the past or accept an idea that ethnographic authority necessarily lies in *being there while it happens*. Through field events such as the assembling of an archive (or, as in paper three, participating in a significant meeting) I believe one can escape the confinement to the present. The windmills gracing Samsø's fields and waters also stand as testaments of the past, as well as of distant places where parts were developed and manufactured before they were shipped to the island. Windmills, fieldwork moments, old documents and people's memories and stories all join in connecting the past and present of the RE Island and invite ethnographic exploration.

See table 2 for an overview of the most central documents related to my study of the RE Island project.

Analysis/Writing, or How to choose between accounts?

Yanow formulates it well, the challenge of describing and making transparent the interpretive process of analysis:

“It can be difficult to make explicit how one goes about making sense of one's data.” It is “[a] kind of in-dwelling with one's data... [T]he process entails reading and rereading and reading again – musing... – until, in the light of prior knowledge of the theoretical literature or the empirical data, or both, something makes sense in a new way” (Yanow 2014: 101-2).

Allow me to provide, as a first step toward this task of making the implicit explicit, a very down-to-earth, stepwise rendering of the process of analysis. A few weeks into my fieldwork, some overarching themes started to crystallize. In an early document I call these themes ‘interests’, i.e. themes to pursue throughout the duration of my fieldwork:

- 1) Public engagement: How has it evolved and how has a ‘culture of engagement’ impacted the island?³⁵
- 2) The Mejlflak wind controversy: What makes this project controversial? What are the differences between the Mejlflak project and the REI project?³⁶
- 3) The REI process and history or stories³⁷
- 4) The international appeal of the ‘Samsø model’: How does it travel, what do other countries and contexts stand to learn from Samsø, and what does the Samsø model look like from an external perspective?³⁸
- 5) An organizational study of the work practices of the Energy Academy and the ongoing RE initiatives on Samsø.

These very broad themes came to guide me in the field; they narrowed my lines of interest slightly, helping me bring a bit of order to my observations while being broad enough not to perform any premature closures. The only theme that has not explicitly made it into the articles that make up the dissertation is 5).

Upon returning from the field, to that place and stage in the research process known as ‘the desk’, I devoted myself to reading my notes and documents, all of them, as openly as possible, as many times as possible (see Yanow’s description above). A time-demanding process since I have detailed fieldnotes from every day of fieldwork, naturally amounting to hundreds if not thousands of pages. During and after this period of dwelling with the data, I started to become more concrete on the themes I wanted to pursue in my analyses. I reread the data with these themes in mind (they could be ‘public participation’, ‘building networks’, ‘climate change’; themes that mix theoretical and empirical sensibilities), testing for myself whether my ideas find sufficient empirical grounding to take forward. At this stage, I know my data well and can recall episodes

³⁵ Paper 4 (mainly)

³⁶ Paper 5

³⁷ Papers 2 and 3

³⁸ Paper 1

and statements pertinent to each article idea. This familiarity with the data helps ideas for articles crystallize also when I am away from the material. I do not make close or text-oriented readings, but focus instead on specific field episodes, significant moments that can open up and bring the entire material into view. Working with the separate articles, the first step of the process, each time, is rereading, once again, the entire material and copy-pasting all episodes and quotes that seem relevant into a separate document. This document, which now contains a subset of the data relevant to the themes of the specific article, make up the empirical foundation, the source from which I draw while writing up the research. Making simple word searches in the documents is an indispensable navigational tool.

What of the role of theory in this process? Central to ontologically oriented STS-studies like the present stands the rejection of theory as an elevated entity through which one can explain the world. Theory rather becomes a participant in the way in which the object of analysis is constituted and presented (Winthereik 2015). As Marianne Lien formulates it, “there is no obvious context out there waiting to be revealed, no theory providing the obvious analytical anchor for the material at hand, but instead, endless opportunities for association and juxtaposition, each with the potential for taking the analysis in a new direction” (Lien 2015: 5). I always thought of my project as an ANT project, so I went into the field armed with the analytical and methodological sensibilities found in this tradition: sensitivities toward the role of materiality and knowledge, to the constructed and multiple nature(s) of the world, and a focus on relations and practices rather than people’s exact words or attempts at individual meaning-making. Through reading, discussions and presentations of my ideas before, during and after my fieldwork, I chose the analytical concepts and theoretical themes I deemed relevant for each article.

Paper three, for example, is guided by the theoretical-empirical notion of *hope*. I decided to pursue this theme not because there were many occurrences of words relating to hope in my data material, and not necessarily because the actors in my field explicitly

or frequently related to the notion of hope. I chose to engage with this concept because the theoretical debates around the notion of ‘hope as practice’ in STS and anthropology (Stengers 2002, Miyazaki 2004, Jensen 2014) resonated with me and my knowledge of Samsø. The concept allowed me to articulate, to draw together and bring into contact with one another, fractions of my data, to construct from them an ethnographic story focused on practices and capable, I think, of transcending my aforementioned challenge of investigating events of the past from the point of view of the present. A method of analysis closer, arguably, to composition and construction than to description. From the vantage point of ANT this is inevitable and uncontroversial, since there can be no neutral or innocent descriptions once one acknowledges that data are not collected but constructed in the field, with the help of theory (see e.g. Latour 1986, Strathern 1999: 3-4).

Still, “if”, as anthropologist David Turnbull put it at a recent seminar in Copenhagen, “everything is stories all the way down, how do we choose between them?” (Sept 2015). One way of choosing between narratives, of selecting which stories to tell, is to let oneself guide by ‘ethnographic moments’: moments that challenge your own preconceived notions of what is going on in the field; moments that enrich your understanding and allow you to show a wider range of complexity of the objects of analysis. “The ethnographic moment”, Marilyn Strathern argues, “works as an example of a relation which joins the understood (what is analysed at the moment of observation) to the need to understand (what is observed at the moment of analysis)” (Strathern 1999: 6). The ethnographic moment is thus a moment of analysis, a moment, transcending the imagined divide between ‘the field’ and ‘the desk’, when something new is understood. It is “a moment of knowledge or insight” denoting “a relation between immersement and movement” (ibid.). Strathern, in the same vein, writes of letting oneself guide by surprising, dazzling and unlooked-for moments. While such moments are often experienced quite strongly in the field, for example as a physical discomfort, they only acquire their significance “through the subsequent writing, through composing the

ethnography as an account after the fact” (Strathern 1999: 9). As illustrated above through the story of the digital archive, the field and the desk are two sites of fieldwork that cannot be kept separate in practice. The field actors are implicated in the process of analysis and in the selection of the stories to be told. Analysis thus becomes implicated in the ‘data collection’ process, and accounts are constructed through writing rather than ‘discovered’ in the field. The distinction cannot be upheld, although it is difficult not to construct one while writing about the research process.

As I discuss in paper two, ethnographic stories are agential: they work on people and things, they forge relations, and they may carry the potential to participate in building a common world (Winthereik and Verran 2012: 37, Stengers 2005, Latour 2010). In this vein, the choice to foreground certain events, stories and quotes, to amplify some aspects of the realities I encountered in the field while inevitably downplaying others, is again related to the notions of intervention and politics. According to Verran, “to choose to make one analysis and not the other, or choosing to make both, is a form of politics” (Verran 2011: 425). In acknowledging the academic’s role as a constructor of realities, the need to be explicit about one’s commitments when engaging in writing the analyses becomes apparent. As I write in paper one, I see Samsø’s intervention in the world as a valuable one, because “[a] successful Renewable Energy Island challenges through its very example the fossil fuel-based economy by suggesting to policy makers and other leading actors and citizens worldwide the possibility of a different future, thus providing a practice-based commentary on the climate challenge as well as geopolitical debates of energy dependence, etc. Samsø’s demonstration of the doability of sustainability initiatives is thus a hopeful and potentially far-reaching one”. It is this possibility of articulating and rendering practically attainable a different future that is my primary commitment, making this an affirmative rather than a critical project. This commitment has inevitably led me to craft some ethnographic stories into academic arguments while leaving other stories unarticulated, just as the Energy Academy actors choose which stories to tell on an everyday basis.

While we may all ‘just’ be storytellers, the ethnographic story is a specific type of story: it is a *re*-performance which makes, rather than represents, reality (Winthereik and Verran 2012: 40).

To bring up, once again, the question of generalization, the mode of generalization most relevant here can be termed a situating *whole-part* generalization, as opposed to the abstracting *one-many* generalization most common in the social sciences (Winthereik and Verran 2012). This mode of generalization involves identifying and unfolding the analysis around moments that have the capacity to contain within them and bring into play in generative rather than closed-down ways the many dimensions, frictions, relations and emergences encountered in fieldwork. The advantage of this mode of generalization is its ability to underline the partiality, the interventionist potential, and the politics of ethnographic stories – rather than to reach abstract, general claims of relevance to *all* social scientists.

In this chapter, I have discussed the primary methods underpinning this research (although some activities, such as digital network mapping and analysis of PowerPoint slides, have been left out to be taken up in the individual papers). Two central dichotomies have helped structure the chapter: positivist social science/interpretivist social science and traditional ethnography/STS-inspired ethnography. While these categories and distinctions are arguably constructs, the hope is that they have helped me communicate the overall logic of inquiry of this thesis as well as some of the main challenges and – helplessly intertwined despite the neat structure of the chapter – the central steps of the research process: the fieldwork situation, the research design and the process of analysis and writing.

The construction of the field did not end when I packed my bags for the last time and left my room on Samsø. Since the summer of 2014 I have visited Samsø a number of times, a few times in the capacity of invited member of the Energy Academy *wisdom council* (see chapter three), in the capacity, suddenly, of someone who can guide

the project managers at the Academy in their world-making endeavours. The activity of describing the field, as I have done in this chapter, is also an activity of constructing and cutting. The stories I have told about the making of the digital archive and about the slippery nature of the Academy actors' relation to the issue of climate change are cases in point, and so are the tables below. In the name of *transparency*, one of the evaluative criteria I put forward together with *surprise* and *flexibility*, I have put together tables listing interviews, meetings and documents central to my inquiry. But the tables cannot be exhaustive. What constitutes an interview? Only occasions when I have pressed the record button on my tape recorder? Only occasions guided by an interview guide? Perhaps only occasions that generated data that I have made explicit use of in the analyses? If I were to list all the informal interviews I have conducted and all meetings and events I participated in, the lists would never be finished. Still, below, I offer my best attempt at list-making; another act of construction.

Three Tables for overview

Table 1 Overview of semi-structured interviews

Name and position	Form	Date	Category
A generally engaged islander, <i>Organic Samsø</i>	Taped interview at the Energy Academy	Oct 14, 2013	Central island actors
The head of the Tourism and Business section, Samsø Municipality	Taped interview at Samsø Business and Tourism Center	Nov 18, 2013	Central island actors
The island electrician	Taped interview at the Energy Academy	May 28, 2014	Central island actors
The municipal energy and climate coordinator	Taped interview at the Energy Academy	Oct 15, 2013	Central island actors
Local politician, Samsø	Taped interview at the Energy Academy	Oct 17, 2013	Central island actors/The Renewable Energy Island project
The head of the Environment and Planning section, Samsø Municipality	Taped interview at Samsø Municipality	Oct 21, 2013	Central island actors
The administrator of the Facebook group 'Help each other on Samsø'	Taped interview in the informant's home	Oct 24, 2013	Central island actors
The former principal of Samsø's closed folk high school	Taped interview at the Energy Academy	Nov 25, 2013	Central island actors
Entrepreneurs and hotel owners, generally engaged islanders	Taped interview at the informants' home	Nov 25, 2013	Central island actors
Summer house owner on Samsø	Taped interview at the Energy Academy	Nov 9, 2013	Engaged in the Mejlflak controversy
The manager of a	Taped interview	Nov 26,	Engaged in the Mejlflak

Samsø tourist attraction	at the Energy Academy	2013	controversy
Project manager 1, Samsø Energy Academy	Taped interview at the Energy Academy	Nov 11, 2013	Samsø Energy Academy
Project manager 2, Samsø Energy Academy	Taped interview at the Energy Academy	Nov 21, 2013	Samsø Energy Academy
Project manager 3, Samsø Energy Academy	Taped interview at the informant's home	Nov 25, 2013	Samsø Energy Academy
Søren Hermansen, director, Samsø Energy Academy	Taped interviews at the Energy Academy	Nov 6 and 7, 2013	Samsø Energy Academy
Daily manager, Samsø Energy Academy	Taped interview at the Energy Academy	Nov 8, 2013	Samsø Energy Academy
Project manager 4, Samsø Energy Academy	Taped interview at the Energy Academy	Nov 22, 2013	Samsø Energy Academy
The former mayor of Samsø	Taped interview at the Energy Academy	Nov 12, 2013	The Renewable Energy Island project
Farmer managing the Ballen/Brundby district heating plant	Interview at the district heating plant	May 14, 2014	The Renewable Energy Island project
The former head of the farmers' association	Taped interview at the Energy Academy	May 26, 2014	The Renewable Energy Island project
Plumber and businessman, current head of the business council	Taped interview in the informant's workplace	May 28, 2014	The Renewable Energy Island project/Central island actor
Farmer and major wind investor	Taped interview with the informant's wife present in their home	Nov 6, 2013	The Renewable Energy Island project
Alleged critics	Taped interview in the informants'	Nov 11, 2013	The Renewable Energy Island project

	home		
The head of Samsø Vindenergi (Samsø windmill guild, land-based windmills)	Taped interview at the informant's workplace	Nov 14, 2013	The Renewable Energy Island project
Farmer, developer of the rapeseed oil-fired tractor	Taped interview in the informant's home	May 7, 2014	The Renewable Energy Island project
Smith and businessman, former head of Samsø business council, the original promotor of the REI project	Taped interview at the Energy Academy	May 7, 2014	The Renewable Energy Island project
The chairwoman of the NGO <i>Samsø Energi og Miljøkontor</i>	Two interviews, one at the Energy Academy, one at a local café	Nov 19, 2013 and May 27, 2014	The Renewable Energy Island project

Table 2 Overview of a selection of the most central Renewable Energy Island project documents

Name	Sender
Tiårsplan: Første energiplan for Samsø. (Ten-year plan: First energy plan for Samsø, ‘the Masterplan’). Project Report.	Samsø Energiselskab (Samsø Energy Company), Samsø Erhvervsråd, Samsø Landboforening, Samsø Kommunalbestyrelse, ARKE, Planenergi (1997)
Samsø, a Renewable Energy Island: 10 Years of Development and Evaluation (10 year evaluation report). Project report, Samsø Energy Academy.	Jørgensen, PJ, Hermansen S, Johnsen, Aa, Nielsen, SP, Jantzen, J and Lundén, M (2007)
Communities = Commons + Communities. Samsø: Samsø Energy Academy.	Hermansen, Søren and Nørretranders, Tor (2013)
Renewable Energy Islands in Europe (Report, private copy).	Energistyrelsen (the Danish Energy Agency) (1998)
Pressemeddelelse: Samsø bliver Danmarks Vedvarende Energi-Ø (Press release: Samsø becomes Denmark’s Renewable Energy Island).	The Danish Ministry of Energy and the Environment, Bünger, Jan (1997)
Mødereferat. Møde om Vedvarende Energi-Ø 17 Jan 1997. Energistyrelsen, København (Minutes. Meeting about Renewable Energy Island January 17 1997. The Energy Agency, Copenhagen).	The Danish Ministry of Energy and the Environment, Bünger, Jan (1997)

Table 3 Overview of a selection of central meetings I participated in

Activity	Time and place	Main participants	My role
Meetings in the Energy Academy's <i>wisdom council</i>	The Energy Academy, March and September 2015	A small group (10-15 people) of consultants, journalists, futurists, academics, business people, artists, central islanders	Member of the council
Meeting about the Energy Academy's digital platform, www.energiinstituttet.dk	The Energy Academy, November 2013	Two Academy project managers, an external consultant	Observing and commenting on the outline and ideas, representing 'the academics' user group of the website
Windmill meeting (see paper three)	The Energy Academy, arranged by Samsø Municipality, October 15, 2013	Samsø Municipality's climate and energy coordinator, a select group of islanders involved in wind projects	Observing
'From Best to Next Practice' seminars	The Energy Academy, September 2013 and May 2015	A large, international group of the Energy Academy's network and partners discussing issues of sustainability, the Energy Academy and Samsø's development	Participant, observer and facilitator ('harvesting', i.e. taking notes of the discussions) and helping to edit a publication following the first seminar (Hermansen et al. 2013)
'Fossil Free Island' status meeting (the energy project that has followed the Renewable Energy Island project), a partnership between	The Energy Academy, May 2014	The Samsø Municipality chief executive, the two municipal climate and energy coordinators, the local politician	Observing

Samsø Municipality and Samsø Energy Academy		head of the municipal technical and environmental council, two Academy project managers	
Staff meeting: 'Collective development evening'. The Energy Academy management facilitating a process of employee coaching and development	The Energy Academy, October 2013	All Energy Academy employees	Observing and participating
Meeting in the 'electric car project'	The Energy Academy, October 2013	One Energy Academy project manager and a group of local islanders interested in electrical cars and transportation challenges on Samsø	Observing and assisting the Energy Academy project manager
Meeting of the board of the Energy Academy	Café Perlen, Sælvig Harbour, June 2014	The board of the Energy Academy (university, business and local actors, among others the mayor of Samsø), the director and the daily manager of the Energy Academy	Observing
Open citizen meeting about Samsø Municipality's new settlement and business strategy	Flinchs Hotel, June 2014	About 60 people: A private consultancy 'Innewvation' facilitating the process, local islanders and local politicians	Observing and participating in group work
Meeting about 'the Energy Hotel'/'Samsborg', a large project under development on Samsø spearheaded by the Energy Academy	The Department of Political Science, University of Copenhagen, February 2014	The director of NCC (a large Danish construction and development company), Jens Hoff (my supervisor) and Quentin Gausset from the University of	Participating with knowledge of Samsø

		Copenhagen. The director was looking for an academic advisory group for the project	
Re:New Conference with the theme 'Leading from an Emerging Future', a Theory U conference with Otto Scharmer, founder of the Presencing Institute. Keywords: leadership, mindfulness, sustainability	The Bella Center in Copenhagen, March 2014	600 participants from public institutions and private businesses. All Energy Academy employees joined for a trip to Copenhagen.	Participating and observing
Election meeting, the evening before the local election	Flinchs Hotel, November 2013	50-100 local islanders, the local politicians up for election, the Energy Academy director facilitating the debate	Observing

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Part 2: Papers

Papers³⁹

1. *Demonstrating Doability: The Networking Practices of a Danish Renewable Energy Island*
2. *Transition Stories and Their Ethnographic Counterparts: Samsø's Renewable Energy Transition*
3. *Management Through Hope: An Ethnography of Denmark's Renewable Energy Island*
4. *Authoring Participation*
5. *Nearshore Wind Resistance on Denmark's Renewable Energy Island: Not Another NIMBY Story*

³⁹ The articles as they appear here are not in their final version; they all have to go through revisions before they are ready for publication. Please do not cite.

Paper 1 Demonstrating Doability: The Networking Practices of a Danish Renewable Energy Island⁴⁰

Abstract

This article studies the making of exemplary projects through online and offline issue network mapping. Since Samsø, a small tourism and farming island, was appointed Denmark's Renewable Energy Island and embarked on a ten-year experiment to become energy self-sufficient, an example of the doability of sustainability initiatives, it has aimed to demonstrate its achievements to national and international audiences. The central question is how the island has managed to become a flexible and widely known example capable of building multiple geographical and thematic networks all over the world? The study suggests that while Web-based activities are central, actors like the Renewable Energy Island are as dependent as ever on practices such as travelling, project participation and giving presentations. Drawing on STS (Science and Technology Studies) literatures on public demonstrations and issue network analysis, this article employs a mixed methods approach combining ethnographic fieldwork with digital mapping to analyse four examples illustrating different ways in which Samsø manifests its presence in various networks. The methodological mix is essential in grasping the ways in which movements on as well as off the Web are co-implicated in the enactment of public demonstration projects such as the Renewable Energy Island project and furthermore deepens our understanding of the interplay between the digital and the offline domains in 'issue networking practices'.

Keywords: renewable energy, climate change, public demonstrations, issue networks

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Introduction

ge With no traffic lights on the island and few street lights, driving its roads on a cloudless night is like piercing a black cloud. There is one movie theater, few cars and even fewer buses, except for summer, when thousands of tourists multiply the population.


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* Yet last year, Samsø (pronounced SOME-suh) completed a 10-year experiment to see whether it could become energy self-sufficient. The islanders, with generous amounts of aid from mainland Denmark, busily set themselves about erecting [wind turbines](#), installing nonpolluting straw-burning furnaces to heat their sturdy brick houses and placing panels here and there to create electricity from the island's sparse sunshine.

ge

185 By their own accounts, the islanders have met the goal. For energy experts, the crucial measurement is called energy density, or the amount of energy produced per unit of area, and it should be at least 2 watts for every square meter, or 11 square feet. "We just met it," said Soren Hermansen, the director of the local Energy Academy, a former farmer who is a consultant to the islanders.

MAIL

 PRINT

 REPRINTS

SHARE

Figure 1: Source: *The New York Times*, September 29 2009.

When searching the Web for mentions of Samsø, Denmark's Renewable Energy Island since 1997, articles like this *New York Times* entry abound⁴¹. The stories tend to carry the same general narrative which goes something like this: Samsø, a traditional Danish farming and tourism island of 4000 inhabitants, was appointed Denmark's Renewable Energy Island (REI) by the Danish Ministry of the Environment in 1997. The island was to become self-sufficient with renewable energy through well-known Danish technologies within ten years. Through a joint community effort the islanders made it. The experiment is considered a success which communities worldwide can learn from. This article is concerned with the globalisation of this local example.

As Denmark's Renewable Energy Island, the project has had an international outlook from the start; the local, self-contained doing was not enough, it had to be seen, heard about, even replicated. Samsø joined its first EU project in 1998, and the island first appeared in *The New York Times* in 1999. Samsø was to become a window to the world showcasing Danish energy technology and participatory community practices, a demonstration project oriented toward national and international audiences (Worsaae 1997). In *The New York Times* article above, when Samsø loses the Danish 'ø' and becomes 'Samso', the internationalized name allows Samsø-the-model to travel more smoothly, but it also suggests that there are several versions of Samsø in circulation, doing the work of demonstrating the island's accomplishments to diverse audiences.

I am interested in the movements through which a Danish island can become an internationally renowned demonstration project in sustainability. The central question is *how* – through which networking practices and strategies – the island of Samsø has become a flexible model and a renowned demonstration project capable of travelling

⁴¹ A Google.com query for "Samsø renewable energy" revealed, among many others, the following stories about Samsø:

<http://www.scientificamerican.com/article/samso-attempts-100-percent-renewable-power/>

<http://ecowatch.com/2014/05/01/samso-renewable-energy-island-sustainable-communities/>

http://www.huffingtonpost.com/stefanie-penn-spear/samso-worlds-first-100-re_b_5303237.html

<http://www.cbsnews.com/news/danish-island-is-energy-self-sufficient/>

<http://www.euronews.com/2012/06/05/samso-where-renewable-energy-rules-the-roost/>

<http://www.sciencedirect.com/science/article/pii/S0304380014002725>

http://content.time.com/time/specials/packages/article/0,28804,1841778_1841782_1841789,00.html

through multiple zones, crossing geographical and thematic boundaries? Ultimately, I study the processes through which influence is produced in this particular case. A successful Renewable Energy Island challenges through its very example the fossil fuel-based economy by suggesting to policy makers and other leading actors and citizens worldwide the possibility of a different future, thus providing a practice-based commentary on the climate challenge as well as on geopolitical debates concerning energy dependence, etc. Samsø's demonstration of the doability of sustainability initiatives is thus a hopeful and potentially far-reaching one, but, as the analysis of four network(ing) examples will show, it takes both time, effort and resources to reach the status of a well-known demonstration. The article investigates these processes by bringing two separate literatures together, the sociology of public demonstrations and issue network analysis, and two methodological domains, digital analysis and ethnographic fieldwork.

In the empirical examination of how this public demonstration project has 'gone global', emphasis will thus be on the network activities of the island actors through the location of 'issue networks', discussed in some detail below, detected online as well as offline. Informed by Science and Technology Studies (STS), networking activities can be said to 'bring the global into being' (e.g. Latour and Callon 1981, Law and Mol 2008). By allowing a 'local' island project to 'go global' through circulations in various networks, dispersed and distant places and actors are connected and new connections forged, turning Samsø into an influential demonstration project.

The mixed methods approach combining ethnographic field examples with digital network mapping offers a flexibility that flows into the analysis, allowing it to move smoothly from one network to the next. Working across the digital and the social domains is both a methodological and an analytical move, since, as renown is not produced in one place or through one strategy, in order to capture the variation we need to look at different sites of production and not limit the scope of analysis to e.g. the local level or to one data source. The island where I did fieldwork is not the same island that

appears in the newspaper article. The methodological mix is essential in capturing the ways in which online and offline networks are co-implicated in the way in which public demonstration projects such as Samsø attain their positions of influence in the world.

Entanglements of the Field, the Web and Theory

I spent five months on Samsø 2013-14. Living on the island, I joined the daily work at the Energy Academy, the project organization established in 2007 to promote the Renewable Energy Island and continue Samsø's energy- and climate change-related activities. I considered the ten Academy employees my colleagues, attended meetings and executed minor tasks for them, and in addition carried out interviews with central island actors and ploughed through reports, newspaper articles and books about Samsø.

The constant flow of visitors, the numerous tasks that filled the days of the project workers at the Academy, the talk among the staff about partnerships and networks; the sheer level of activity of this house on a meadow by the beach on Samsø alerted me to the fact that while the REI project had come to its conclusion nearly ten years ago in 2007, maintaining a position of relevance takes continuous work. Even more so because, by now, the renewable energy (RE) technologies showcased on the island are too dated to 'do the talking' on their own. This is where activities such as storytelling, travelling, receiving visitors and participating in new projects enter the picture for the Energy Academy. Søren Hermansen himself (the Academy director) has around one hundred travel days in a year, and he receives more than a thousand personally addressed emails every month with suggestions of new collaborations, meetings, etc. (pers. communication, April 2015). Evidently, Samsø does not travel on its own but is brought into circulation through online and offline networking efforts: travels, meetings, conferences, media reports. When visitors leave Samsø, they pass on the messages of the Energy Academy verbally and digitally. As the director puts it, "When you type in 'Samsø' [on the Web], you will get a lot of hits on the search engines, and it's not necessarily because we're world-famous, it's because *a lot* of people have

been here. And they've written about us and uploaded videos and linked to us" (June 2014). Samsø's favorable position on search engines is of great PR value, Hermansen continues; a Danish multinational like *Grundfos*, a leading pump manufacturer with a green image, might choose to cooperate with Samsø rather than other Danish localities simply because, in Hermansen's words, "We're easier to find online". With the offline and the online so tightly entwined in the Academy's activities, a methodological approach mirroring this entanglement is called for to capture the nuances of the case, and this has led me to connect two literatures: the sociology of public demonstrations and issue network analysis on the Web and in fieldwork data.

The concept of 'issue network' was originally coined by political scientist Hugh Heclø, who in 1978 witnessed a 'broadening of organizational participation in policy-making'. His claim was that 'issue-activists' (lobbyists) were increasingly "forming 'loose alliances' in which they came to define public affairs by sharing information about them" (Marres and Rogers 2005: 923; Marres 2006). In recent years, the localisation of issue networks has been made central to strands of digital research informed by actor-network theory, championed by Noortje Marres and Richard Rogers who have employed issue network analysis to trace the ways in which issues are 'done' and publics assembled around them on the Web (Marres and Rogers 2005).

By approaching the Renewable Energy Island as an issue the boundaries of which are constantly defined and redefined through diverse networking practices, the issue network analyses in this paper do not respect the boundaries of the Web. In locating issue networks online as well as offline, the paper can be read as a nod in Heclø's direction. Heclø's 'issue network' was a pre-digital concept, something to be identified in the field. Furthermore, in contemporary issue network analysis issues are points of contestation; they are problems which affect and bring together groups of actors the relations between which tend to be antagonistic (Marres and Rogers 2008; Marres 2005). This paper undertakes a shift in the understanding of the issue network from antagonistic issue implication toward information-sharing, learning and

collaboration in line with Heclø, thus staging a meeting between the two applications of the issue network and correspondingly expanding our notion of the issue network.

The technical intricacies of issue network detection through hyperlink analysis will be laid out in the analysis of the two Web-based network examples, but as noted, my analysis will not treat the mapping of the networks around Samsø as an exclusively digital exercise. In widening the concept of the issue network to include other representations such as a home-made network map and a PowerPoint presentation, my application of the issue network is tightly connected with the notion of the public demonstration.

The public demonstration is a distinct form of experiment, one that is conducted in public and designed to persuade its audience to accept its claims (Rosental 2013, Marres 2009, Marres 2012). As Marres notes, the public demonstration with its focus on drawing in and seducing an audience “has special affordances as an instrument of public involvement in its own right” (Marres 2009: 120). While classic STS studies of public demonstrations have prioritised the natural science setting (see e.g. Shapin and Schaffer 1989 and Latour 1988), Marres’ recent analysis of green living experiments as publicity devices brings sustainability and the sociology of public demonstrations in touch with one another, as does the case of Samsø. In Marres’ analysis, the purpose of a green living experiment becomes, perhaps paradoxically, to involve witnesses in a demonstration of the ‘undoability’ of such endeavours. In contrast, the power of the argument related to Samsø’s becoming a Renewable Energy Island lies in communicating through the practical example the *doability* of sustainability initiatives.

The mixed methods approach undertaken in this article takes the sociology of public demonstrations out of its comfort zone as a traditionally fieldwork-based domain and brings it in contact with digital methods as, echoing Stark and Pavel, “public demonstrations are increasingly digital demonstrations” (Stark and Pavel 2008: 32). By analysing Samsø’s networking activities as they appear in PowerPoint presentations, in hand-drawn form and in digital network maps, the analysis achieves a flexibility that

allows these activities to stand out as ways in which the Samsø actors seduce their audiences around the world by involving them in ever-unfolding demonstrations of the accomplished REI experiment, thus demonstrating Samsø's continued relevance.

Before turning to the analysis of the four examples, the following section will, grounded in my fieldwork experience, provide some background about the REI project and detail the way in which Samsø, not unlike other islands, has become a public demonstration site.

The island as public demonstration site

The physical geography of an island makes it fit for demonstration experiments: results are easily calculable and projects manageable because the boundaries of the community are clear. Due to their isolation, islands are often perceived as “spaces that echo the ideal conditions of the laboratory” (Greenhough 2006: 226) and given exemplary status. Not just natural science phenomena (Palsson and Rabinow 1999, Rainbird 1999) but also political, social and technological processes may be demonstrated on the island (e.g. Watts 2012, Lezaun 2011), detached from its surroundings with which it can be compared.

Accordingly, Samsø's RE efforts were from the outset both inwardly and outwardly oriented. Addressing the problem of energy independence – an issue commonly framed in global terms (Marres and Rogers 2008: 252) but simultaneously a local concern as rising oil prices can be ruinous to island businesses – the islanders severed national and international ties by becoming energy self-reliant⁴² and strengthening Samsø's ability to function as a self-contained unit. While cultivating its status as an island and thus as an isolated unit, Samsø initiated the process of becoming a RE Island in order to strengthen its ties to the world and end the separation that made island life vulnerable, as an ageing population and few jobs threatened the islanders' stability of life and belief in the future (Jørgensen et al. 2007). By becoming Denmark's

⁴² The electricity produced by the island's windmills feeds into the national grid which Samsø remains part of. The energy self-reliance is more theoretical than practical.

RE Island, Samsø made itself relevant outside of Samsø, attracting funds, resources and interest. While severing some ties, new associations were created, and island life became less precarious. Samsø, by involving spectators in its ‘Theater of Proof’ (Latour 1988: 85), became interesting to its surroundings.

Taking a step back, the practical work involved in becoming energy self-sufficient was a locally grounded endeavour. Getting the islanders on board with the projects – establishing windmill guilds, building district heating plants – required home visits, phone calls and meetings, all arranged by local working groups and orchestrated by the organisation *Energiselskabet* (the Energy Company), a union of Samsø actors in which farmers, citizens, the local municipality, and the island’s businesses were represented. Throughout the project, local democracy and community ownership were practised in order to secure the project’s legitimacy and practical realisation. In the project reports, local aspects are strongly emphasized: rather than hiring skilled labour from the mainland, tertiary training was provided for local workers who learned to oversee windmills, etc. The RE technologies based on sun, wind, straw and wood were chosen because these were locally available resources (Samsø *Energiselskab* 1997).

Still, the project developers failed neither to care for the project’s international connections nor to maintain Samsø’s good relationship with the national policymakers on whom the project depended for political and financial support. Here, Hermansen, the Academy director, explains why this extroverted attitude is considered necessary:

“The internal perspective wouldn’t work if we didn’t have people abroad. Getting out there is extremely important to our value. But when we invite people here, there has to be something worth coming for... The narrative has to have a solid basis in reality. I can’t travel the world telling the story about Samsø if you can’t go to Samsø and experience for yourself the concrete basis of my stories” (June 2014).

A main concern for the island actors has been to produce similar results in distant places, thereby increasing the project's 'value' as a demonstration project. Samsø is dependent on partnerships, on new projects and collaborations, funds and attention from abroad⁴³; all products of the island's networking activities. The storytelling which Hermansen refers to is an integral part of his job as Samsø's famous ambassador. He and the rest of the Energy Academy staff form part of what he calls "a travelling climate circus", a group of international RE professionals who dominate conferences with their strong communication skills and lived stories of RE projects. This storytelling effort is costly in terms of time and resources, but vital. Stories travel easily. While to Hermansen these stories may seem less 'real' than what happens on the ground, we will view the narratives about Samsø, exemplified in *The New York Times* article above, as versions that are no less real than what happens on Samsø, as they, too, produce real results. They participate in forging relations and building networks.

Still, the credibility of the stories, Hermansen stresses, depends on the firmness of the island's accomplishments. As noted, one of the Academy's foremost tasks is hosting guests on the island. Around five thousand international guests visit each year, attending workshops, listening to presentations and touring the island on guided *Energy Safaris*. On the Energy Safari, the guests visit the old windmills and feel the heat inside the straw-fired district heating plants. They watch the conveyor belt transport straw bales into large incinerators and the resulting ashes being led into an outside container. When full, the ashes are spread on the farmers' fields for fertilization. Sometimes, the guests are allowed to climb a windmill to experience Samsø from above, hovering seventy meters above the ground, gasping for breath after the climb up the primitive ladder inside the turbine. Every part of the tour is photographed by the visitors and every experience accompanied by stories told by the Academy guide about the processes of collaboration through which the technologies became part of island life. RE technologies become outdated quickly, and Samsø's technologies were new in the

⁴³ Having completed the Renewable Energy Island project in 2007, the islanders embarked on their current project, 'Samsø 2.0', concerned with becoming a fossil free island by 2020.

nineties. It is through the stories and the photographs that their status as powerful demonstrations is maintained, a testament to Samsø's accomplishments enacting Samsø as Denmark's RE Island, a practical example of the doability of sustainability initiatives. A demonstration site that produces its own documentations, thanks to its eager visitors.

The empirical analysis will further unpack Hermansen's statement, illustrating and detailing Samsø's different networks of influence, bringing into view the spider's web of connections spun from the island to secure its continued relevance as a model of sustainability. I will identify and describe four examples of issue networking which all, to varying degrees, privilege storytelling as the dominant mode of demonstration. In STS, storytelling events are considered participants in the making of reality (Latour, 2001: 10 in Winthereik and Verran, 2012: 42). Following Winthereik and Verran, stories "have in them the capacity to re-present the world in ways that are *generative* for the people and practices that the stories are about" (Winthereik and Verran, 2012: 37). It is this generative quality of the RE Island, its capacity to inspire similar doings in other contexts, that makes Samsø a successful demonstration.

The four instances of issue networking are chosen because they represent central aspects of the work undertaken by Academy actors to make Samsø 'do work' in distant places: European and international project work; the construction of partnerships and networks; welcoming visitors to the Academy. In this analysis, the network is not just a theoretical abstraction; it is produced and encountered in the field, and DIY networks provide alternative ways of understanding Samsø's movements as they participate in demonstrating Samsø's far-reaching influence. Taken together, the cases below show how projects acquire an exemplary status through issue network mapping. The analysis focuses on three depictions of Samsø's networks of influence and describes one of the crucial activities undertaken to shape these networks. The first example thus describes the way in which the Energy Academy presents itself to its visitors. This activity, where visitors 'see for themselves that there is something worth coming for' (to refer to the quote from Hermansen), is crucial in the forging of networks and helps us understand

how public demonstrations do network work and lay the foundations for further action.

Visiting the Energy Academy

When Samsø Energy Academy opens its doors to five thousand annual visitors – a central daily work practice for the Academy staff – nothing in terms of the framing of the event is left to chance. The building, designed by internationally renowned architects Arkitema, is built sustainably with natural materials by local labour and easily accommodates the large number of visitors. The reception area is equipped with television screens showing films about Samsø. Next to the TVs the words *past, present, future, local, regional, national, global, individual* and *collective* are written on the walls. Through the panorama windows one can look out on a landscape of grass fields and the sea where a natural, down-to-earth version of Samsø is displayed.

When the visitors – industry groups, national delegates, students; several groups each week – enter the Academy, they are asked to find their home country on a map of the world and circle it. The map allows the staff to keep track of the visitors' origins while sending, by making visible Samsø's global connections, the message to the guests that they have come to a place of international interest and relevance. The setting of this public demonstration event is designed to provide a proper frame for the audiences to take in the messages to be communicated.

A ubiquitous instrument in the staff's presentations is the Prezi or PowerPoint show. Although the visitors are encouraged to actively participate – “We don't want the international visitors to just sit back and listen; we want them to be in the field with us, so we always ask them: What can you do? How can you imagine you might contribute where *you* live?” (the daily manager, September 2013) – the PowerPoint presentation is central to the Academy representatives' communication practices. Each presenter makes his or her own PowerPoint slides, but a series of three slides has become something of a classic appearing in many presentations (figure 2).

Samsø - Midten af Danmark



Samsø - Midten af Europa



Samsø - Verdens centrum



De som vil forandre hele verden, kan med held starte i dens centrum, og begynde med sig selv.
- Piet Hein -

Figure 2

The first PowerPoint slide shows a standard map of Denmark with Samsø in the middle between Jutland and Sealand. A circle separates Denmark from neighbouring Sweden and Germany. The caption reads “Samsø – in the middle of Denmark”. The message comes across as an uncontroversial, primarily geographical statement.

Moving to slide two, “Samsø – in the middle of Europe”, we see the geographical map of Europe. Again, a white circle has been added with Samsø in the middle, thus in the middle of Europe. At this point, the visitors usually smile; they see where this is going.

The third slide is a patently manipulated map of the world that has been twisted and turned to yield the desired effect. Again, the white circle is drawn so that Samsø appears to be in the center of the map, and thus in the center of the world. In this world, where the Arctic and Europe have made it into the center at the expense of the Global South and Antarctica which have all but disappeared, Samsø is, the caption states, “the center of the world”. Underneath the picture, a quote from a Danish comedian reads: “Those who want to change the world may want to start from its center, thus starting with themselves”. At this point, everyone laughs, realizing that they are being manipulated, and returning guests might exclaim, as the interpreter for a Hungarian delegation did when I was present, “Haha, I know this picture! Samsø in the middle of the world!”

A negotiation of realities is taking place (Law 2009: 13). Samsø is framed as a geographical place and simultaneously as more than that, as something that is in defiance of its geographical boundaries, thus communicating a political message: Samsø will not be held back on account of its size or geographical position. Samsø is nationally, regionally and globally positioned - at once - just as the inscriptions on the wall in the welcoming area anticipated. PowerPoint shows are “[a]ssemblages framed in particular ways”; like stories, they ‘do’ or ‘create’ realities (Law 2009: 2; Stark and Paravel 2008: 37), and as such they are perfect devices of public demonstrations. By virtue of the quote on slide three, the slides become self-conscious, ironic. They communicate to the audience

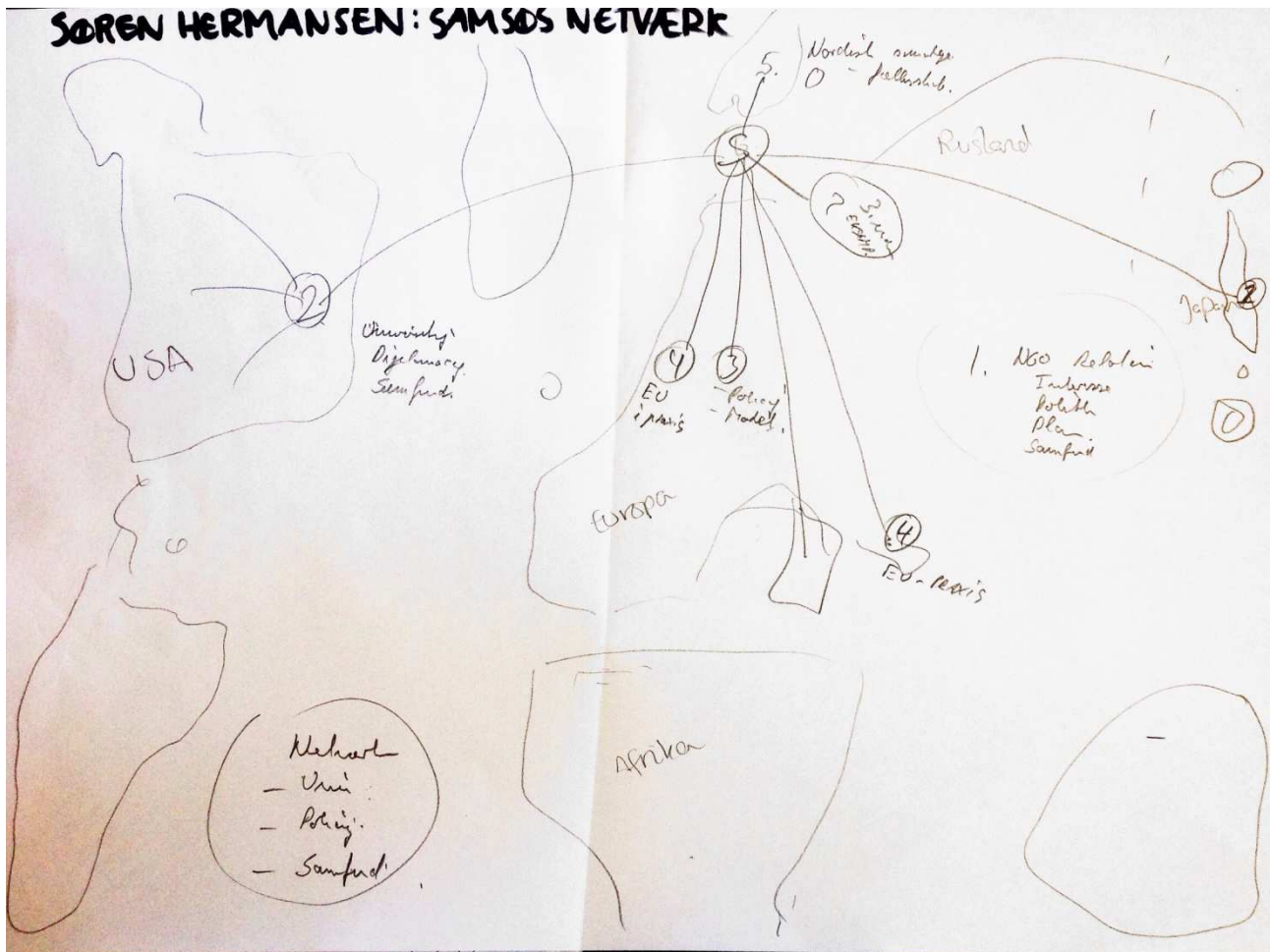
that the overt manipulation of Samsø's size is an invitation to think big, no matter how insignificant your starting point. A request, echoing Latour and Callon (1981), not to let yourself be held back by size. As such, the presentation seeks to empower the viewer *and* Samsø at the same time, inviting visitors into the process of 'changing the world' and calling upon the viewer to contribute. In this way, The Academy's visitors become not merely witnesses of a public demonstration, but participants and members of Samsø's networks, and Samsø maintains its narrative of possibility and doability, rather than lapsing into that which might be the danger: becoming the exception. By welcoming visitors in large numbers, the Energy Academy engages existing networks and establishes new relations through the act of persuasion and engagement that is the public demonstration event.

A Hand-Drawn Network Map

Consistent with Marres and Rogers' claim that "a network located by way of hyperlinks does not reveal all the issue networking practices that may be going on, on and off the Web" (2005: 8), when I asked the Academy director Hermansen about Samsø's international networks, the networks we discussed were not Web-based hyperlink networks, but networks developed over time, resting on social relations and maintained through travels and mutual visits: "I think networks need to be based on recognition, on that family feeling. You need to be able to recognise yourself in the network", Hermansen told me. Hermansen, as the member of the Energy Academy who does by far the most travelling, has a hard time distinguishing between his personal networks and the Academy's⁴⁴ and Samsø's. Still, he talks about representing something bigger than himself, for he travels as a delegate of the island. He describes himself as a kind of neutral arbiter representing the collective accomplishment of Samsø – as opposed to characters such as Al Gore or Nicholas Stern who, according to Hermansen, act as

⁴⁴ In climate and sustainability circles, Søren Hermansen is world-renowned for his passionate, down-to-earth lectures and personality. In 2008 he was *Time Magazine's* "Hero of the Environment" (*Time Magazine*, 2008).

climate gurus representing only themselves and their personal projects. I asked Hermansen to draw a geographical map depicting Samsø's networks worldwide. Figure 1 is photo of the hand-drawn network that resulted from the exercise – with a reader's manual beneath.



Hermansen's description of Samsø's networks, in his own words:

- 1. Japan:** The NGO relation, interests, politics, plans, a bit of industry, society. Actually, our activities in Japan resemble pretty much our activities in Denmark, they operate on the same levels of society.
- 2. USA:** Primarily connected through the Danish embassy. Diplomacy, universities, society.
- 3. Brussels:** Policy and model. The EU thinks we're a good model for what they would like to see as European policy.
- 4. The Netherlands and Greece, Italy, Spain, Portugal, the Canary Islands:** EU in practice, concrete projects. We share an interest in becoming part of EU programs that support our local development.
- 5. The Nordic countries:** Community. The countries work well together because we share the same cultural background. Most other places are extremely market-oriented, but in the Nordic countries the political visions guide the work, most of the time.
- 6. The Third World** (forms only a small part of the network): We are considered an example in e.g. Zimbabwe, Bhutan, Mongolia. But it isn't our core thing, we aren't

part of DANIDA [the public Danish International Development Agency]. But we're small enough in size to be an interesting development project, and we're big enough to be relevant as a model for e.g. developing a Pacific island.

In the circle at the bottom of the map: 'University' – 'Policy' – 'Society'.

Figure 3. June 2014

Hermansen here demonstrates Samsø's influence through participation in networks encompassing most of the regions of the world. He portrays Samsø as a versatile and variable actor, assuming different roles in different contexts and relying on varying types of relations; some personal, some bureaucratic, other diplomatic. In Japan, the predominant version of Samsø is one emphasizing 'community power' and the principles of shared ownership and cooperative, local energy projects. This network is founded on Hermansen's personal relationship with activist and director of the Japanese Institute for Sustainable Energy Policies, Tetsunari Iida.

Samsø's European network as depicted on the map is based on the island's status as an exemplary project. This zone is maintained through continuous participation in EU-based RE projects and is reliant on the EU's continued willingness to support regional energy projects. This network is more bureaucratic and less based on personal ties, and Samsø typically functions as a consultant or senior participant helping to steer new projects.

In the developing countries of the south, Samsø is a model, simply, of the successful local development project. Due to Samsø's limited size, the island's experiences can be more or less directly applied to rural areas in need of development. Energy and sustainability are not necessary parts of the application of Samsø's experiences in this geographical area.

Samsø's American network rests to a large extent upon Hermansen's willingness to travel far to give lectures at universities and in government institutions in Washington. As a relatively new network, it depends on diplomatic ties; informal ties have yet to form to the same extent as in e.g. Japan. Whereas the EU, Scandinavia and 'Third World'

networks are primarily project-based, the US and Japan networks rely on Hermansen's personal presence as Samsø's public image and the person who holds the connections. Samsø, according to the director's map, covers a wide spectrum of applications: from local democracy and rural development to RE projects and political-educational relations.

Samsø being such a versatile actor, what is the island *not*, according to the director? Samsø is not about market-based solutions. The Energy Academy will not try to sell you anything except ideas: "We are not out to shove windmills down people's throats". Samsø is not primarily about energy technologies, "People don't visit Samsø to see outdated windmills; they come to learn about society and policy", Hermansen stresses. This is reflected in the fact that not all of Samsø's applications are related to energy or climate change. The point is not that Samsø is an all-encompassing model capable of accommodating *every* and *any* desire or interest. Still, to judge from the hand-drawn network map, it seems that one of the core characteristics of this RE island, possibly the backbone of its success as a well-known demonstration project, is its ability to circulate network-specific versions of itself, adjusted to each specific site.

Samsø's Organizational Network

Moving from hand-drawn to Web-based networks, my first digital endeavour is to localize the Energy Academy's home network: the Academy's immediate organizational network as it looks from Samsø stakeholders, projecting outwards, according to the Web. In which projects does the Academy participate, who are their collaborators and funders, what are the terms on which they collaborate? This is one version of Samsø according to the Web. In terms of perspective, compared to the paper-based network map above, it will naturally be less personalised.

Marres and Rogers describe the issue network as "a heterogeneous set of entities (actors, documents, slogans, imagery) that have configured into a hyperlink network around a common problematic, summed up in a keyword... Once such an issue network

has been located on the Web... the network may provide clues as to the state of the issue, and the state of its public” (Marres and Rogers 2005: 927-928). The issue, simply, is Samsø, and performing hyperlink analysis in this case entails looking for connections between entities on the Web related to Samsø. I use the network visualisation tool IssueCrawler to create the issue network⁴⁵. The IssueCrawler performs a co-link analysis to map interconnected communities of websites from a series of URL starting points deliberately chosen by the researcher. Choosing good starting points (e.g. websites which list hyperlinks and which are thought to be central to the issue network) and filtering out non-issue specific sources which turn up in the initial network visualisations are essential to the location of issue networks. The starting points themselves are not automatically included in the visualisation; only websites acknowledged through a link from at least two of the original starting points are included and visualised in the issue network. The visualisation shows websites as nodes and hyperlinks as links between the nodes (Eklöf and Mager 2013: 469). Outlining one configuration among many, the network is shaped by the starting points and will never provide a full or final depiction of a network.

The relations between the websites in issue networks are typically indirect, since “[a]cknowledgments of other sites, by way of hyperlinks, characteristically are one way recognitions” (Marres and Rogers 2005: 922). The websites in the issue network need not link to each other in order to be included in the visualisation; as long as they receive two links from the crawled population, they may only have the issue in common, in this case a shared concern with Samsø. Since Samsø is not an issue in the sense of an object of debate and contestation, Samsø is perhaps better understood as a ‘demonstrational object’ assembling networks insisting on the doability of sustainability and energy self-sufficiency. Drawing up the networks surrounding Samsø will give us access to different ways of imagining Samsø’s networks of influence. The analysis will allow us to detect some of the networks in which Samsø circulates, and through closer investigation we

⁴⁵ The IssueCrawler is developed by The Govcom.org Foundation Amsterdam. For more information, see www.govcom.org.

will be able to see which engagements of the Danish RE Island have made it into circulation among which entities.

The websites chosen as starting points for the IssueCrawler (see appendix 1) are derived from the Academy's website (energiakademiet.dk), which lists a number of collaborators and ongoing projects, EU projects primarily. The website provided such a wealth of starting points that Google searches, the outcome of which will always be on Google's conditions, could be avoided, allowing us to maintain the 'web-vision' from the Energy Academy itself, thus achieving more of an 'insider's perspective' (Koed 2012: 61). The resulting network is a snapshot of the Academy's current 'work situation' (provided that the website is regularly updated).

Using the IssueCrawler software, a highly polarized network space is located. The two clusters, visually and spatially distinct from one another, one Danish, the other European, are connected only through the Energy Academy node in the map's center. The network is thus held together by energiakademiet.dk, confirming that the map depicts a 'home perspective', rather than an issue network as it is traditionally conceived as a network of websites connected through a concern with the same issue (figure 2).

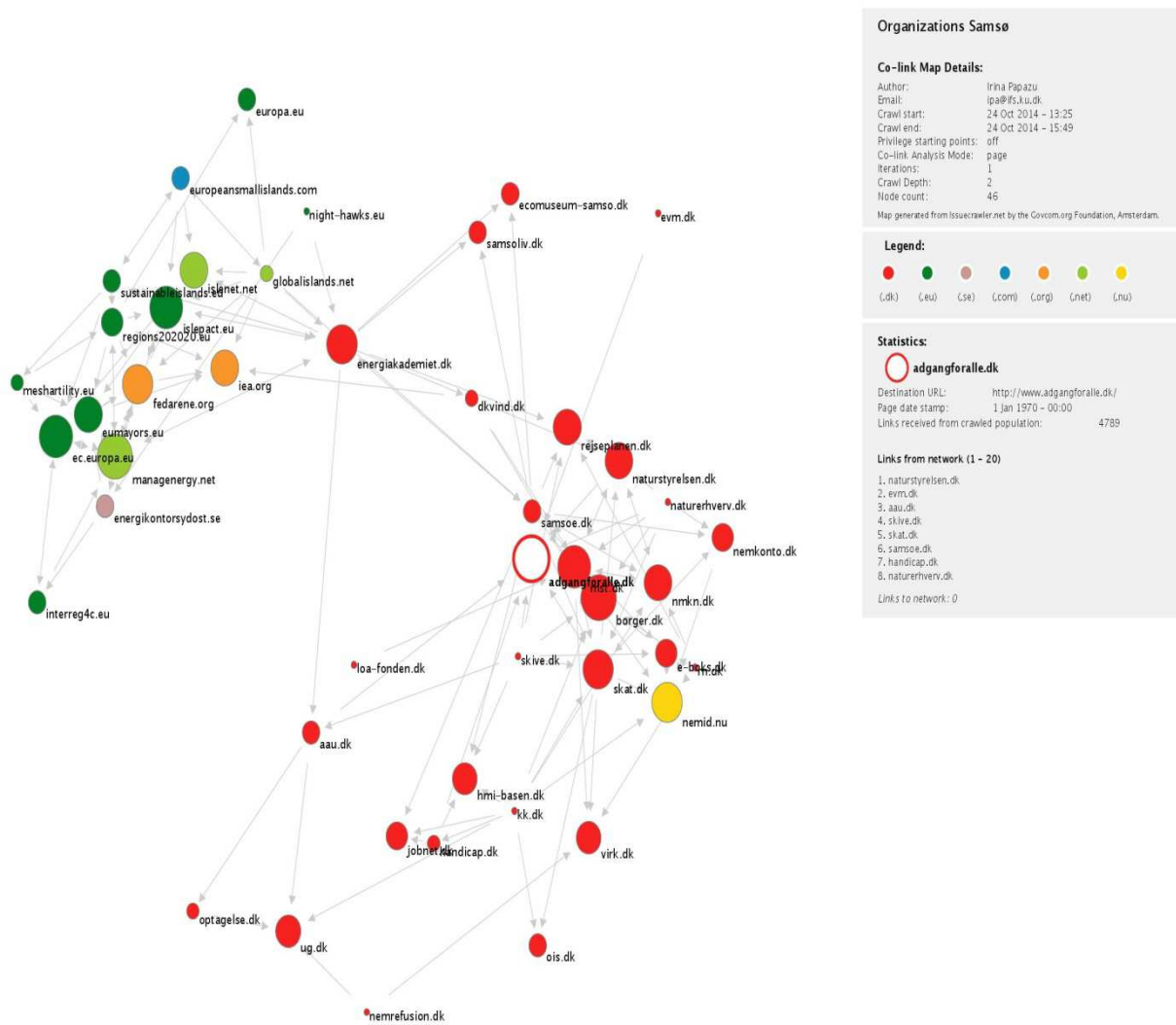


Figure 4: Samsø's organizational network on the Web, Fall 2014.

Source: issuecrawler.net, Govcom.org Foundation, Amsterdam.

A core characteristic of this network is that it is maintained through concrete, physical project work and reflects the Academy employees' actions. The network is not based on *ideas*, not even on Samsø as the good example; this is a network assembled through *work*, and through the Energy Academy's position as an active project organization with many partners.

The entities in the top left cluster share a concern for islands; from *Islepact's* “sustainable energy actions for islands” to the *Global Islands Network's* “efforts to help ensure a healthy and productive future for islanders”, islands – but not necessarily climate or energy – are the focus of these EU-based initiatives. Moving down the green EU cluster, the island focus is mixed with energy and sustainability projects in which Samsø takes part, such as *Night Hawks* (“reducing night time energy waste”). This green focus is maintained when we move to the bottom half of the cluster where we find two well-known EU-based climate initiatives, the regional climate and energy project *ENERREG* and the *Covenant of Mayors*. We also find the *International Energy Agency* (IEA), the only international node in the network. While in the top-left corner Samsø figures as a working partner, toward the bottom we see Samsø being used as an example rather than a collaborator. This is especially notable with the IEA, which lists Samsø as a ‘casestudy’ in the report “Citizens, Towns & Renewable Energy” (IEA 2009). In the EU zone, Samsø is creating waves both through the Academy’s project work and by way of demonstration, as the Samsø case is employed to make a case for “a major transition of the energy sector” (IEA 2009: 3).

According to the red, loosely connected Danish cluster, conversely, Samsø is not a role model, nor is the Academy an organization involved in projects. Samsø is first and foremost a *place*. Present in the network are Samsø tourist center, some local sights, Samsø Municipality’s website. A route planner also present in the network guides you there. Toward the center of this cluster the *Danish Windmill Association* is the only node in this network, apart from *energiakademiet.dk*, which directly engages questions of energy and sustainability. But a number of public organizations concerned with nature and the environment are present: *the Danish Nature Agency*, *the Danish AgriFish Agency*, *the Danish Environmental Protection Agency*. The presence of these institutions might be connected with the rules and regulations related to creating energy transitions in practice in Denmark. New RE technologies may interfere with the environment. In fact, the network is dominated by Danish governmental institutions and especially by websites

designed to facilitate the meeting between the citizen or organization and the state: *nemkonto*, *nemid*, *e-boks* – receiving digital mail from the authorities, paying taxes, auditing accounts. The network thus renders visible a certain type of work involved in being an active organization in Denmark, namely paperwork, bureaucracy and compliance with the rules. This network is a window into Danish society dominated by public institutions. Here, Samsø will only be a contested object if it fails to abide by the rules of society. What this network of normalcy essentially demonstrates is the politics of ordinariness involved in doing sustainability successfully. When an energy project is successful, it sinks into the taken for granted fabric of everyday life. The mark of success for an accomplished project: it is considered mundane and goes unnoticed. When mobilised in other circles Samsø is instead performed as a fresh and powerful example to follow. But the closer we come to home, the less Samsø is noticed.

Samsø's Media Network

In the network below we see how the character of the network changes markedly when Samsø and the focus on sustainability the island represents move so far from home that the island's demonstration of success becomes a powerful tool of mobilisation in itself. In this network (figure 3), all starting points are outsiders to Samsø. They are gathered from Google.com, Google.dk and Wikipedia.com; *delineation devices* that make available modes of seeing which do not necessarily offer reliable representations but which fit well with our present aim of achieving an outsider's perspective (Koed 2012), as Google and Wikipedia orchestrate most outsiders' access to the Web. Having retrieved the links to news stories in the Wikipedia entry about Samsø, I searched Google for further news stories with the queries "Samsø renewable energy" and "Samsø vedvarende energi". The first ten Google result pages for the Danish and international searches were examined, including as starting points only websites reporting about Samsø from a distance and excluding pages that seemed to have direct, non press-related contact with the island, in pursuit of an outsider's perspective to contrast the network above (see appendix 2).

The resulting map of linked websites is a rather loosely clustered network heavily dominated by American news media and organizations. *The UN*, *the IPCC* (the Intergovernmental Panel on Climate Change) and *Greenpeace* at the center of the network are the only international nodes. The Energy Academy itself has assumed a peripheral position in the bottom-right corner, and the UK and Canada are each represented by one newspaper, *the Guardian* and *the Globe*, respectively. What sets this network apart from the organizational network above is, firstly, the fusion of mainstream and critical news media and organizations, and, secondly, the network's overall focus on climate change over energy.

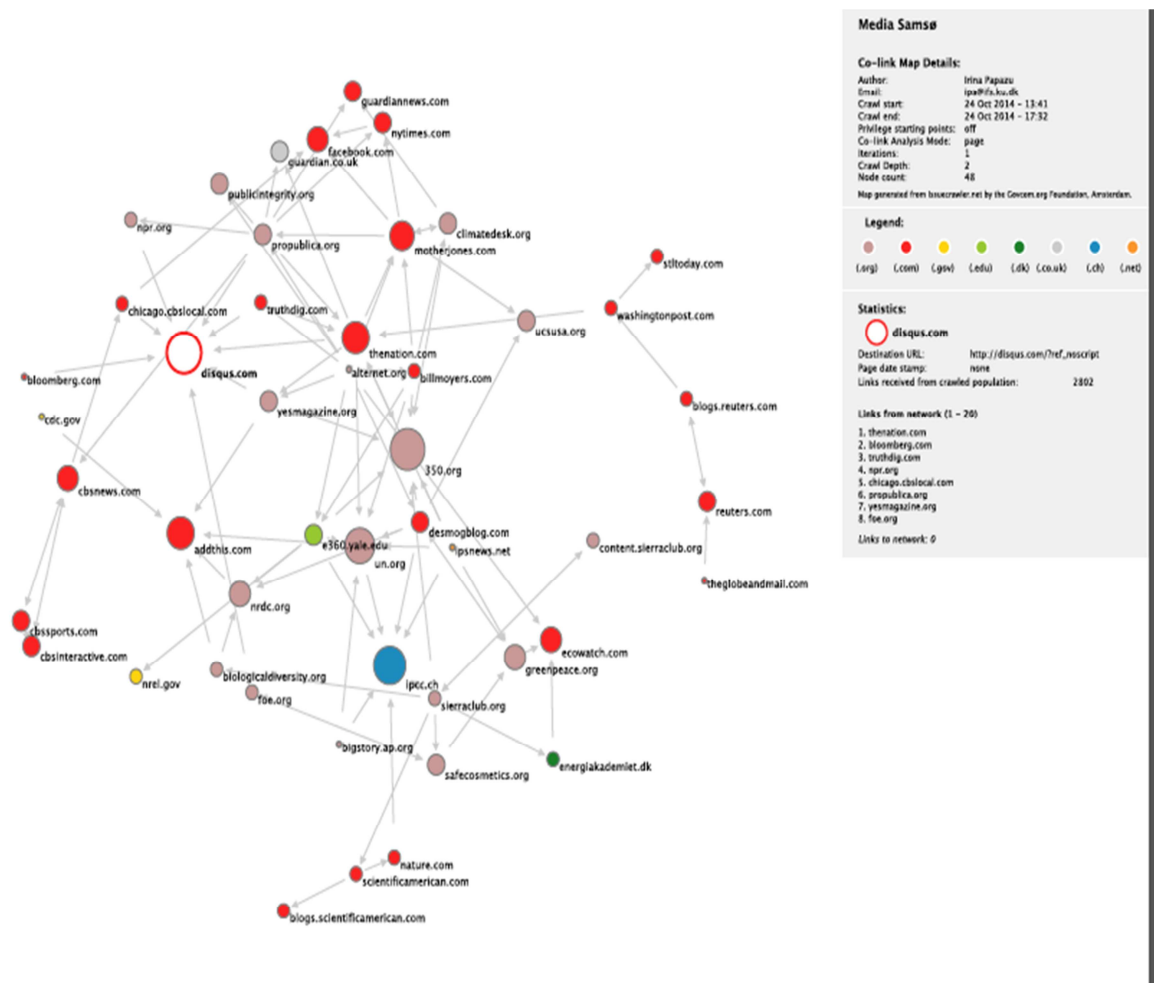


Figure 5: Samsø’s media network on the Web, Fall 2014.

Source: *issuecrawler.net, Govcom.org Foundation, Amsterdam.*

On the left side of the map we find mainstream media such as *the Guardian*, *the New York Times*, *NPR* and *CBS*. These have all reported from Samsø; articles which typically tell some version of the well-known story of how Samsø became Denmark’s Renewable Energy Island. The latest *New York Times* story, however, stands out by being an on-the-spot report from the People’s Climate March in New York, September 2014. In the article, connections are made between The Climate March and Samsø as the journalist runs into students planning a visit to the island: “A group... has headed... to Denmark along with two faculty members and five residents of Maine’s many small islands grappling with high energy costs from reliance on diesel generators...the college

president told me their goal... is to devise a plan for Maine's islands to follow the example of Samsø, a Danish island that was once dependent on diesel fuel but now is a net exporter of fossil-fuel-free electricity to the mainland." (*The New York Times* 2014). Samsø thus becomes implicated in the global climate agenda through its power as an example (and by a chance encounter in Manhattan). While the IPCC and UN nodes would likely be central in any climate-oriented issue network, the fact that Samsø appears in this context is not a given but shows how, according to this American view of Samsø, the island represents a significant climate change-related endeavour (remember how the EU-centered map above centered on questions of renewable energy and sustainability more generally, and less on climate change explicitly).

In the US, climate science is still contested, and this is reflected in the structure of the network containing activist and left-leaning nodes such as *Mother Jones*, *Alternet.org* and *The Nation*. Among these critical American news sources we find free press and independent science organizations, such as the *Union of Concerned Scientists* (ucsusa.org). Most of these organizations do not deal with Samsø directly but with the issue of climate change, the shared concern of this network. This network map, more so than the one above, displays the characteristics of a typical issue network, with different aspects of an issue being articulated and disagreements coming into the light. Samsø is enrolled into this network as an example of an alternative vision directed at the so-called climate sceptics. Rather than Samsø being the center of engagement in itself, Samsø becomes another argument in a tense debate.

Samsø is not usually treated as a contested or questionable object in itself, and for the most part, this network takes Samsø's success story as a given. The network does, however, provide access to one debate over Samsø, playing out in *The Scientific American*. In 2010, the journal published a long, uncritical article on the Samsø story. The first comment below the article links to a 2007 article in *The Australian Business Review* named "When the wind doesn't blow, power doesn't flow even in Denmark". The comment sparks off a long debate of more than fifty comments with several participants

arguing for and against Samsø's accomplishment, concluding with this last comment: "Well, I see that this article hasn't received the warmest of receptions, but at least the Danes are actually trying things." Quite a step down for "the world's most inspiring renewable energy-powered island" (Ecowatch 2014), another article made visible through the network. Such contestations are, however, rare, and Samsø's movements in the US- and climate change-dominated media zone continue undisturbed. The network provides access to articles from the early 00's as well as to articles and blog posts from last week. Not only is the view of Samsø's accomplishments predominantly positive, Samsø is still considered relevant by its spectators.

Although these three maps and the PowerPoint presentation show us different versions of Samsø's networked practices and movements, the RE Island rarely takes the scene as a disputed object. Samsø plays different roles according to context; in one network it is evoked as a model community in terms of public participation, in another as an example of carbon neutrality or rural development, and in the Danish context as nothing out of the ordinary. However variable, it seems that at the core, Samsø is displaying feasibility, demonstrating that a more sustainable society is within reach.

Conclusion

Throughout the analysis, the offline and the online have impinged on one another continuously. An Academy staff member describes her awareness of this interplay matter-of-factly:

"The network evolves, changes and expands depending on where Samsø-related people travel. 'Samsø' doesn't travel on its own, you don't just build a website and wait for it to start making waves. It takes physical effort, which is not all that surprising, but it's still contrary to our usual understanding of the Web and the digital as something that has replaced the offline world." (October 2014)

Combining a Web-based approach with fieldwork episodes has allowed for a flexible investigation of the ways in which demonstration projects can gain influence through networking practices and assert themselves as ‘success stories’ for diverse audiences to learn from and invest in. The mixed methods approach has made Samsø’s network activities and network politics visible. While the online issue network mapping gives a strong, quite geographical, understanding of the zone, the fieldwork examples, not least the PowerPoint presentation, allow for an appreciation of the importance of contextuality and manipulability. Together they bring to the fore the fact that which type of network is the salient form of organisation for Samsø at a given time and place is variable, and exactly variability – ‘Samsø’s ability to circulate network-specific versions of itself, adjusted to each specific site – is one of the strengths of this project. While Marres and Rogers (2008) claim that “a network located by way of hyperlinks does not reveal all the issue networking practices that may be going on, on and off the Web” (2005: 8), this interplay between the on- and offline has been underdiscussed and remains largely undetermined, as research tends to focus on one or the other domain. This article, by zooming in on this interplay, can be read as a contribution to this empirical and theoretical problem.

The various networking practices we have witnessed Samsø engage in display each its own politics. The US-dominated media network displayed a politics of issuefication (Marres and Rogers 2005), turning Samsø into a counterargument against climate sceptics. The director’s handmade map of the world showed Samsø’s conscious strategy of diversification, of adjusting to the context to make oneself relevant, basically, world-wide. Samsø’s organizational network, displaying an EU and a Danish cluster, demonstrated Samsø’s endeavours as efforts to be followed and learned from; there were no obvious conflicts in this Heclø-echoing issue network. The PowerPoint presentation turns witnesses into network participants through its manipulating moves.

Being a RE Island takes work. Becoming energy self-sufficient by investing in windmills and building district heating plants, creating citizen groups and arranging

public meetings is just the first step, the foundation of the net-work that follows. During my fieldwork, I frequently encountered ‘networks’ in conversation, presentation and practice. Networking, understood as “practices that circulate information, people and things” (Marres and Rogers 2008: 253), is a way of escaping size and place, of creating zones of relevance and changing horizons. In the field of environmental change, most influential examples and solutions on display are local; they are instances of success limited in scope and scale. International schemes, such as the European Union Emission Trading Scheme, have yet to prove themselves efficient at achieving carbon reductions. While policy-makers nationally and internationally struggle to come up with large-scale solutions to tackle a changing climate and a fossil fuel-based world economy, successful examples out there, however small in scale, are mobilised and seize the opportunity to communicate that sustainability may be doable after all. However mundane, a successful RE Island challenges through its very example the fossil fuel-based economy by suggesting to policy makers and others that things can be different, thus carrying with it a radical political potential for change.

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<http://www.theaustralian.com.au/business/opinion/when-the-wind-doesnt-blow-power-doesnt-flow-even-in-denmark/story-e6frg9k6-1111114580943?nk=edbbd24ece47b82783a11553147000bb> (accessed 28-04-15)

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Appendix 1

Samsø organizational network: Starting points for the IssueCrawler

The Energy Academy:

<http://www.energitjenesten.dk/>
<http://energiakademiet.dk/viden/>
www.energiinstituttet.dk

Implement – EU project (and project partners):

<http://peopleandbiogas.com/baggrund/>
<http://www.innovatum.se/>
<http://www.ipark.no/ipark>
<http://www.samsoe.dk/site.aspx?LangRef=1>
<http://www.time.kommune.no/kart/>
<http://www.trollhattanenergi.se/om-oss/>
<http://www.lemvig.dk/>
<http://www.fyrbodal.se/2.52a880561341fd21f7380008686.html>
<http://www.greengascluster.com/>

Night Hawks – EU project:

<http://www.night-hawks.eu/>
<http://www.prioriterre.org/>
<http://www.severnwye.org.uk/>
<http://www.ekodoma.lv/index.php?lang=en>
<http://stratagem.com.cy/partners.html>
<http://www.saena.de/>
<http://www.craca.it/homeEN.aspx?lang=EN>

Smilegov – EU project:

<http://www.sustainableislands.eu/partners.html>
<http://www.dafni.net.gr/en/>
<http://www.gotland.se/>
<http://www.oland.se/olandskommunalforbund/>
<http://www.visitestonia.com/en/holiday-destinations/the-islands/saaremaa-island>
<http://europeansmallislands.com/>
<http://www.itccanarias.org/web/>
<http://www.arem.pt/>
<http://www.cea.org.cy/CEA%20English/Links.html>
<http://www.lca.org.mt/pages/iseMain.asp>

D2D – EU project:

<http://www.wisle.org/people>

<http://www.shetland.gov.uk/>
<http://www.en.aau.dk/>
<http://www.inselundhalligkonferenz.de/>
<http://www.lunduniversity.lu.se/>
<http://www.fryslan.nl/>
<http://www.tudelft.nl/en/business/research-projects/>
<http://www.epea.com/en/content/links>
<http://arkitema.dk/presse/#/>
<http://www.texel.nl/>
<http://www.planenergi.dk/>
<http://www.brk.dk/Sider/Forside.aspx>
<http://www.laesoe.dk/default.asp?PageID=81>
<http://aeroekommune.dk/>
<http://www.danske-smaaoer.dk/links>

Organizations mentioned on the Energy Academy website:

<http://www.ve.dk/vedvarendeenergis-samarbejdsprojekter>
<http://www.ictsd.org/bridges-news/biores/overview>
<http://www.seagency.dk/projects.html>
<http://stateofgreen.com/en>
<http://www.shelburnefarms.org/>
<http://www.ecday.eu/news/>
<http://www.aarhus2017.dk/sponsorer-0>
<http://masdecoracion.latercera.com/>
<http://www.arte.tv/de>
<http://ruab.org/>

Appendix 2

Samsø media network: Starting points for the IssueCrawler

News media links on the Wikipedia.com page “Samsø”:

http://en.wikipedia.org/wiki/Samsø#Renewable_energy

<http://content.time.com/time/magazine/article/0,9171,1883373,00.html>

<http://www.newyorker.com/magazine/2008/07/07/the-island-in-the-wind?currentPage=all>

<http://www.metaefficient.com/renewable-power/danish-island-is-energy-self-sufficient.html>

<http://www.cbsnews.com/news/danish-island-is-energy-self-sufficient/>

Google.com: “Samsø renewable energy island”

<http://www.scientificamerican.com/article/samsø-attempts-100-percent-renewable-power/>

<http://ecowatch.com/2014/05/01/samsø-renewable-energy-island-sustainable-communities/>

<http://www.huffingtonpost.com/stefanie-penn-spear/samsø-worlds-first-100-renewable-energy-island-reb-5303237.html>

<http://www.go100percent.org/cms/index.php?id=58>

<http://earthtechling.com/2014/09/students-study-renewable-energy-on-denmarks-island-of-samsø/>

<http://www.nextworldtv.com/videos/energy/samsø--the-renewable-energy-island-of-denmark.html>

<http://www.pbs.org/wnet/need-to-know/environment/an-island-without-oil/1328/>

<http://climateheroes.org/support-us/>

<http://www.nationofchange.org/samsø-world-s-first-100-percent-renewable-energy-powered-island-beacon-sustainable-communities-13990>

<http://www.csmonitor.com/Business/The-Bite/2014/0705/Samsø-s-farmers-move-toward-organic-farming-and-away-from-fossil-fuels>

<http://www.wintergreencoop.com/samsø-island/>

<http://www.care2.com/news/member/354341191/3766494>

<http://lawweb.colorado.edu/events/details.jsp?id=5130>

<http://europeupclose.com/article/samsø-island-denmark-living-the-green-dream/>

<http://theenergylibrary.com/node/601>

<http://www.euronews.com/2012/06/05/samsø-where-renewable-energy-rules-the-roost/>

<http://www.independent.co.uk/environment/climate-change/the-little-island-and-its-big-green-victory-1827638.html>

<http://www.occupy.com/article/danish-island-powered-renewables-creating-followers-worldwide>

<http://news.greenmountainpower.com/manual-releases/2014/Montpelier-announces-a-renewable-energy-future?feed=d51ec270-a483-4f6c-a55e-8e5fbe2238c2>
<http://www.grundfos.com/about-us/how-we-think-and-act/small-island-goes-green.html>
<http://www.greenenergytimes.net/2013/12/15/samsø-island-is-100-renewable/>
<http://pennsylvaniafrack.com/2014/09/24/students-study-renewable-energy-on-denmarks-island-of-samsø/>
<http://www.spiegel.de/international/europe/an-ecotopia-for-climate-protection-samsø-island-is-face-of-danish-green-revolution-a-656325.html>
http://mitsloanblog.typepad.com/mit_clean_energy/2011/03/sams%C3%B8-a-renewable-energy-island.html
<http://www.theguardian.com/environment/2008/sep/21/renewableenergy.alternativeenergy>
http://www.smartgridnews.com/artman/publish/Technologies_DG_Renewables/Samsø---Denmark-s-renewable-energy-island-3775.html
<http://www.justmeans.com/blogs/the-island-of-social-innovation-samsø>
<http://www.norwegian.com/magazine/features/2013/04/is-this-the-most-eco-friendly-island-on-earth>
<http://www.sierraclub.org/sierra/green-life/2014/03/4-worlds-most-sustainable-islands>
<https://www.mum.edu/samsø-worlds-first-100-renewable-energy-powered-island/>
<http://news.coa.edu/2014/10/16/soren-hermansen-of-samsø-energy-academy-to-visit-coa-campus/>
<http://www.workingwaterfront.com/articles/Modern-day-Vikings-meet-Maine-island-delegation-in-Samsø-Island-Denmark/16139>
<http://ecowatch.com/2014/10/23/samsø-island-renewable-energy/>

Google.dk: Danish results (“Samsø vedvarende energi”)

<http://denkorteavis.dk/2012/6844/>
<http://politiken.dk/klima/ECE2087817/kaffedrikkeri-har-gjort-samsø-til-verdensberoemt-klimaduks/>
<http://www.information.dk/470180>
<http://ing.dk/artikel/ildsjæl-fra-samsø-far-miljøets-nobelpris-99661>
<http://aarhusstift.dk/2014/03/studietur-til-samsø-med-groen-kirke/>
<http://www.djoefbladet.dk/blad/2010/21/nyt-job-s-oe-ren-stensgaard.aspx>
<http://www.information.dk/126394>
<http://www.jyllands-posten.dk/protected/premium/erhverv/ECE3508997/samsø-bliver-energi-oe/>
<http://www.csr.dk/sams%C3%B8-har-luft-under-vingerne>
<https://www.realdaniadebat.dk/landbrugsforum/pages/VedvarendemedvindoverSams%C3%B8.aspx>
<http://radikaleaarhus.dk/samsø-har-noget-at-vaere-stolt-af/>
<http://rethinkbusiness.dk/c/blog/pumper-og-cirkulaer-oekonomi-i-samsø-kommune>

<http://www.golf.dk/content/samsoe-ser-groent>

<http://www.business.dk/oekonomi/samsoe-skal-vaere-groent-modelsamfund>

Paper 2 Transition Stories and Their Ethnographic Counterparts: Samsø's Renewable Energy Transition⁴⁶

Abstract

Through a joint community effort Denmark's Renewable Energy Island Samsø became self-sufficient with renewable energy over a period of ten years from 1997 to 2007. Today, the story about Samsø's successful energy transition has become a global export and a widely known exemplar of community building, public participation and shared ownership in energy technologies. In this article I argue that what has allowed the Samsø narrative to travel so widely has been the effective 'transition story' that has been forged about the islanders' exertions. This transition story, however effectful, has become fixed and standardized over time. There has been a hardening of categories and a weeding out of details that might become problematic if Samsø is to retain its influence as a leading figure in the green transition in the longer run. Building on an extended period of ethnographic fieldwork on the island, I make an intervention "in good faith" (Winthereik and Verran, 2012) into this 'grand narrative' of Samsø, as I employ ethnographic stories from the field to describe the dynamics of storytelling, the practice of providing the narrative with ever-changing contexts and the strategic tweaks the narrative has been subjected to. In so doing, I contrast the genre of the green transition story with the ethnographic story and discuss the role of the storyteller in relation to questions of intervention that arise through the analysis of the case of Samsø.

Keywords

Ethnography, transition stories, renewable energy, performativity, storytelling

⁴⁶ Submitted to Science as Culture

Introduction

Two storytelling events

Field note 1, September 2013

I conducted my doctoral research on Samsø, a Danish tourist and farming island of four thousand inhabitants which in 1997 was appointed Denmark's Renewable Energy Island (REI) by the Ministry of Energy and the Environment. The nomination set an island-wide, locally managed energy transition in motion, transforming the rural landscape into one marked by on- and offshore windmills, straw-based district heating plants and solar systems. Ten years from 1997, the islanders could call themselves 'CO₂ negative' thanks to the surplus electricity produced by offshore windmills exported to the mainland to offset the energy use of the islanders' transportation practices which remain fossil fuel intensive. Over the years, countless journalists, politicians, students and scientists have visited Samsø to learn about the island's achievements. Representatives of the island's Energy Academy, the organization still carrying out projects related to environmental sustainability and energy on the island, continue to travel the world telling stories, turning the local endeavour into a globally recognized example to be followed. I spent five months on Samsø in fall 2013 and spring-summer 2014, ten years too late to experience firsthand the island's renewable energy (RE) transition. From my office space at Samsø Energy Academy I observed and participated in the life around me, I had countless informal conversations, conducted interviews and document analysis. My fieldwork led me all around the island in an attempt to gain an understanding of the processes through which Samsø had become Denmark's RE Island and of the significance this title carries today, as Samsø continues to assert its status, among other things through new RE projects and dissemination of the islanders' experiences.

On my very first day at the Energy Academy, an employee and I were asked to show a Taiwanese visitor around and give him an introduction to "the story", as it is often referred to. I was thankful to discover that, although I was expected to chip in

now and then, I was not required to actually tell the story which I had just come to study myself. This is the condensed version of Samsø's transition story offered that day by the employee: "The slaughterhouse closed and two hundred people lost their jobs; it was the island's biggest employer. Hermansen [today the director of the Energy Academy] was well-known in the local community and good at talking to people. All of a sudden, the project had a lot of followers, because he made sure to get the support of the important local stakeholders first. It took two years of drinking coffee. The challenge is getting people to buy the idea. The technology you just buy, that's not the problem". As I would soon learn, this is a classic rendition of the RE Island story. The situation made me uneasy and at the same time put me at ease. It signalled to me that I was already accepted as a member of the staff, as someone who fulfills a function, not simply an outsider or the classic 'fly on the wall' observer. This moderated some of my ethnographic anxiety connected to getting through the first days of fieldwork. But the simplistic character of the story had an unsettling effect on me. The employee had recently moved to Samsø and had not herself been involved in the RE Island project processes. Nevertheless, part of her job was to pass on Samsø's transition story to visitors from all over the world. The story presented to me here was stripped of the messiness and controversy, the public resistance, and the legal and financial battles I had expected to encounter. These had no place in her story. What was it I had come all this way to study; did Samsø's experiences have no body, no complexity; were the island storytellers simply tape recorders repeating long-established clichés? These were the sources of my unease.

Field note 2, June 2014

In my last month of fieldwork, I was asked to give a presentation of the RE Island story to an experience exchange group of farmers from Jutland visiting the Energy Academy. That day I had decided to go to the office at nine, but received a text message ten to nine from a project manager on the verge of panic. Himself recently added to the

Academy staff, he had just gone off the phone with Hermansen, the Academy director, who needed someone to take care of the group that afternoon. Both complete amateurs with regard to the task, we agreed to manage the situation together. I warily consented to tell the RE Island story. The project manager would talk about current green projects on Samsø. Being at a point in my fieldwork where I felt dizzy with impressions and the vast amounts of data accumulated over five months, my first impulse was to dig out one of the much-used standard PowerPoint shows circulated at the Energy Academy. The slideshows had caught my interest from the beginning; standard renditions of Samsø's transition story presented to visiting groups without much variation. Each Academy employee had his or her take on the delivery, some focusing more on e.g. the financial or participatory aspects of the island's transition process than others, but the aspects emphasised in the slides were largely the same. On that particular day, however, I could not localise any of these templates I thought I had saved on my computer.

Faced with having to tell the story my own way, a new unease sets in. I know by now that the standard story about the RE Island project is inaccurate and simplistic; it has become vague and uncertain and no longer stands out to me as a clear, well-rounded entity. Having worked with the data for months, I cannot disregard this and present the standard transition story convincingly. I have to forge my own vague account, and I decide to do so using quotes from my interviews in combination with the cuttings from the local newspaper which I have spent many Thursday afternoons at the local record office digging out and photographing (the newspaper clippings can be accessed at www.energiinstituttet.dk/186).

Upon saying goodbye to the farmers, the project manager calls my "historical perspective" interesting and notes that "maybe we should work on developing that way of telling the story, instead of all of us simply telling the same story. You really assumed the observer's role throughout your presentation; you didn't insert yourself into the story as if it was *your* story and your experiences", he utters with some surprise. As I subsequently pondered over his words, it dawned on me that by assuming the

researcher's or observer's more distanced perspective, I was in fact inserting myself *into* the story. Not feeling comfortable with reiterating the standard narrative most often heard at the Academy, I had found a way to tell Samsø's transition story from my own point of view – that of the researcher. While what I offered that afternoon was in no way a *counter* narrative, it did serve as an alternative to the well-established story; it did seem to add a new flavour to a well-known entity.

Stories and why they matter

When The European Environment Agency (EEA) released its five-yearly report “The European Environment – State and Outlook 2015” earlier this year, synthesising information about the results of European environment and climate policies, the example of the Danish island Samsø was highlighted (EEA, 2015; Denmark's Radio, 2015). At the meeting in Copenhagen marking the publication of the report, representatives of the island were present to inform the international press about Samsø's accomplishments. Having made the transition to a CO₂ neutral, energy-producing society independent of fossil fuels, Samsø exercises its role activities such as the ones described in the opening vignettes: storytelling activities.

In this article I set out to complicate and enrich this green transition story of Samsø, to lay it out and to disturb it, to poke at it to see what hidden creatures might come crawling out; to shift our focus on the island if ever so slightly. My aim, essentially, is to discuss and document Samsø's RE Island project in order to prevent it from becoming a curiosity of the past and equip it, instead, for a future that needs alternative visions. As is apparent from the EEA's interest in Samsø, Samsø is still heralded as an instructive example and role model of sustainability, but how to maintain such a privileged position? My discomfort described above derives from two sources: the tendency to fixate and frame Samsø's transition story as a rarity of the past, and, tightly connected with that, the standardization of the story (an artefact of the large number of

Samsø storytellers) that forces many – potentially useful and valuable – details of the practical transition process to retreat into the shadows.

My overall aim is to understand storytelling as a method for circulating knowledge and demonstrating how RE transitions to less CO₂ intensive ways of living can be accomplished in practice. In bringing out some of the complexities of the Samsø case I do not seek to construct an alternative transition story for Samsø, but rather to investigate how the island actors have and continue to negotiate and put the story together, and to add my own ethnographic alterations and complicating observations to the mix in an attempt to free the story from its current – however effective – template-like formula.

At the beginning of my fieldwork I thought my research would focus on the making of the Renewable Energy Island. How were the project goals realised? What were the barriers to be overcome? etc. Despite the constant stream of visitors to the island, there have been no in-depth academic engagements with these questions. Visitors typically spend one or two days on Samsø, talking to Energy Academy employees, interviewing a few central island actors. They sit through the above-mentioned PowerPoint presentations and go on ‘energy tours’ around the island, visiting the windmills and experiencing the heat of straw-fired district heating plants. After boarding the ferry back to the mainland they write the story presented to them by their island hosts. Such writings abound and can be found, impressively for a small island, in major international papers such as *the New York Times* (2009; 2015), *Time Magazine* (2009) and *the Guardian* (2008; 2012). Receiving up to six thousand annual visitors specifically interested in Samsø’s energy transition, the ten Energy Academy employees cannot be blamed for having arrived at a fairly standardized welcoming package for their guests. The visitors have limited time and expect to be engaged in an information-laden and readily accessible manner, and the Academy staff on their part have other tasks to fulfill. Apart from welcoming ‘energy tourists’, the Academy participates in a variety of EU projects and collaborates with Samsø Municipality on making Samsø independent of

fossil fuels before 2030. The stories about the RE Island leaving Samsø are shaped accordingly, often anecdotal and sketch-like in character, providing only vague glimpses into what I believe is a significant societal reorganization and innovation, one of the strong stories of what is often referred to as ‘the green transformation’, the transition from fossil fuels to renewable energy.

Despite my prolonged stay on Samsø, I noticed how the stories I was told about the RE Island project did not add much to the stories printed in *the Guardian* or *the New York Times*. The accounts I gathered from different island actors seemed on the whole to support and add little new detail or complication to the ‘standard story’ about the RE Island project, which seemed to be far more unified, a much more coherent story, than I had expected. This suggested to me that since the REI project had turned out successfully – having achieved the project goals even ahead of schedule and with a minimum of public contestation (Jørgensen et al., 2007) – the heterogeneity involved in accomplishing what had undoubtedly been a complicated techno-social endeavour had been all but erased. The practices and events of the past seem to have become irrelevant in a present where well-composed stories about the RE Island are inspiring people around the world (for a similar point, see Cussins, 1996). But my curiosity with regard to the project was not satisfied by these stories. Risks had to have been taken, resistance and criticism managed, experiments conducted and new knowledge attained. A diversity that the stories currently told did not convey. Was there an alternative to the nicely framed and somewhat static version of the story I kept encountering?

In the course of my fieldwork I experienced moments when islanders who had been part of the RE Island project challenged the neat coherence of the story. Verran refers to such moments as “moments of disconcertment” (Verran, 2001) that carry the potential to open up the field to new insights. The stories told about the project as well as ethnographic encounters of my own when taken together seemed to carry the potential for adding heterogeneity, *life* and more detail to what we know about Samsø’s REI project. I wish to draw out *both* what makes the RE Island project into a coherent

object *and* the attempts to challenge this coherence made by actors close to the project who are representatives, makers and at the same time contesters of the standard narrative. By unpacking different versions, different stories told about the REI Island project, I aim to draw out the diversity inherent in being and becoming an internationally renowned ‘transition story’. The analysis will be constructed around these stories.

In *Science and Technology Studies* (STS) there is an interest, parallel to what I saw on Samsø, in the crafting of *ethnographic* stories, and in their effects. Following Bruno Latour, ethnographic stories do not simply represent; they *re-present*, they transform (Latour, 2001: 10). If “ethnographic descriptions are storytelling events... making reality” (Winthereik and Verran, 2012: 40), the Energy Academy staff and I share an interest in telling stories that “have in them the capacity to re-present the world in ways that are *generative* for the people and practices that the stories are about” (Winthereik and Verran, 2012: 37) as well as for the outsiders who are inspired by the stories. In this article our interests converge as I attempt to tell ethnographic stories about the stories the Energy Academy employees have spent a decade crafting and spreading.

Drawing out the multiplicity and challenging the apparent singularity of the REI project is no easy task. It takes work to create the impression of coherence and, as we shall see, once coherence is established, it can be very hard to contest, as is the case with any other ‘black box’ (Latour, 1987). The coherent object takes on an existence of its own. The stories I build the analysis around do not just differ in terms of content but also with regard to genre and agency. Some stories are ordering devices, technologies for transferring knowledge which foreground some carefully selected facts while omitting other. The ‘grand narrative’ of the REI project, with which I will open the analysis, is that: a carefully constructed story with strong, inspirational messages of collaboration, community and doability, of taking risks and succeeding. This generalized, coherent story, designed to travel smoothly, exists alongside other stories which seek to complicate the REI narrative. Themselves less accomplished, less fixed, more transient,

these ethnographic stories function less as devices for transferring knowledge and instead assume a role of disrupting or slightly disfiguring the grand narrative.

STS scholar John Law situates *performativity* as one of the central claims of actor-network theory (Law, 1999). In this line of thought, enactments such as stories do not simply “present something that has already been made but also have powerful productive consequences. They (help to) make realities” (Law, 2004: 56). The theater metaphor, an obvious connotation of the term ‘performance’, is appropriate, linking the notion of performativity to the sociology of public demonstrations: Samsø is consciously staged as a demonstration island, a “Theater of Proof” (Latour, 1988: 85) testifying to the doability of energy self-sufficiency. This reality of Samsø as a public demonstration takes center stage at the cost of the messy processes that must have preceded the accomplishment.

If we make rather than represent that which we describe, “the hands of the storyteller are never clean” (Law, 2002: 11). I am aware, diving into the Samsø story, that my telling of the events will join the ranks of the accounts I engage with, making me *complicit* in the making and staging of Samsø as Denmark’s Renewable Energy Island (Holmes and Marcus, 2008). As the analysis proceeds, accounts drawing on ethnographic moments from my fieldwork will be introduced which interfere with Samsø’s effective transition story, displaying Samsø’s transition story as *partial*, as just one among many possible narratives. According to Winthereik and Verran, an analysis that foregrounds the *partiality* of stories can be termed ‘good faith analysis’. Partiality refers, firstly, to the fact that a story can never be a description of a whole; it is always only a part of a whole. And which part is foregrounded is a political question – “it wants to achieve something in a particular context”. Secondly, partiality rhymes with partisanship as it refers to the researcher’s commitment to use the incomplete stories that are drawn out of the empirical material to make a difference in the reality that first fostered them (Winthereik and Verran, 2012: 48-49). The researcher emerges as complicit and activist, as an intruding character open to the fact that her intervention in

good faith *might* come to make a difference – but might as well not. An analysis in good faith thus holds an ambition to offer a richer image and to pay attention “especially to those parts that tend to elude the field of vision” (Jensen, 2014: 352), while acknowledging that the account will always be partial.

This ambition is more appreciative than critical, it should be noted (354). When Latour arrived at the Salk Institute in San Diego in 1975 his ambition was through his ethnography to reveal the messiness of scientific practice and thus to challenge the status of scientific facts as truths that are *discovered* and thought to exist independently of the practices, substances and tools that participate in their discovery (Latour and Woolgar, 1979). Since then, many STS scholars have been interested in debunking truths and myths, showing how contingent realities are built and how they can be challenged and destabilized. However, in 2004, Latour argued that constructivist thinking had resulted in a situation in which critique had run out of steam. He called for “efforts to develop modes of analysis and engagement not premised on ‘deconstruction’ or ‘debunking’ ” (Latour, 2004). Pointing to how realities are constructed does not have to be critical in this negative sense of the word; it can be a way of calling for appreciation of the hard work that goes into building durable realities. This is my intention with the analysis of Samsø.

This appreciative engagement has grown as the STS ethnographer’s relation to the field of study has changed (see e.g. Zuiderent-Jerak, 2015; Whatmore and Landström, 2011). While Latour’s presence at the Salk Laboratory was tolerated, his informants hardly deemed his research pertinent to their daily work. When I first contacted Samsø Energy Academy’s daily manager to discuss my possibilities for doing fieldwork on the island, my proposition was welcomed and at the Academy I was immediately considered part of the staff. I was viewed as a resource, as someone who could bring the Renewable Energy Island to a new audience: the academic world. My relation with the Samsø actors has from the beginning been one of complicity and

collaboration (Holmes and Marcus, 2008: 524). This relation has urged me to pursue my ambition of re-presenting the storytelling practices on Samsø in good faith.

While the RE Island narrative had long been forging new relations and inspiring change, on Samsø I sensed a desire parallel to my own among some of the Academy employees to draw out new learning from the project, to rewrite the story slightly. With this article I therefore do not see myself as bringing a critical intervention; I do not seek to bring attention to shortcomings or inaccuracies. I seek to enrich rather than debunk. This good faith intervention entails an acknowledgement of at least a degree of symmetry between the stories told by me and by the island actors, as well as an attentiveness to the fact that the stories are constructions that have effects; although the effects of a globally circulating story arguably differ from my searching ethnographic encounters. My aim is to put forward a proposition, an attempt at “paving the way along which the world advances into novelty” (Whitehead, 1929/1978: 187), or, more modestly, a hope that such commentary might at least help to “prevent further hardening of the categories” (Winthereik and Verran, 2012: 39).

The article proceeds as follows: I first present the standard RE Island narrative, the Samsø story as it is communicated to audiences worldwide, in quite short form. Next, I characterize the narrative as a nearly ideal typical green transition story. Confronting this genre with the ethnographic genre, I go on to describe how the influential director of the Energy Academy, Søren Hermansen, the protagonist and main creator of the story, is himself not altogether comfortable with the standard RE Island narrative having achieved near-hegemonic status. An account of his different attempts at complicating and challenging the well-known version follows. Having delved into these different moments or alternative stories, in the conclusion I return in my conclusions to some reflections on what a richer, looser and more detailed version of this green transition story might have to contribute to our understanding of the way in which we employ storytelling to imagine the times to come.

Samsø's transition story⁴⁷

“The relentless Baltic waves notwithstanding, the tiny island of Samsø is a tranquil, unhurried place. Though it sits at pretty much the dead centre of the Kattegat, the narrow channel that separates the two most populous regions of Denmark – the Danish mainland and the large island of Zealand (...) – Samsø has never been anywhere near the heart of Danish life. It’s just a bump in the channel, a mere 114 square kilometres of rolling pasture, small farms and tidy, picturesque villages, with a population about 4400⁴⁸” (Turner, 2007: 27). Faced with threat of closure of Samsø’s biggest employer the slaughterhouse, Samsø, however idyllic, was in a deep crisis. With the loss of a hundred jobs on the island, it was feared that Samsø might as well sink into the ocean. With its peripheral location it seemed inevitable that Samsø would fall victim to the winds of globalization and centralization. Samsø with an ageing population and few jobs had no role to play, it seemed, except as the producer of the famous *Samsø potato*, one of the early Danish potatoes sold as an expensive delicacy each spring (Jørgensen et al., 2007).

But something told the island’s spectators that, like in other times of crisis on Samsø, the islanders would come up with a creative solution. The fighting spirit is strong on Samsø. As the Danish Minister of Business said when she visited Samsø in the nineties: ‘When we politicians hear about a problem on Samsø, we look at each other and say that now we’ll soon hear about a new project on Samsø.’⁴⁹ And quite so, the Renewable Energy Island project – a competition issued by the Ministry of the Environment to find an island willing to install local renewable energy systems and become energy self-sufficient within ten years – presented itself at just the right time. It was not that the project came with public funds and support; the winner of the title would have to set up its own system for realising the project goals. At the time of the competition, Samsø was no ‘greener’ than the rest of Denmark with a degree of energy

⁴⁷ This is an idealtypical version of the REI story. Being a story, references are generally not added, but some sources will be suggested in the footnotes. For a longer and beautifully written version of the story, see Turner (2007: 27-44).

⁴⁸ Today, this number is down to about 3700.

⁴⁹ Interview with the mayor at the time of the project, Nov 2013.

self-sufficiency of twelve to fifteen percent. This was one of the reasons why Samsø was picked as Denmark's RE Island: by comparison with the rest of Denmark, Samsø's potential as a demonstration island was great; the results of the experiment would be easily scalable to the wider Danish context, and the island's exertions would demonstrate to foreign countries Danish renewable energy solutions (wind power, bio and solar energy) in practice⁵⁰. To the islanders, the main attraction of the RE Island project was the prospects of local job creation, further training of the island's workers and increased utilization of local resources such as straw and wood for heating. 'Going green' was never an idealistic project for (most of) the islanders⁵¹.

The development and implementation of the REI project was facilitated by a local organization called Samsø Energiselskab (Samsø Energy Company), which was not an energy company in the traditional sense of the word. Samsø Energy Company included all relevant parties without allowing one group to dominate others, and thus secured the democratic basis of the REI project – what has since become known as *energy democracy* in practice. Three business men, three farmers, the municipality (two politicians, the mayor and one administrator) and four members of the newly founded NGO representing the island public, Samsø Energi- og Miljøkontor (Samsø Energy and Environment Office) were members of the organization. Since all 13 members of the Energy Company were amateurs when it came to carrying out a society-wide energy transformation, two people were hired: Søren Hermansen, a local teacher and farmer, was to secure the support of the islanders while Aage Johnsen, an engineer from the mainland, a competent expert who has since passed away, would develop the technical plans for the RE projects. This 'dynamic duo' is believed to be one of the major forces behind the RE Island project. Especially Hermansen possessed an ability to talk to and convince the islanders that they should put their trust and resources in the project, not least due to Hermansen's local knowledge and presence, being a son and a grandson of Samsø farmers who were well-known and respected persons in the local community.

⁵⁰ Bünger, 1997.

⁵¹ Hermansen and Nørretranders, 2013.

Many ideas for innovative projects were on the table in the planning process, but in the end the accomplished projects were those based on well-known technology, while the more experimental projects such as producing biogas to fuel the ferry or harvesting the surplus heat from the ferries to use in district heating were abandoned early on⁵². While Samsø already had a few windmills, a local windmill guild and a district heating plant prior to the RE Island project, three new district heating plants were built (two of them straw-fired, one based on woodchips and solar panels), eleven land-based wind turbines, an offshore wind farm of ten turbines and many household RE technologies were installed over the ten year-period. The islanders invested around DDK 440 million (EUR 53 million) while the direct public subsidies only amounted to DDK 30 million (EUR 4 million). This means that each islander invested on average 100.000 DDK (14.000 EUR), made possible by the local bank's cooperativeness: the bank created loan packages enabling prospective shareholders to borrow money to buy one, ten or thirty shares in the collaboratively owned RE technologies. While some were collectively owned, other RE technologies were owned primarily by farmers who invested great sums. 4700 shares in the windmills were sold, each at a price of DDK 3150 (EUR 422), allowing people who did not have a penny to their name to set up a deal for a bank loan. The investments had a short payback time and were good business in the long run for all involved.

This mix of ownership forms made the RE Island project realisable and flexible.

The islanders, however, did not instantly support the project. The 'dynamic duo', the communicator and the engineer, invested time and effort in arranging public meetings, Hermansen taking care of the inspirational talks and the formation of working groups around the projects, while Johnsen prepared the answers for the technical questions that might come up. At first the islanders had a hard time seeing the relevance of the RE Island project. Being down-to-earth people, the energy coordinator Hermansen's initial idealistic talk of 'going green' as a reward in itself did not catch on.

⁵² See Samsø Energiselskab et al., 1997 and Hermansen et al., 2007.

But Hermansen soon changed tactics, realising that the islanders had to be made to see the concrete benefits of the RE projects: job creation, the possibility of turning a profit on the investments, the potential for revitalizing and improving the robustness of the island community and for the island public to work its way out of the crisis. The islanders were given a good deal of responsibility for the projects and tasks⁵³. With this new pragmatic approach, the islanders got engaged in the RE Island project, working together toward the goal of energy self-sufficiency, which was realised in 2007, ten years after Samsø's nomination as Denmark's Renewable Energy Island. Today, Samsø not only produces enough electricity through wind energy to cover the consumption on the island but also exports surplus electricity to the mainland.

Transition stories as genre

Moving into the terrain of the Renewable Energy Island, I wondered how a traditional rural society could be reconfigured into an internationally acknowledged frontrunner in energy transitions: how had the processes unfolded which led to the island-wide establishment of new energy technologies and how did the island public come to support the resource-demanding project? Upon my arrival on the island I nevertheless had to face that not only was 1997 a long way away in people's memories, but an account of the events had been constructed over time which told a strong story with few variations from storyteller to storyteller, be they Academy employees or island actors such as politicians or farmers.

On the whole, the islanders I talked to corroborated the account given above while adding their own emphasis depending on their role and position vis-à-vis the project. The chairman of the business council stresses the strengthening of collaboration between the island's businesses, as no one local business could handle the tasks involved in the RE projects on its own. The mayor and the president of the NGO Samsø Energy and Environment Office at the time, ex-officio members of Samsø Energy Company,

⁵³ Hermansen and Nørretranders, 2013: 125-133.

both emphasize the importance of this organizational constellation for the success of the RE Island project as it secured the collaboration between the island's influential interest groups. In general, the social and organizational aspects are stressed, while the technological aspect of the RE Island project rarely plays a role in the stories. The RE technologies implemented on Samsø were not considered innovations; they were well-known and well-tried Danish technologies, most notably wind power, fit for a demonstration project that would show to the world Danish RE technologies that work in practice and which can be installed elsewhere risk-free. Furthermore, as noted, Samsø had a few windmills and a straw-fired district heating plant in place prior to the RE Island project. Participatory processes, 'energy democracy' and community-building inspired the island's storytellers more than technological innovation.

The standard account has all the elements of a good story. Firstly, the prominent protagonist at the head of the project, Hermansen, without whose ability to create networks the RE Island project might never have been realised. Today, Hermansen is still the RE Island's main representative, occasionally referred to as Denmark's Al Gore (www.dr.dk). Secondly, the element of crisis – the impending closure of the slaughterhouse, the island's biggest employer. And, in the end, redemption, a happy ending. Public skepticism turned into support and participation, emphasizing the power of the local community. Classic themes such as center vs. periphery and the threat of globalization are struck. These are elements often found in the stories of energy or green transitions. The Green Economy Coalition (GEC), a global network of organizations such as NGOs, research institutes, UN organizations, business and trade unions, has published a report detailing "the ten essentials for telling the story of transition", some of which are: Heroes and villains, Compelling vision ("e.g. energy ownership; community empowerment; job opportunities"), Urgency, People's stories ("e.g. find the Steve Jobs of green and clean; locate local heroes and change-makers") (GEC, 2014: 3). The stories most commonly told about the RE Island project clearly fit the mold of the well-staged green transition story able to inspire and attract diverse audiences. The RE

Island story is a story crafted to travel and engage audiences world-wide in similar doings; it is a story with strong performative effects.

Next, we turn to a different genre of storytelling: the ethnographic story.

Ethnographic stories that intervene

The storytelling organisation

As I await the ferry one Friday afternoon, I have lunch with the Energy Academy director Hermansen – the above-mentioned ‘Danish Al Gore’ – and his adult daughter in his home near the harbour. We are discussing the Academy’s role as what he terms a ‘storytelling organisation’. The director: “We might be a storytelling organisation, yes, but not a strategic one! We can’t be that self-satisfied. Besides, that would be manipulation. But at the Academy today, I’m actually the only one who participated in the RE Island projects we’re telling our guests about. And there they [the Academy staff] are, telling the story as if they were part of it. That’s when it becomes narrative, and the stories become myths.” He seems frustrated, and his daughter chips in: “But those are the conditions of the organisation today”. The director, somewhat appeased: “Yes, certainly, I know, it’s unavoidable...”

The ethnographic story, like the transition story described above, is also “a unified text, a narrative, it exemplifies and enacts a particular time and place... [it] foreground[s], background[s], and render[s] some things out of the frame” (Winthereik and Verran, 2012: 40). But contrary to Samsø’s transition story, it follows from the logic of ethnographic stories as enactments “that there are many, many differing sorts of indexes that could be created” (ibid.). Ethnographic stories tend to be quite honest about their contingent, uncertain status; they, as their author the ethnographer, are situated, local pieces of knowledge that do not claim hegemony or objectivity. Ethnographic stories are vague wholes (ibid.: 41). The RE Island story, on the contrary, has become a generalized, singular narrative, and the Academy director acknowledges this with frustration. The fact that he witnessed and participated in the making of the RE

Island, while the remaining members of the current staff did not, makes the RE Island story exactly that: a handed down *story* that no longer has roots in the personal experiences of most of its tellers.

This is one factor behind the solidification of the RE Island story: the representatives of the story know little more than what they tell. It seems a necessary evil for the Energy Academy, an organization with a high turnover of staff. Especially during summer, when visitor numbers peak and most of the permanent staff goes on holiday, summer helpers are hired to give presentations and show guests around. As an employee comments, “delivering the story can be difficult. But it’s actually been easy for the summer helpers this year to access the story as outsiders, because I handed over a neatly demarcated version of the story to them, which gives them both confidence and credibility as storytellers”. To the functioning of the Energy Academy as a ‘storytelling organisation’, being able to hand over the story in the shape of readily accessible PowerPoint slides etc., and being generous with respect to *who* gets to tell the story, is vital. This generosity was reflected in their invitation to me to show the Taiwanese visitor around on my own first day of fieldwork. But it is an openness that has effects on the quality and character of the RE Island story. It accelerates its singularisation and generalization.

The director witnesses how this generalization of the story into a narrative that fits its multiple storytellers *and* fits the mould of the transition story genre comes with certain costs. He has been a driving force in building the strong narrative that continues to inspire onlookers globally. He is even the protagonist, the hero of the story. But the universalistic, timeless elements of the story, the elements that make the story work as a transition story and allow people from different parts of the world to identify with it, also constitute its Achilles’ heel. When Hermansen tells the story about the RE Island project in Denmark and abroad, he gives it life, he changes it to fit the context and the audience, he adds anecdotes about ongoing projects; it seems he always has something new to say. The RE Island story is *his* life story; he can mould it as he likes, he can let go

of old meanings and add new ones as he pleases (Linde, 1993). His telling of the transition story, like the ethnographic story, has the character of an ever emerging vague-whole story, and through its flexibility it continues to fascinate his audiences. The effect of the Samsø story thus becomes very reliant on its storyteller, and Hermansen is aware of this. As Samsø's most compelling storyteller he feels the weight of his role and looks for little ways out, as I will describe in the following ethnographic stories. Here we will see how Hermansen struggles to tell stories about the RE Island project that deepen, disturb and offer new ways of looking at what happened. These stories slightly rework the tight narrative about the RE Island project, they offer new insights into the events and become activities that seek to secure Samsø's continued relevance as a demonstration project in energy sustainability. It is my argument that such reworkings might prevent Samsø's experiences from being relegated to the realm of the past.

The little controversies and tactics of the RE Island project

In my talks and interviews with Hermansen, he always tried to open up the events to me, to show me the messy life of the processes behind the projects. Figure 1 below represents one such attempt to involve me in the by now widely forgotten controversies of the RE Island project. The difficultly intelligible drawing depicts a dispute in the village Onsbjerg over the siting of a straw-based district heating plant. The dispute was caused by one person's resistance, the chairman of the local branch of the Danish Society for Nature Conservation (DN). In the director's drawing, the village is depicted by a circle, and the points of the compass are added ('V' for west, 'Ø' for east) to illustrate the wind blowing from west to east. In the top left corner we see the village's medieval church and below it the planned heating plant. The director has added the chairman's house to the right side of the circle, and to the right of that, the chairman's proposed site for the plant. Smoke is rising from the chimneys of the plants.

The director: "The chairman opposed the heating plant in Onsbjerg because it would be too close to the old medieval church. He was afraid the chimney would shade

the church. We produced a lot of expensive visualisations to show him that the plant wouldn't overshadow the church. We had chosen that site because there were barns and a storehouse already in place so it was the economic solution. In the end, all we did was move the chimney, but not the plant. By then it had become clear that the chairman primarily opposed the plant out of fear that the steam from the plant would pollute his and the rest of the houses in the village – the Samsø wind typically blows from west to east. But there is no real danger of pollution from the plant, the Environmental Protection Agency checks the levels each year. In the end, the chairman retired and moved to the mainland, and the dispute was forgotten”.

This is a minor dispute based on one person's protests. If anything, the story serves to underline the specificity of the participatory practices of the RE Island project and thus to corroborate and enrich the RE Island narrative. Expensive visualisations were constructed to appease one person (albeit a person with a large support base; DN has many members on Samsø). In general, Hermansen told me, resistance was taken seriously. Plans to build biogas plants were never realised due to public opposition. Ten-fifteen wind turbine locations had to be dropped due to public resistance. No windmills were erected on northern Samsø because of its treasured nature. The offshore wind farm was moved slightly to one side to avoid disturbing the view from the landowner's estate, thus significantly increasing the cost of the project.

‘What we can agree on’ became a mantra for the project as well as a device for sorting the projects. Since the project proposal – referred to by the project developers as “the master plan” but never mentioned by the ‘lay islanders’ I talked to – cleverly listed many more projects than were feasible or necessary to achieve energy self-sufficiency, projects could be dropped without significant consequences if they could not find support among the island public (Samsø Energiselskab et al., 1997). The master plan was a well-designed steering instrument, carving out a comfortable maneuvering room for the project developers and allowing the project to come together in a way that fitted the island community. Living a life somewhat ‘under the radar’, this master plan has never

found a place in the island's transition narrative. I asked several 'lay islanders' (non-project developers) if they knew of a master plan behind the RE Island project, and most answered "no": it was a very "diffuse" project, the projects "sprouted organically". Confronting one of the Academy project managers with these responses, she looked at me with a smile: "The plan was available to the public but it wasn't exactly distributed door-to-door. It wasn't supposed to appear like there was a set plan that simply had to be rolled out; it was made to seem like the project evolved from the bottom".

This intricate balance between responsiveness, openness and controlled planning on the part of the RE Island project developers might not make for the most inspirational story. It does not speak strongly to the values of 'community' and 'empowerment' mentioned as "essentials to telling the story of transition" by the Green Economy Coalition (GEC, 2014: 3). But these tactics of concealing the level of planning, making the project seem open and flexible by leaving the impression that the role and influence of the 'lay islanders' is greater than it actually is, is a powerful approach to steering projects and one that might be valuable to inspired audiences worldwide interested in carrying out RE projects in practice. Furthermore, the frequently experienced moments of success throughout the project years, as sub-project after sub-project were realised, arguably did the island community much good, especially in terms of planting in the islanders a belief in their own powers of action. As the reader may recall, Samsø was in a precarious place at the time with rising levels of unemployment and the constant threat of depopulation. The avoidance of public controversy in this way, while not at first sight corroborating the strong 'energy democracy' narrative, did feed into a deeper belief in the viability of the island community, which at the time was – and continues to be – much needed.

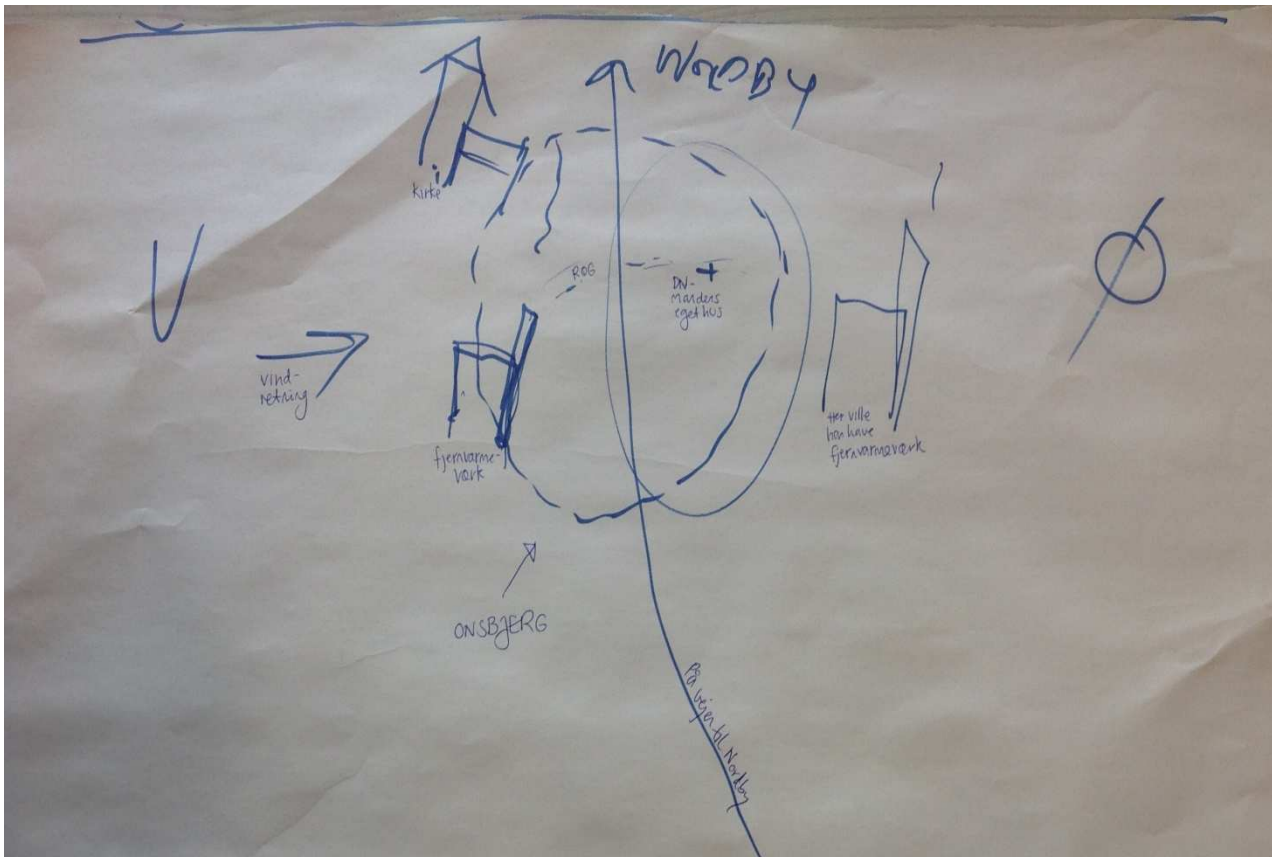


Figure 1. A hand-drawn Samsø controversy.

Re-contexting the story: From coffee to crisis

On another Friday afternoon on the Samsø ferry I talk to a filmmaker who has collaborated with the Energy Academy. The filmmaker: “It’s incredibly interesting, the way they construct their stories, consciously or unconsciously. The Academy is first and foremost a storytelling house. They could have chosen to tell a story about how three – only *three* in twenty-one! – of the windmills are owned by cooperatives of local citizens! But that’s not how they tell it, is it?”

The stories about the RE Island often center around ‘the community-driven’ and ‘community-making’ project – around ‘the social processes’, as the Academy employees tend to phrase it. Bringing the islanders together around the various projects and initiatives of the RE Island plan gave the island community a new direction, a common goal to work toward, as noted above. To the Academy director, *that* is the inspirational

story Samsø has to offer. In his lectures, he stresses that the stories about the windmills and district heating plants are only subsidiary stories, they are not *the* story, not the real issue. The three communally owned windmills communicate this story about what the community can accomplish if people work together; the remaining eighteen wind turbines, locally but individually owned (or owned by e.g. Samsø Municipality which invested in five offshore wind turbines) do not have the same compelling effect. “The real story”, according to Hermansen, is about “how you carve out a space for where you want to go”. With a smooth shift from the RE projects to storytelling and back again, he adds, blurring the line between the practical work and the narrative: “Our storytelling has participated in improving Samsø’s opportunities. It has expanded our freedom of action as a community. Through the actions we undertook fifteen years ago we have become less vulnerable”. In this quote he makes no distinction between the RE Island project and the practice of storytelling which evolved with it. The project is not just the sum of RE technologies installed on Samsø over a ten-year period; the projects and the stories told about them have melted into each other, the stories an equally valuable product of that time as the material changes made to the island. As noted, our stories foreground some aspects, such as three communally owned windmills, while pushing aspects that do not serve the purposes of the story outside the frame.

Lately, the Academy director has been working to create a link between the RE Island story and the Danish narrative of ‘the state bankruptcy of 1813’, attempting to provide a new context for the RE Island story without reworking the elements within it. In 1813, so the story goes, “Denmark faced total collapse. On the losing side of a major war, the country in tatters, its economy in ruin. Having lost land and resources... the country was bankrupt on every level. Except one. Out of this crisis, a new way of viewing society arose, fundamentally changing the structures of power, privilege and connection. Over the next span of years Denmark as we now know it was created and a golden age was born.” This text is from the public Facebook group “Denmark 1813 – From Crisis to Opportunity” of which several Academy employees including the

director are members. The group has 184 members and is a network of people involved among other things in the Danish folk high school movement and other progressive educational programmes, in politics and public debate, and in green transition projects. By attaching the RE Island narrative to this narrative of turning crisis into possibility, the RE Island becomes part of a bigger national context. Samsø fought its way out of its crisis by turning to the community, establishing cooperative associations etc., just as Denmark managed to do in 1813. Now we need a similar nation-wide transformation, the network suggests, and in this transition process Samsø possesses valuable know-how. This is not just a smart move in terms of making Samsø relevant to a larger Danish context, it is also a place from where the director draws new inspiration in that it invites a rethinking of the old RE Island story without challenging the individual components of the narrative. Moreover, this spin or activity of re-contexting (Asdal and Moser, 2012) also widens the applications of Samsø's experiences, broadening the focus from *energy* or *green* transitions to how you rethink communities in the face of – any – crisis.

For a long time, the punchline of the RE Island story for many of its Academy storytellers has been, “It just requires a lot of coffee!” Recall the Academy employee telling the Taiwanese visitor, “It took two years of drinking coffee”. The coffee storyline draws attention to the specific character of the participatory processes. It communicates that they took time, that they were local and grounded with everyone on the same footing, the developers not above the ‘lay islanders’ but willing to talk, listen, deliberate, negotiate, exchange experiences and knowledge. It is an easy-to-communicate and memorable point that resonates even with Japanese top executives eager to learn more about modern business management; these, too, come to Samsø to learn. It is a simple, not too demanding or challenging message and method that can be adapted to any context and even function as a management tool. But this is the type of storytelling that has started to frustrate the director who with the ‘1813 narrative’ wants to rethink and redefine, to widen the scope and relevance of the RE Island story, to add a historical and political perspective.

The struggle over the wider significance and applications of the RE Island story became apparent to me during lunch hour at the Academy one day about a month into my fieldwork. An exchange of words made me aware of the ongoing redefinitions and reworkings of the Samsø narrative, foregrounding the partiality of the story and the fact that *this story is perhaps the most valuable commodity of Samsø and also a highly malleable one*. The director mentions that he will be talking at a conference in Copenhagen the next day. I ask him what he will be talking about, and an employee heartily inserts, “So you’re going to tell them that they need to drink a lot of coffee, right? Haha.” Hermansen responds, suddenly in a strict tone, “Look, I’ve noticed you’ve really adopted that phrase, but you should quit using it so much”. Shortly after, quite undeterred by this encounter, the same employee shows a journalist from the large Danish newspaper *Politiken* around Samsø, and the title of the journalist’s report, which makes the newspaper’s headlines in connection with the publication of the fifth Assessment Report of the IPCC (Intergovernmental Panel on Climate Change), is “Coffee drinking has made Samsø a world-famous climate champion”, with the subtitle stating “The solution to the world’s climate problems can be found on Samsø. The locals have to be involved.” (Maach, 2013). The news story was successful in putting Samsø on the Danish map, which left everyone at the Academy pleased. But negotiations over the framing and messages of the RE Island story are ongoing, adding new nuances to the singular transition narrative.

The construction of crisis

Recall how green transition stories tend to be sparked by crisis and how the closure of the slaughterhouse on Samsø added exactly this element to the story? In the previous section I described the struggle over and variability of the overall framing of the RE Island story, but there is especially one of the internal components of the story which is also contested, namely the chronological connection between the closing of the island’s largest employer and the RE Island project. In fact, the slaughterhouse did not close until the summer of 1999, more than two years into the RE Island project. This can be

ascertained by reading the local newspapers and by asking the involved island actors about the chronology of events. The smith, one of the main promoters of the project in its early days but never much of a storyteller, was quite taken aback by my question about the connection: “The slaughterhouse closed, and that had nothing whatsoever to do with the RE Island project. The project was well under way when the slaughterhouse closed; as far as I know, the two had nothing to do with one another”. For the smith, long retired, the project is part of his life story; it is not a product or a tool to negotiate Samsø’s influence in the world, as it is to the Academy storytellers in whose eyes the connection between the slaughterhouse closing and the RE Island project has become reality. The chronological dislocation placing Samsø in a state of crisis functions as a catalyst for the story. A fundamental element in the story if the Samsø narrative is to work as a well-crafted transition story, the closure of the slaughterhouse marks exactly that, the *transition*, the change from one state of life on the island to another. The difference from then (before the closure) to now (after the closure) functions as a central engine in the transition narrative and therefore cannot be disputed by the Samsø storytellers without disputing the transition narrative itself.



Figure 2. A photo of the slaughterhouse as it looks today, taken by the author on the described trip.

On a trip around Samsø with a group of American students I asked the employee acting travel guide that day why he takes the students to see the closed down, ramshackle slaughterhouse (cf. figure 2). There does not seem to be much to see with only the empty, worn down buildings left. His answer is a question: “Don’t you agree that the slaughterhouse is incredibly important to the story?” He goes on to tell me that when he bought his house on the island in the nineties and moved to Samsø part time, “the atmosphere was incredibly bad. We basically won the competition on the day the slaughterhouse closed and two hundred people lost their jobs. So I’d say it’s extremely relevant, wouldn’t you?” He adds that when he tells the story, one of his main points is that the islanders are no more ‘green’ than other people. “But it made sense to do it [join

the RE Island project] as a community. It's been a life raft. It's about Danish culture and the cooperative movement and about community building. I love telling people that Samsø falls below the national average when it comes to organic farming. That is so surprising! How can a community like *that* create a renewable energy island?" With a narrative so strong that the original chronology of events has become irrelevant (cf. Cussins, 1996: 599-600), what is stressed here by the employee is the role that this element plays in the narrative. The state of crisis makes the RE Island story universally relevant; it frees it even from the category of *green* transition stories, turning it instead into an inspirational story of community building, much in line with Hermansen's '1813 narrative'. Samsø's appeal thus becomes near-universal. Indeed, Samsø is often used as an example of rural or island development rather than as a simple energy or climate project.

The Energy Academy does not welcome its visitors to tell them a historically accurate truth. It constructs stories fit for travelling and inspiring; it builds positive narratives that have effects. Early on in my fieldwork I realised I was not studying the RE Island project as it was. I was studying an island – or, more precisely, an organization, the Energy Academy – that produces generative stories, stories with reality effects on as well as off the island. As the daily manager put it: "It [the RE Island] is an organism, constantly sizzling and bubbling". Some ten years after the realisation of the goal of energy self-sufficiency, Samsø's RE Island project has managed to stay relevant. But will it continue to do so in the future?

Concluding discussion

In 1980 Langdon Winner published one of the seminal texts in STS, "Do Artifacts Have Politics?", in which he argued that social and political concerns and qualities can be built into technical systems which thus become endowed with particular societal effects. Winner famously built his argument on an analysis of New York master builder Robert Moses' bridges to Long Island: "Poor people and blacks, who normally used public

transit, were kept off the roads because the twelve-foot tall buses could not get through the overpasses.” (Winner, 1980: 124). In the nineties, however, the story about what is now known as “Winner’s” rather than “Moses’ bridges” became an object of dispute. As it turns out, the bridges do not seem to prevent the buses from going from New York to a certain park in Long Island (Woolgar and Cooper, 1999: 434).

What does Winner’s story, or urban legend, have to contribute to our study of Samsø’s transition? In their article “Do Artefacts have ambivalence?” Woolgar and Cooper stage a defense for Winner’s story which pertains not to its truth value, but to its effects. They note that “[it] is important to recognize that the story is itself a dynamic, shifting and essentially inconcludable narrative” (437) and move on to argue that the value of Winner’s story lies in the status it has acquired: “the story provides a single iconic visual motif to stand for a whole thematic strand of issues within ST&S; in Latour’s terms, it therefore has considerable explanatory power” (439). Winner’s text managed to “perform a community of readers” (439). Just as STS depends on Winner’s bridges to articulate an argument fundamental to the theoretical field, so do the storytelling activities of the Samsø actors – regardless how detached from or related to the original historical events – create real-world effects and assemble audiences worldwide; audiences and communities hungry for down-to-earth transition narratives.

With regard to Samsø, however, my main argument is that if the story of Denmark’s Renewable Energy Island, like Winner’s bridges, becomes known as nothing but an urban legend, it might cease to inspire similar doings and become instead an artifact of the past, in a time when our present and future seem to demand exactly transitions: changes to our ways of living together. My interventions, thus, the four ethnographic stories detailing how the Samsø narrative is toyed with, elaborated on, altered to fit certain purposes, contested and re-contexted, are made in good faith in the sense that I have highlighted the partial and partisan nature of the stories. By unpacking slightly different versions of the RE Island narrative I have aimed to draw out the diversity and complicatedness inherent in being and becoming an internationally

renowned ‘transition story’. The pragmatic attitude needed, the strategies and tactics that must be developed to get the community on board with the project, and the difficulties in going from being an ‘acting’ to a ‘talking’ organisation all combine to make for a different transition narrative. Not to speak of the role in my story of the master narrator Hermansen, whose story it was to begin with.

In the second opening vignette I described how I attempted to insert myself into the Samsø narrative as a storyteller telling the story from my own position as a researcher of the story. Keeping the story open and alive, playing with it and making it one’s own is exactly what the Academy director Hermansen excels at, and this positions the storyteller at the heart of the communication of the RE Island narrative. The ethnographer and the protagonist telling his life story thus approach each other, establishing symmetries between the green transition story and the ethnographic story. The act of intervention, which is above all an act of care for the story, is certainly not reserved to the ethnographer.

All stories may be or become enactment devices, bringing new realities to life. The complicating stories fighting to be acknowledged next to, or to meddle with, the standard Samsø narrative constitute disturbances that pertain to specific elements of the story. But where I encountered most struggle over the story was with regard to the context within which the RE Island narrative is inscribed and how the story is communicated. In these discussions it also became clearer to the island storytellers that they were indeed dealing with a malleable entity. In returning to Law’s notion of performativity, if stories participate in constructing realities, they also carry the potential for opening up political spaces for making decisions about societal change that could drastically change the coordinates of possibility and the conditions underlying our current practices. By inserting disfiguring elements into well-known narratives we disturb hegemonic taken-for-granted and open up our central narratives to re-contexting, to reflection and to creating new versions and new futures, making storytelling an engine for change.

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Paper 3 Management Through Hope: An ethnography of Denmark's Renewable Energy Island⁵⁴

Abstract

Purpose

The purpose of this paper is to analyse the process of social and technical change that took place between 1997 and 2007 through which Samsø, a rural island of 4000 inhabitants, became Denmark's Renewable Energy Island.

Design/methodology/approach

Building on ethnographic fieldwork conducted on Samsø in 2013 and -14, the article takes as its starting point a citizens' meeting in which a new renewable energy project is proposed by a municipal coordinator. This meeting, in which the municipal coordinator exhibits a 'change management' attitude, fails to win the citizens' support and becomes an entry point into an investigation of how the Renewable Energy Island project developers managed to get the island community to actively support the project. A gateway to the past, the meeting allows the author to ethnographically describe the unobserved events of 1997-2007.

Findings

The argument is that the Renewable Energy Island project developers practised management through hope or 'hope management', in contrast to 'change management', creating a project that succeeded in accomplishing its goals of changing the island due to its openness, its rootedness in the island community's past, and the project developers' ability to speak to a down-to-earth variety of hope.

Originality/value

The paper makes use of an ethnographic study of the present to investigate an unobserved past in which a Renewable Energy Island was built. Taking up the 'hope debate' in anthropology and Science and Technology Studies (Stengers 2002, Miyazaki 2004, Jensen 2014), the paper contributes with an empirical analysis of the role of hope in the management of change processes.

Keywords: hope, ethnography, renewable energy, climate change, change management

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1. Introduction

”[H]ope is the difference between *probability* and *possibility*. If we follow probability there is no hope, just a calculated anticipation authorised by the world as it is. But to 'think' is to create possibility against probability. It doesn't mean hope for one or another thing or as a calculated attitude, but to try and feel and put into words a possibility for becoming.”

Isabelle Stengers, 2002: 245

This article is about processes of change and how they are handled. Our departure point is Samsø, Denmark's Renewable Energy Island since 1997. On this island I recently did fieldwork, and as part of my fieldwork I observed how a citizens' meeting convened by the municipal energy and climate coordinator brought into view and reactualised the dynamics which several years ago led the islanders to accept the Renewable Energy Island project, a major project posing great challenges and bringing drastic change to the community. The meeting allowed me to observe the failure of the 'change management' attitude of the municipal coordinator who had convened the meeting to propose a new wind project, bringing to the fore, instead, the role of hope in guiding processes of change. It is this clash between 'hope management' and 'change management' in the case of Samsø, Denmark's Renewable Energy Island, which is discussed in this article.

Samsø's energy transition has been called a 'green revolution' (Burger and Weinmann, 2013; Turner, 2007: 29; Höges, 2009): upon winning a government-initiated competition between five islands to become Denmark's 'Renewable Energy Island' demonstrating Danish renewable energy (RE) solutions and (what is understood to be) the strong Danish tradition for public involvement to the world, Samsø embarked on a journey and a community-building process revitalizing the local community through the installation of four primarily straw-fired district heating plants, ten land-based and eleven offshore wind turbines and a large number of solar systems and privately owned RE

technologies. Through processes of local cooperation, over a ten-year period from 1997-2007 Samsø accomplished its down-to-earth energy revolution and became CO₂ neutral, inspiring observers all over the world and welcoming five to six thousand annual 'energy tourists'.

But is 'revolution' a fitting expression for this accomplishment? Samsø's energy transition was a slow one. The first years saw the patient construction of technical plans and the mobilisation of the island public into working groups, volunteers and customers willing to work toward what became a common goal: energy self-sufficiency. The first new wind turbines were not erected until 2000, three-four years into the project. The ten-year project period allowed time for the project to grow and for the island collective to change accordingly.

Is this what a 'green revolution' looks like? Philosopher of science Isabelle Stengers offers a two-piece warning against the word revolution. For one, revolution implies a detachment "from the past for a new tomorrow" (Stengers, 2002: 266). An abstracting move, revolutions are not situated in the here-now where lived life originates; they represent breaks, disruptions in life and custom. Secondly, the swift change implied by the word 'revolution', the orientation toward tomorrow, goes against Stengers' call to "slow down". In a context of change, slowing down allows necessary time for new practices and modes of coexistence to form and settle; necessary "because new habits also mean new feelings, new interests, new possibilities" (Stengers, 2002: 266; see also Stengers, 2005). Samsø did not strive for detachment from its past. Contrarily, the Renewable Energy Island (REI) project, where possible, built on existing village-based working groups, and both the wind and heating technologies and the organizational structure of the cooperative society or co-op frequently employed in the project were familiar constructions, traditional forms on Samsø. "On Samsø", a project manager from Samsø Energy Academy, the organization heading most RE initiatives on the island, told me, "we rediscover methods from the past, ways of doing things which worked at earlier times and still work today".

If 'revolution' implies a rupture with the past, maybe 'hope' is a more fitting characterization of the drive of the project. Hope, as in the quote at the top, referring to "possibility for becoming".

The Energy Island through its example and its methods of becoming also inspires hope. Following debates in anthropology and Science and Technology Studies (STS) about the capacity, even the necessity, for our methods to "nourish hope" (Miyazaki, 2004; Stengers, 2002), I treat the hopeful position not as a naive one, but as a position that urges the researcher to base the analysis in a "pragmatic and experimental engagement" with the empirical material (Jensen, 2014: 361), leading away from simplifications and definitive conclusions onto a path which creates room for hope in the present. Following Stengers, "hope is not for a future in the name of which we should sacrifice ourselves. No, it must be born from the very collective process as it *happens*" (Stengers, 2002: 257). Hope is what Samsø inspires in its spectators, and hope, I will argue, in this empirically grounded variation, was the engine of the REI project. My personal motivation for writing this is captured mainly in the first part of that sentence: Samsø's potential for inspiring, for sparking hope. I find Samsø's accomplishment, its practical staging of a real alternative to fossil fuel-intensive ways of living, not just compelling but also necessary; therein lies my hopefulness as a researcher.

While hope intuitively implies an orientation toward the future, in the case of Samsø we must project not forward but back in time to localise the hope which, I argue, made the REI project possible and to mobilise and equip this hope to, in anthropologist Miyazaki's words, generate new hopeful moments (2004: 25). I argue for an empirical sensibility toward the past as something that carries with it the potential to guide us in the present toward the future. To understand present hopes we need to understand the past; a logic reflected in Nietzsche's notion that in order to prepare ourselves for the present and the future we need to know our history (1996[1874]). The windmill meeting fails, as I will show, in part due to the failure of the organizer of the meeting to relate the new project to Samsø's past. This failure of linking up with the past leaves no room for

hope in a new project, and it mirrors my own methodological difficulty of getting empirically close to the hard work and practices that made up the REI project ten years ago. As the central concept of this article I treat hope as a theoretical-methodological problem *and* an empirical-analytical object of study, without making any hard distinctions between these categories. Employing hope as method implicates researcher and research object in a complex, even messy relationship, which should not be cleaned up or ignored but instead appreciated as “nothing else than the irreducible and always embedded interplay of processes, practices, experiences, ways of knowledge and values that make up our common world” (Stengers 2011: 10). The connections that arise between these entities – method, theory, analysis - are part and parcel of a method of hope.

Methods and methodological challenges

The article builds on an extensive fieldwork conducted on Samsø where I lived for five-six months during fall and summer 2013-14. From my office space at Samsø Energy Academy (the project organization with ten employees welcoming visitors, giving presentations about the REI project and initiating new RE projects on Samsø) I did participant observation and had informal conversations. I carried out some thirty interviews with central island actors and Academy employees and ploughed through old and new reports, newspaper articles and books about Samsø and the REI project. For this article, I draw on all these data, but most explicitly on fieldnotes from one specific meeting and the conversations that followed.

Writing about Samsø invariably raises the question of how to make the past visible. The events that led to the realisation of the island’s ambitious goals of energy self-sufficiency and CO₂ neutrality are far away by now, dimmed not only by the passing of time but by the many stories told about the island. Stories, neatly constructed to be fit for near-global circulation, which have turned Samsø into an almost mythological place (see e.g. Lyman 2014, Biello 2010), and which have arguably played an important part in the island’s success at becoming a widely recognised figure in the green transition. A

small farming and tourism island in the centre of the Kattegat between the Danish mainland and Zealand, home to four thousand islanders, Samsø is easily reached from Copenhagen by train and ferry. But getting to know the processes leading to change on the island without relying heavily on handed down stories by reminiscing islanders or impressionable observers who have narrated their Samsøs in books, newspaper articles and personal accounts, proved complicated for the researcher arriving to the scene almost ten years late. Nevertheless, my interest in that crucial time when an island community accepted a drastic change in the face of a threatening future urged me to find a way to ethnographically account for this process.

Employing hope as method requires empirical closeness and groundedness. But achievements inspected after the fact have been shown to take on the stability of accomplished facts, while the circumstances that went into their production have become invisible (see e.g. Latour and Woolgar, 1979). Those circumstances are what we are after. My reliance on documents and personal accounts inserts a distance between Samsø's becoming and I that is not just due to the decade that has passed but also to the quality of the documents and accounts available. There was, for instance, no systematic production or filing of documents during the REI project. The documents and accounts I have had access to constitute a comprehensive but unfocused data material lacking in detail and consistency. However, during my fieldwork on the island I participated in this meeting which so contrasted what I will describe as the methods of the REI project as to bring these back into the light through their contrast, thus endowing my data material with a new clarity and allowing me to craft this account.

The meeting exploded like a bomb in the heart of my field. The meeting itself and the discussions in its aftermath opened up and made visible practices, relations and negotiations of the past; this past that had hitherto appeared to be packed up only to be revealed to Samsø's many guests as a vague outline, a shadow of what had been. In what follows, after accounting for the meeting, I will explore the avenues opened up by the event; I will follow them into the past, back to the REI project, to seek an understanding

of what was done differently back then. Following these paths will allow me to answer what I believe to be a central question when it comes to Samsø's ability to inspire hope and foster further change in the world, namely, through which practices and methods were the processes of change involved in the REI project handled on Samsø? How was the RE Island created?

Upon my account of the windmill meeting I will contrast the method employed by the municipal energy coordinator convening the meeting with the methods of the REI project developers. If the municipal coordinator embodies one method, that of 'change management', the REI project developers, still active at Samsø Energy Academy today, represent another, that of what has become widely, even internationally known as the 'Samsø way' or, as I will call it, 'hope management'. It is this Samsø method that I will attempt to track down.

2. The meeting

From my desk at Samsø Energy Academy - the non-governmental project organisation heading the RE initiatives on the island and my base during my fieldwork - in the open-plan office in a building dominated by large windows generously putting the surrounding grass fields and the sea on display, I saw the meeting participants approaching. It was morning on a weekday, and the participants had agreed to start their workday with a meeting. The Academy was not involved in the new project to be proposed, but Samsø Municipality's energy and climate coordinator behind the initiative, Rob, found it natural to borrow the Academy's spacious kitchen for the meeting since the Energy Academy was naturally associated with energy-related initiatives on Samsø, and the meeting participants were used to stopping by the Academy for meetings. The Energy Academy and Samsø Municipality take turns initiating 'green' projects on the island with no rigid division of labour between them, and the two institutions often collaborate, just as they regularly meet and discuss new projects. This project meeting, however, was unrelated to the Academy. This was just weeks into my fieldwork, and the meeting offered me a

chance to meet a range of the men who had been central actors in the REI days. Around ten people showed up; invitations had gone out for a select few: three farmers, including the chairman of the farmers' association; representatives from Samsø Havvind, the local organisation behind Samsø's offshore wind farm; three municipal workers; the island electrician; the chairman of one of the villages' civic associations; a left-wing local politician and one Academy employee.

Until now I had encountered the men (very few women were actively engaged in the REI project) only as characters in the stories about the REI project: I had heard about how they had been won over by Hermansen (the protagonist in many stories, the energy consultant handling 'the communication side' of the REI project, now director of the Energy Academy) and how they had accepted great changes to the island and their lives (workers were trained to maintain windmills; farmers reorganized their farms and invested great sums to produce wind power on their lands; the island landscape changed to give way to district heating plants, solar systems and wind turbines in the fields).

For the meeting, the characters had escaped the books and articles and entered the Energy Academy with a familiarity I envied them in those early days of fieldwork. The farmers slipped out of their clogs and walked around in their socks and workclothes, and in the kitchen Rob, the energy coordinator, was setting up his PowerPoint show while I helped arrange the chairs and get breakfast and coffee ready. The atmosphere was laid-back, the participants chatting; everyone used to meeting at various occasions in the local community, now awaiting Rob's new proposal.

Since the conclusion of the REI project in 2007, Samsø, led by the Energy Academy in collaboration with the municipality and other island actors, has been at work on a new project, 'Samsø 2.0', concerned with becoming a fossil-free community by 2030. The project still finding its form it was not surprising that the municipality's energy coordinator had a new energy project to present. Still, it was customary for the municipality to run its initiatives by the Energy Academy to set up a partnership before initiating new projects, so Rob's convening a meeting with central stakeholders before

discussing the project with the Academy was unorthodox, the Academy employee present let me know. He suggested that it may have to do with the fact that Rob is not a local; he lives on the mainland and comes to Samsø a few days a week, and he has not worked long at the municipality, which, furthermore, is his first or second job after finishing university. This young man from the mainland now attempted to sell a project idea to the group of seasoned islanders.

The starting point for Rob's presentation is Samsø municipal council's recent field trip to the town of Hvide Sande in Western Jutland. On the harbour in Hvide Sande offshore mills have been erected on land. With the industrial activity on the harbour, the noise generated by the wind turbines does not bother anyone, allowing each turbine to produce 15 GwH, a Danish record. Rob jokingly mentions that Hvide Sande Municipality welcomed the islanders with surprise: 'We usually come to you - why are you coming to learn from us?' But the municipal delegates returned to Samsø inspired. Rob explains that the Hvide Sande business model is different from Samsø's in that the money is raised through a foundation. This model involves a long payback period of 7-9 years, longer than the payback time on the wind investments on Samsø. The money generated by the wind electricity would, due to the requirements of the foundation model, have to be invested locally and communally and not benefit private investors as has previously been the case on Samsø. This business model, less dependent on private investment, holds a great potential for benefitting the island community in the long run. Following the introduction, Rob poses a number of questions in his PowerPoint slides: Could we be interested in a similar project on Samsø? Would this model be suitable for Samsø? If so, how might we want to invest the money in ten years' time? Is there a burning platform for Samsø?

The concept of 'the burning platform', Rob tells me in an interview following the meeting, was coined by management professor John Kotter who works in the field of 'change management'. The term is used to highlight that the existence of a 'sense of urgency' plays an important role in processes of change. When bringing people together

around a new project, the identification of a common 'burning platform' is a central first step. Like myself, I doubt the meeting participants have read Kotter, and their response to Rob's project pitch is less than enthusiastic. Hesitant at first, they start pitching in: "Maybe the buses could be a burning platform..." someone begins (the buses run infrequently on Samsø and are subject to much complaint). A farmer adds, more sceptically: "The Hvide Sande model is unique; it can't be replicated here". The conversation quickly turns to the location of new Samsø turbines, an issue not raised by Rob. Some are quick to reject the possibility of identifying new sites: "The northern island is untouchable because of the preserved natural landscape. And the only part of southern Samsø where we can put up new mills according to the district plan is on the estate owner's land." The estate owner, central to the REI project due to the fact that he, word has it, 'owns half of Samsø', though invited, has not shown up today. The electrician chips in: "There *are* still possible windmill sites on the island". "But is the willingness there?" someone replies. "Look at Mejlflak!" [a controversial projected offshore wind farm near northern Samsø proposed and developed by mainland actors and heavily contested on Samsø].

The discussion is slipping out of Rob's control, and he makes an attempt to redirect the participants' attention to his 'burning platform': "Of course there is a burning platform. Just look at the municipal budgets: *there is no more money*", he appeals. "I realise that we can't simply copy the Hvide Sande model, but there must be a 'Samsø way' of doing this...". Rob tells me afterwards that the role of project instigator does not sit well with him. He had thought the islanders felt the burning platform as much as he does and would immediately support a new ambitious wind project. The participants' awareness of the hard-pressed municipal budgets ought to have been sufficient to spark a desire to embark on something new. And besides, as Denmark's RE Island it should not be difficult to spark interest in an RE project. Rob had pictured his role as someone who puts together a slideshow and presses a button, moving the PowerPoint presentation from one slide to the next while a project working group assembles around

him as the participants start feeling the inspiration from Hvide Sande. Instead, the meeting seems to be dissolving in scattered critical comments and arguing among the participants.

A farmer sceptically inserts that the state has refused many new windmill applications nationally recently. Himself a part of the aforementioned Mejlflak project which has already been approved by the state, the farmer takes the stance that Samsø should simply invest in the Mejlflak turbines; something Samsø Municipality has decided against due to the controversy surrounding the project. Another debate arising is that of how the money generated by the proposed turbines should be spent in ten years' time. A participant posits that the money ought to benefit the local community as a whole, not the island's tourists or farmers. The farmers who invested in the REI turbines still reap the benefits from selling electricity to the grid, and this cumulation of wealth in the hands of a few sits uneasily with some islanders, although it is a criticism rarely articulated. The chairman of the farmers' union cuts in: "It's tourism and farming that we have to live off; that's where the jobs are". The quarrelling continues: other areas could benefit from the money; it might sponsor a new public swimming facility; and "by the way", a participant adds, "if we support the farming industry and create new jobs in that sector they will soon be snatched by 'eastern workers' [immigrants from Eastern Europe]". The atmosphere is getting heated. The discussion still more diffuse, Rob's hope of starting a project working group dwindles with each new contribution to the debate. The Energy Academy employee, who has kept a low profile until now, attempts to calm the parties: "Let's talk about how we can raise the money for the foundation before we discuss spending it!"

After this interruption, the discussion once again turns to the location of the wind turbines, and the participants come to the conclusion that the estate owner's approval is crucial to the project. He not only owns large land areas which constitute potential windmill sites, he is also a member of the Samsø Foundation which could be crucial in raising the money required.

Suddenly, as the participants are converging on the point that they cannot move forward without the participation of the estate owner, he enters, one hour late. He has been outside smoking, supposedly unaware that the meeting started at nine o'clock. All eyes on the newcomer, the meeting that was coming to an inconclusive end changes character. The participants try to give the estate owner the full report, but the local farmer who wants Samsø to invest in the Mejlflak project interrupts: "The only possible site for new windmills is on your land south of the landfill". The estate owner, hesitant, directs his attention at Rob who has fallen silent: "Is there money in the project?" Rob shuffles out of his chair and pointlessly finds the slide in his presentation that says "Where will the money come from?", feeding the estate owner's question back to him.

The estate owner is visibly displeased with being brought into the process at such an early stage, but the discussion picks up again and moves back and forth until the estate owner unexpectedly gets out of his chair and stands up. While the other participants are in their workclothes, he is elegantly dressed as if on his way to go hunting. "I'm leaving!" he proclaims. "I don't see why you have to erect more windmills in my backyard; I have enough as it is. And it seems like the Mejlflak project is an obvious investment opportunity. Let's invest there instead". Rob, inserting that investing in that project would be highly controversial, grudgingly agrees to look into it again. The meeting is over, the estate owner already out the door.

3. "We've been bombed back to the Stone Age!"

In the aftermath of the meeting, Rob came to represent in the discussions of the Energy Academy staff the counterpoint to what now stood out more clearly to me as 'the Samsø method'. Hermansen, the Academy director and coordinator of the REI project, put this plainly in a later interview: "Rob's doing things now that we did ten years ago, presenting them as if they were brand new. I mean, a foundation! We experimented with that back then - it didn't work out. And he brings everyone to Hvide Sande only to be welcomed by confused people saying: 'What is Samsø doing over here? It used to be the other way

around!” Hermansen continues, “If I hadn’t been there, the REI project would never have been realised. I don’t mean to sound self-satisfied, but I was able to gather together the projects so they didn’t end up detached from each other without direction. Rural communities are ruled by fear because we’re always under threat of extinction, and I have at numerous occasions managed to raise people’s hopes again, due to my local knowledge and our reliable project plans”.

If Rob practices one method, imbued with a ‘change management’ attitude, the director represents another, that which has become widely known as the ‘Samsø way’. It is this ‘Samsø way’ or method that we are attempting to track down. From Hermansen’s quote, some elements can be identified: the importance of creating a common direction, the importance of ‘local knowledge’ and ‘reliable project plans’. Furthermore, raising people’s hopes is central. I will return to each in the remainder of this analysis.

What are people’s hopes and fears on Samsø? Island life is precarious; jobs are few, vital public institutions such as health care and schools exist under the perpetual threat of closure, and demographics look bleak with young families leaving rather than moving to the island (Jørgensen et al., 2007). The islanders hope for a less uncertain existence. The municipal energy coordinator has been hired to build wind turbines to aid the hard-pressed municipal budgets, and he simply hopes to fulfill his job, he expresses to me in a tense interview following the meeting. But he does not manage to bring his own and the meeting participants’ hopes together.

“We’ve been bombed back to the Stone Age!”, the Academy employee present at the meeting later tells the travelling director on a Skype connection, worrying that Rob has destroyed in one meeting the relations the REI project developers have spent close to two decades building, and drawing my attention to the care with which these relations had to be built, the time and effort it must have demanded.

Rob’s method, his way of approaching the islanders at the windmill meeting, goes against ‘the Samsø way’. He goes ahead quickly, proposing a project which is supposedly very open (“Where will the money come from?”), but which builds on a

fixed business model (the foundation), a PowerPoint show presenting the project in an already solidified form and calculations and budgets from the Hvide Sande project, a municipality with no relevance for the islanders. When the change management concept of ‘the burning platform’ fails to gain resonance, he half threatens them to support the project: “*there is no more money*” in the municipal budget. The most accommodating among the participants are brought to think about improving the island’s public transportation system. There are no great visions, as Rob fails to ignite the assembly’s hopes. In the Skype conference the Academy employee tells Hermansen: “It’s a misunderstanding. You need to present *positive* ideas to people which they can actively select and be enthusiastic about”, expressing something of a parallel to Stengers’ attitude toward hope as a slow, collective process of becoming – even if the idea of presenting people with ‘positive ideas’ sets the stage for a slightly more practical and bounded engagement than Stengers’ open-ended process of becoming.

When Rob neglects to make the islanders’ own experiences the starting point of a conversation about a new RE project, and instead presents Hvide Sande as the new pioneer, he implies that Samsø is no longer on the forefront. In signalling that Samsø needs to look elsewhere for inspiration, Rob unwittingly displays a lack of appreciation for Samsø’s renown and history and for the work the islanders put into the REI project; a project, ever-present in the island landscape, which continues to generate activity and profit for the wind turbine owners and shareholders as well as interest from the outside world. Remember the Academy’s daily manager’s words: “On Samsø we rediscover methods from the past, ways of doing things which have worked at earlier times...”. Rob’s failure to connect his project proposal to the island’s past and the islanders’ self-image as front runners is fatal to his project. He fails to establish a common direction for the future. When Hermansen emphasizes the value of his ‘local knowledge’ to the realization of the REI project, this knowledge did not simply allow him to engage the relevant stakeholders in the project. His local knowledge allowed him to connect past

and future with the present, thereby raising the islanders' hopes and setting change in motion, not through 'change management', but through 'hope management'.

4. Pragmatic lessons of the REI project

“Hope is not about miracles. It is about trying to feel what lurks in the interstices”
(Stengers, 2002: 245)

There was nothing idyllic or easy about the REI project; it was hard work. If hope played a role, it was not a hope for 'miracles', it was hope as a sense of possibility, a feeling that the hard work might come to fruition. In this and the following section I will attempt to draw out some of the messiness that characterized the REI project, and with this move show how the gap between the REI past and the meeting just described may not be as wide as the outraged comments of the Energy Academy employees signal. The islanders were likely no less sceptically inclined in the nineties, but their scepticism was known, managed and turned into a productive force in the REI project.

As I told an Academy employee about the meeting, she probably sensed my surprise that these men, the key players in the REI project, showed such resistance toward a new RE project. She somewhat gleefully noted, “I'm glad you've experienced your first citizens' meeting on Samsø”. She went on to tell me how there was, in fact, no big difference between the meeting I had just witnessed and the participants' scepticism and folded arms at the REI project meetings. The islanders have always been reserved, reluctant, a bit conservative when introduced to new ideas. My surprise, she said, probably had to do with the “version of the story” that was transmitted to me at the Energy Academy. The Academy specializes in telling the story about the REI project in concise terms. The stories are kept short and have been refined over the years to achieve the desired effect: to inspire the visitors. There is little room for communicating messy details and sceptical atmospheres.

I tend to believe, however, that the messiness and the challenges of the process can also be part of an inspiring story. The hope nourished by a pragmatic attitude open to the problems involved in creating change is not of the *easy come easy go* variety communicated in the stereotypical REI narrative: many meetings, lots of coffee, people coming together to help out with the projects, making them great successes for others to replicate. Instead, embracing the messiness of the processes and the problems involved fosters a kind of “hope against hope” (Miyazaki, 2004: 13); a propensity to work toward building a less precarious future, despite the fact that it is highly unlikely that any number of wind turbines can ever change Samsø’s position as a rural island with a steadily declining population. It is a variety of hope that calls for hard work and cautious visions, but one that, through its pragmatism, might actually resonate with Samsø’s diverse audiences around the world.

While Rob seemed as stunned by the islanders’ sceptical attitude toward his project proposal as I initially was - causing him to lose his nerve and simply drop the project - the REI project developers learned early on that taking the conservative attitude of the stakeholders into account in the planning of the projects was a precondition for success. When the islanders were first presented with the plans to change the island’s heating system from individual solutions based on electricity or oil to straw-based district heating, the project faced strong resistance. The Academy director (then a young farmer and teacher hired as the ‘energy counsellor’ of the REI project by the group of locals heading the project; his role was to handle the ‘communication side’ while an engineer was brought in to develop the technical plans and see the practical implementation of the RE technologies through) initially thought the green project plans would “sell themselves”. “The resistance surprised us. We hadn’t seen the risks involved in the project or anticipated that the smiths would come to us and ask: ‘Now that you’re dismantling people’s oil-fired burners, what will my job be?’ To us, the possibilities of the project lay in the green perspective itself, in our opportunity to make the world a greener place. But most citizens don’t think like that, their reaction is: ‘What about my

job?’ So we started to turn risk into opportunity; we started to think about job creation. That was a learning process, finding the right template; it was like inventing a manual”.

What was introduced into the REI project at that point was a pragmatic ‘what’s in it for me?’ or ‘will it pay off?’ (pronounced in the characteristic rural Samsø dialect) attitude, a test of the practical viability of the projects. The islanders were not willing to take risks and jeopardize their livelihoods for a hopeful ‘green’ project, but they were willing to believe in the down-to-earth potentials of the same project for improving their livelihoods and their local community⁵⁵. The focus on local job creation necessitated additional activities which became part of the RE projects, such as providing further training locally to equip Samsø’s workers to handle the tasks involved in servicing wind turbines and district heating plants, and introducing solar panels and heat pumps to be sold in local stores to keep the activity generated by the REI project on the island.

When Hermansen in the previous section talks about his ability to “gather together the projects”, this ability is related to the increased complexity of the projects caused by the change in the framing of the REI project from a green to a pragmatic project. The project developers had to accept that the REI project was not simply a technical challenge of installing RE technologies. Neither was it an idealistic project concerned with making the world a greener place. It was these things and more; the REI project had to accommodate all the islanders’ concerns and interests in order to succeed. It became a democratic and social exercise rather than a political, ‘green’ one. It thereby became more modest, but no less challenging. The challenge became how to meet citizens’ needs and interests in a way that allows everyone to recognise themselves in a project, while simultaneously getting everyone to work toward a common goal of energy self-sufficiency. In a way, the REI project became radically *unactivist* and thus to an extent reflects Stengers’ notion of hope as something that is grounded in the process of

⁵⁵ A similar point has recently been published in *Nature Climate Change* as a significant finding for the field of climate change research. The study concludes that in order to motivate climate change action the potential co-benefits of such action, especially co-benefits regarding the functioning of the local community, should be stressed as these tend to motivate more broadly than the climate change agenda manages to on its own (Bain et al., 2015).

becoming, rather than in some far-removed result for which one might hope in some diffuse way. This prioritization of the process over the outcome, of means over ends, demanded an openness and adjustability of the REI project and its developers, but not the kind of openness suggested in Rob's questions of "Where will the money come from?" and "What is Samsø's burning platform?" The openness of the REI project was anchored, firstly, in Hermansen's person (his "local knowledge") and, secondly, in "the reliable project plans" (relating, once again, to the director's quote about the success of the REI project in the previous section). Stengers' notion of becoming does, however, tend toward greater open-endedness than the islanders' who remain somewhat focused on how the REI project will affect their livelihoods in a pragmatic socioeconomic sense.

5. The dream factory

Himself a farmer and a local, Hermansen did not have to work hard to make the islanders trust him and, with him, the project that he represented. When Hermansen proposes a project, he is expected to have the island community's best interests in mind. Rob, by contrast, being an outsider from the mainland and a technical expert whose sole reason to be on Samsø is to carry out RE projects, has to work hard to gain legitimacy in the islanders' eyes. Hermansen's ability to "turn risk into possibility" (interview, Nov 2013) inspired confidence in the islanders who soon started to propose their own projects under the REI umbrella. When, for instance, three organic farmers started experimenting with extracting natural gas from a landfill and powering their tractors with rapeseed oil from their fields, the REI project managers invited experts from the mainland to equip the farmers for the challenges involved in their 'modest innovations' (Watts, 2014: 26), although such experiments were not part of the official 'masterplan' for the REI project.

The masterplan outlined the number and possible location of the major RE technologies to be established within the ten-year time frame but was not widely shared with the islanders, who were led to believe that the REI project was more open-ended

than it looked from the planners' perspective. This openness allowed the islanders to recognise themselves in the project, no matter their interests and occupation, which fostered great activity and creativity. In the words of an Academy employee, "it was a dream factory". Island life, as noted, is characterized by a significant amount of defeatism. As the former principal of Samsø's closed folk high school tells me, his and Hermansen's fathers, both farmers, did some calculations in the seventies of the island's demographic trend and future development. According to their calculations (their method remains obscure) the island population will be down to 3700 today, which is correct. Their calculations further predict that ten years from now the population will be down to 2500. A concern already in the seventies and with no solution in sight, "Samsø is a decaying culture", the principal concludes (interview, November 2013).

The concept of the 'dream factory' seems particularly well-suited to describe the span of the REI project from hard work, personal risk and pragmatism to the sense of possibility, openness and community also contained in the project. This may also remind us of Miyazaki's Pauline notion of "hope against hope"⁵⁶, echoed in the figure of Foucault's 'hyperactivist' who acts because of, not despite, his pessimism, " 'insisting properly' in the face of expected futility", thus preventing despair (Jensen, 2014: 361). This island community acts and creates results "in the absence of an agreed purpose", each with his own agenda, whether it is to secure his job, make money on RE investments or reduce CO₂ emissions, "shorn of the belief that what they do will come to matter" (361). But the pessimism of the islanders is a productive one, causing them to act in defiance of the facts, which they know very well, enacting a down-to-earth variety of hope that is realised in small projects in which each participant can believe. The RE Island was created by bringing together all the small projects. Rob, naively promising change by presenting one large and diffuse project which will supposedly address an equally diffuse 'burning platform', awakens the islanders' scepticism by proposing a project that is not constructively pessimist enough. The mere expectation expressed by

⁵⁶ "Hope against hope" is an expression borrowed from St Paul, Romans 4:18.

the energy coordinator that Samsø's problems may be *solved* goes against the islanders' attitudes; their pessimism a built-in element in their hope.

With the carefully prepared masterplan doing the work of coordination behind the scenes during the REI project, it (along with budgets and other 'reliable project plans') allowed the project managers to go to citizens' meetings, propose ideas for projects and answer the islanders' questions on the spot. While the engineer took care of the technical inquiries, Hermansen concentrated on getting people to believe in the projects and getting the right people involved (Hermansen and Nørretranders, 2013). Being a local, Hermansen knew who to involve in what, and he knew people's standpoints, interests and standing in the local community. The then mayor, also deeply involved in the REI project, explained to me how this worked in practice: "I knew there were maybe twenty dynamic farmers and ten good businesspeople, so when there were problems I would go to them and talk to them just like we are talking now, you and me, over a cup of coffee, and I would know that they would come up with ideas, and I practically knew in advance what we'd be able to find support for" (interview, Nov 2013). With the key players engaged, more would follow, and for the most part projects that were likely to meet resistance never left the drawing table. This approach of strategically targeting key players rather than the island community as a whole might not sound as democratic as the romantically inclined reader would hope, but the project developers found it a necessary pragmatic attitude: some of the people, many of them the same men who were present at the windmill meeting, were asked to invest millions of Danish kroner and fundamentally reorient their livelihoods (farmers becoming wind investors, workers becoming RE technical experts). "They are not Mr. and Mrs. Jensen", as Hermansen puts it.

Getting 'the right people' involved at the early stages of the process was key. This is, indeed, one of the REI dogmas Rob followed when he selected participants for the meeting. But he lacked the participants' trust. An Academy employee, who is also Hermansen's wife, told me about the meetings they held when planning the offshore

wind farm in 2002: “There were no women, only men. I’m allowed to come there because I’m Hermansen’s wife, so sometimes they listen to me. They sit there like chiefs... But Hermansen has the authority it takes; he’s good at creating a safe space so people who are investing a lot of money believe themselves in safe hands. Trust and safety are so important”. When the trust in the relation between the islanders and the project planners was not sufficient for the estate owner worrying about the risks involved in his large investment in the offshore wind farm, the project planners found the money to pay an expensive lawyer to appease him. The estate owner, according to Hermansen, needed someone to go to with his questions, someone who was “above” Hermansen in the “hierarchy”, as the estate owner would not accept a subordinate position to the project planners. The lawyer made him feel secure in a precarious situation where personal trust was not enough but had to be formally instituted.

In 2002, the offshore wind turbines were for a brief period the world’s strongest wind turbines: the ten locally owned 2,3 MW mills cost DDK 10.4 million (£1.4 million) per MW, amounting to nearly DDK 250 million (Hermansen et al., 2007). The lion’s share of the money was raised on Samsø. The farmer who chaired the local association building the wind farm vividly remembers the planning period: “If it was a financially risky situation building the offshore mills? You bet it was! I had red wine running in my veins, I suffered from stress, I couldn’t remember names, it was horrific! In the end, we hired a lawyer and got him to write up a list of all the risks involved in the project. The document was two pages long. I’m not sure anyone had the guts to read it all, they just signed. Everyone in the association had to sign it. That lifted the burden off my shoulders. We really couldn’t take it all in. But we sat down and had a beer, and everything worked out in the end. But we ended up spending a lot of money on lawyers”. When Rob proposes a new wind project and expects the islanders to join him in creating fast results, he unknowingly disregards the personal costs of the REI project still vivid in the actors’ memories.

It is obvious simply from looking at timeline of the REI project that during that period projects took time (Energiakademiet). Networks had to be built and tools for handling the participants' insecurities (the lawyer, the 'reliable project plans') constructed. The slow pace of the REI project at times caused public resentment (e.g. *Samsø Posten*, 1998). A long time passed between Samsø's nomination as Denmark's REI in 1997 and the erection of the first land-based wind turbines in 2000. But time was needed to prepare the projects, and slowly the REI project materialised, echoing Stengers' (2005) call to slow down, to let time do its work; "to feel what lurks in the interstices". The agitated discussions between the Academy staff members following Rob's project meeting and the statement that "We've been bombed back to the Stone Age!" reveals something about the care with which networks are built and how easily they are destabilised. Hermansen's job was to coordinate the 'dream factory', a canvas upon which the islanders could project their hopes and act accordingly; he coordinated minor projects that caught the islanders' interests, and he negotiated trust, risks and stakes in the major projects. With everyone engaged, the ambitious goals of the REI project could be met, and hope was nourished in the process through the practical work involved. Rob's project, his fast 'change management' attitude, negated all this and became a threat to the management style developed on Samsø and still practised today, that which we might call 'hope management'.

The discussions I witnessed at and after the meeting opened up a more nuanced and compelling version of the 'REI story'. This kind of hard and at times messy work may not lend itself well to commonplace inspirational storytelling and is downplayed and simplified in most accounts of the project. But I have attempted to show how, through a more empirically engaged understanding of the techniques and methods employed in the REI project, it may be possible to raise a different kind of hope, one that is more modest, pragmatic and grounded in the past, and also more realistic.

6. Conclusion

When central local stakeholders of the REI project reject a new RE project, their resistance may at first glance be puzzling. If we look closer, the past opens to investigation and allows us to appreciate how differences in management styles between the two projects may have played a crucial role in causing the proposed new project to fail having hardly left the drawing table, while the REI project of the past has become a world renowned success story. This paper has focused on elements of the REI project which the failed wind project meeting brought into view; elements not least revealed by outraged reactions of Energy Academy employees such as “We’ve been bombed back to the Stone Age!” How can a one hour-long meeting be feared to cause so much damage? This points to a much more messy and laborious process than the one revealed in the many popular accounts of the REI project. By following the threads of these comments back in time, I have attempted to draw out some of this hard work, the methods behind it and capture some of the life of the processes connected with the REI project.

The variations in management styles can be defined through a contrast between ‘change management’ and ‘hope management’. By ‘change management’ I understand an outcome- and solution-oriented attitude toward processes of change building on the identification of a ‘sense of urgency’ and a common ‘burning platform’ necessitating action in the face of a threatening future.

A ‘hope management’ approach as practised, I argue, by the REI project developers, focuses, by contrast, on the careful building of a process taking individual or group stakeholders’ interests and worries as a starting point of situated negotiations, in line with Stengers’ (2002) notion of hope as a “possibility for becoming”. The smiths needed tertiary training and promises of increased job security, the estate owner demanded a lawyer; some farmers joined because the project offered space for innovation and idealism, others to become wind investors and earn money. All desires could be contained in the ‘dream factory’ of the REI project, and through the project developers’ ability to build on well-tried practices of the past, such as co-ops rather than

foundations, the project did not break with the culture and self-perception of the island community. “Insisting properly” (Jensen, 2014: 361), despite the bleak outlook for the peripheral island, speaks to this notion of hope, which is not hope in a grand project promising to set everything right, but a situated, modest hope; it is the hope evoked by taking an active stand when in a seemingly hopeless position.

Bringing details of the past to the surface is in accordance with a logic, furthermore, of hope as a “method for knowledge formation” (Miyazaki, 2004). Just as hope, according to Stengers, lies somewhere between what can be thought and felt and what is possible and calculable, I have tried to think and feel and reason my way back to the time when an island community accepted a drastic change in the face of a threatening future. Through the case of Samsø I have approached hope as an analytical tool and as an engine for change in the past. To echo Nietzsche, we ought to study history to prepare ourselves for the present and the future (1996[1874]). Entering through my fieldwork, I have dug into Samsø’s REI history seeking out hopeful messages and tools for managing today’s challenges. Treating ethnographic observations of the present as a gateway to a more in-depth understanding of the past may enable us to refine not only our looking back (by becoming able to construct a version of the past that is less idealized and more empirically engaged than prevailing accounts) but also our looking forward, equipping us for action and change.

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Paper 4 Authoring Participation⁵⁷

Abstract

Samsø, Denmark's Renewable Energy Island since 1997, is world-renowned for being self-sufficient in renewable energy and for having achieved energy self-sufficiency and CO₂ neutrality through successful processes of public participation. In this article I seek to show how these processes of public participation so central to the Renewable Energy Island project can be better understood as instances of *material* participation motivated first and foremost by a concern for the future of the island as a 'liveable' community; a community in which jobs and institutions are not constantly threatening to disappear. By turning to material participation, a concept inspired by Noortje Marres and Jennifer Gabrys, the efforts put into Samsø's energy transformation by the islanders are given specificity. While much literature on public participation foregrounds public meetings and other spaces for deliberation and debate, material participation locates participation in everyday practice and work. On Samsø, the islanders' participation was not an add-on to the project, it was an indispensable resource in itself. Building on extensive fieldwork I analyse how the islanders came to invest their time and resources in the Renewable Energy Island project, highlighting how, by materializing energy in concrete, local projects, energy and climate change-related projects can gain community-strengthening potentialities reaching beyond goals of energy self-sufficiency.

Keywords: energy transformation, material participation, renewable energy, community

⁵⁷ Submitted to *Nordic Journal of Science and Technology*. Revise and resubmit.

Introduction

Samsø, a rural island home to three thousand seven hundred inhabitants, is Denmark's Renewable Energy Island (REI). The island is world-renowned for being self-sufficient in renewable energy from wind, sun and biomass⁵⁸. The four thousand islanders' combined carbon footprint is 'negative' due to Samsø's export of surplus wind electricity to the Danish mainland. However impressive the technological transformation of the island's energy systems, the project was never approached as a purely or even primarily technical challenge. When a group of islanders handed in their application to the Danish Ministry of Energy to start work on becoming Denmark's Renewable Energy Island over a ten-year period from 1997 to 2007, the islanders' main objective was not to 'go green', to lower Samsø's CO₂ emissions or to make Samsø a famous demonstration site for Danish renewable technologies, as was the Ministry's main objective. The islanders' main goal was to secure the survival of the island community. In the words of the project director Søren Hermansen, "We wanted to establish a platform of citizens capable of taking responsibility for their own community. It matters less whether the end product is windmills or a new Internet connection or a new ferry... We had to learn to cooperate" (interview, Nov 2013).

While the world has primarily turned its attention to the 'green' dimension of Samsø's transformation⁵⁹, the locally defined objectives that engaged the islanders had to do with making the island community *viable*. In order to strengthen the community's viability – to create jobs, to cooperate on new projects, to revitalize local businesses and keep people from leaving the island – every islander had to be a participant in the

⁵⁸ Eleven megawatt (MW) wind power were needed to make Samsø self-sufficient with electricity. These are produced by eleven one MW onshore wind turbines erected in 1999-2000 owned by a windmill cooperative and by local individual owners. In 2002 ten 2,3 MW offshore windmills were erected - for a brief period the largest offshore wind farm in the world - to compensate for the CO₂ emissions from the islanders' means of transportation: tractors, cars, buses and ferries. Sixty percent of the island homes are supplied with district heating and forty percent with individual heating systems, e.g. heat pumps and solar collectors (while a few have kept their previous non-RE systems)(Hermansen et al 2007).

⁵⁹ See. e.g. *The New York Times* (Taglibue 2009, Cardwell 2015), *Time Magazine* (Walsh 2009) and *The Guardian* (Bonne 2008, Kingsley 2012).

island's transformation. When participation is understood in this manner, it cannot be limited to a question of acceptance of new technologies or regarded as an issue of increasing the robustness and legitimacy of actions and decisions. We have to revisit our understanding and widen the scope of participation; this is the first contribution of this article.

When the islanders participate and get engaged in the renewable energy (RE) projects, they enact Samsø's new renewable reality through their everyday actions, in working groups or at home. Sometimes they join public meetings arranged by the project developers (who were also locals), but this is not where the real *work* of participation is done, I will argue. To provide an example, during the REI project years on Samsø, when working on altering the island's heating systems, if a village could not find enough people to form a citizen group, the village would be passed over and would most likely not get their own district heating station, as the villagers themselves had to put in the bulk of the actual work involved in the projects.

This article focuses on participation as a resource, as work, as material actions. And it focuses on how, on Samsø, these processes of participation have become part of what makes the Danish Renewable Energy Island famous. Through the islanders' concrete down-to-earth actions, renewable energy has been reframed and rescaled as being about social change and community making rather than about efficiency calculations, markets, national and European energy policies and CO₂ credits. The second contribution of this article is to offer an empirically grounded new perspective on community-based RE transformations, a field that is inspiring still more people, on Samsø reflected in the three to five thousand 'energy tourists' who travel to the island from all over the world each year to learn about what Samsø did.

This paper builds on an extensive fieldwork conducted on Samsø where I lived for six months in 2013 and 2014. From my office space at Samsø Energy Academy (an organization with ten employees welcoming visitors, giving presentations about the REI project, and initiating new RE projects on Samsø) I did participant observation and had

informal conversations. I carried out some thirty interviews with central island actors and Energy Academy employees and ploughed through old and new reports, newspaper articles and books about Samsø and the REI project. For this article, I draw on all these data sources. The fieldwork led me all around the island trying to develop an understanding of the processes through which Samsø became Denmark's RE Island and of what this title means today as Samsø continues to assert this status, among other things through new RE projects and through dissemination of the experiences.

It is important to note that as the REI project unfolded from 1997 to 2007, my data material is conditioned by the limitations of people's memories and the less than systematic filing of the documents related to the RE projects. Details of conflicts, negotiations, even controversy have a tendency, I discovered, to recede into the background as projects are successfully completed and the RE technologies have become part of the Samsø landscape. As a consequence, the described events may come across as less dynamic than one would expect for such a comprehensive undertaking, but I have attempted throughout to provide as much detail as possible.

The article proceeds as follows: Upon taking a closer look at the Samsø *community*, the article proceeds to discuss participation theory and the possibilities offered by STS (Science and Technology Studies) for reframing participation. Especially Noortje Marres' notion of *material* participation will be contrasted with more procedurally focussed perspectives on public participation, shifting the emphasis from knowledge and democracy to materially grounded, informal, practical actions. The analysis will give examples drawn from my fieldwork of how this specific form of participation played out in practice on Samsø.

“We're all in the same boat”

Samsø, being Denmark's Renewable Energy Island, is popularly known to be energy self-sufficient. In fact, however, Samsø has not exactly gone 'off-grid' and it is not *self*-sufficient in the strict sense of the word. The island is connected to the Danish mainland

through a cable essential to the functioning of the island's electricity system (Karnøe 2013). Without the cable, the island would not be able to send its surplus wind electricity into the Danish electricity grid, and in the absence of large-scale RE alternatives to wind electricity on the island, the connection to the mainland allows the islanders to also “make coffee on calm days when the wind isn't blowing” (interview, islander, Nov 2013).

Self-sufficiency and localism on Samsø, then, are not about going off-the-grid, and it certainly is not about insularity. On the contrary, the aim of the REI project has to a large extent been to strengthen the island's ties to the mainland; to become less peripheral in a country where centralization is an ever bigger threat to small communities facing depopulation, unemployment and the closure of vital local institutions. As the chief executive of Samsø Municipality formulated it in a seminar, “we can't exist as an island community if we're not completely entangled in Danish society. Instead of breaking loose, we need to strengthen our connections. If for example we need to raise DKK two hundred and fifty million [EUR thirty-five million] for a new ferry, how would we raise that kind of money if we couldn't get support from the outside?” On Samsø there is a strong sense of insularity, to which we shall shortly return. Paradoxically, the REI project that has made Samsø energy virtually self-sufficient has also brought Samsø closer to the rest of Denmark and the world by putting Samsø on the map, thus making Samsø relevant as an interesting case, as a partner in projects, as a place to seek knowledge and inspiration. This is localism and self-sufficiency with the purpose of overcoming the confinement to the local.

When the director of Samsø's Energy Academy Søren Hermansen, a *Time Magazine* Hero of the Environment in 2008 and figurehead of the REI project, gives his talks about Samsø, the stories about windmills and district heating plants are not the actual matter of the story, he tells me (interview, Nov 2013). What is at the heart of the story is the life that unfolds around those technological arrangements. And that story, “the real story”, is about how you take control of your community's development.

“Through those actions we carried out ten years ago, we have become a less vulnerable society”, he claims.

Talking to the islanders, the reality of living on an island and the sense of vulnerability that comes with it figure prominently. “I live on an island, so there is a physical thing about this...”, a local politician stated (interview, Oct 2013), referring to the island condition as a physical limitation. Hermansen, the director, contrarily, tends to frame living on an island as a resource and a condition that makes collaboration easier. He will refer to the islanders as being gathered around a campfire, “connecting to the same idea of the commons” and compelled to manage this commons together. In framing the island as a commons he evokes the well-known story often related to anthropogenic climate change, namely ‘the tragedy of the commons’ (Hardin, 1968), denoting a situation in which individuals, acting independently and rationally according to their self-interest, end up depleting the common resource. With Samsø a well-defined common resource, Hermansen points out the necessity of finding community-based rather than individual solutions.

Being a clearly demarcated community comes with its strengths – “Samsø being so small makes it easy to gather the troops” (local politician, Oct 2013) – and weaknesses. In my interviews, many islanders mentioned that people have a strong sense of being “in the same boat”: “We probably stick together more because we’re an island... We’re surrounded by water, and that humbles you. Everyone knows we’re all in the same boat” (interview, islander, Oct 2013). Life on an island compels you to get engaged, you feel obligated to contribute, because “everyone must fight for the survival of the community” (farmer, interview, May 2014). There are two sides to the coin. On the one hand, you are a part of a close-knit community. On the other, as the former folk high school principal remarked, “you enter an uncertain world when you move to Samsø” (interview, ^{Nov 2013}).

This shared sense of vulnerability is connected with the steady loss of jobs and closure of institutions; the demographic development working against Samsø with ever

more elderly people and still fewer families with children; the sense of being at the mercy of the national politicians' decisions covering everything from ferry ticket prices to strategies for the development of the peripheral-rural areas. In the nineties, it was the precariousness of island life that created the need to look for alternatives to prevent the island from "slowly bleeding to death", as the head of the technical and environmental administration in Samsø Municipality graphically put it (interview, Oct 2013).

In fact, the consensus around the idea of the vulnerable island community is so strong that Hermansen, moderator of an election debate preceding the 2013 municipal election, exclaimed in his introduction of the politicians: "We're here to discuss Samsø's future, and that makes me wonder why we have eight parties running when we're all working towards the same goal" (field notes, Nov 2013). While there is still politics on Samsø and there may be diverging views on the island's future directions, there is little disagreement as to the importance of hard work in order to preserve Samsø as a viable community. This is the common project, and this is where the REI project came as a welcome opportunity when in 1997 the Danish Ministry of Energy issued a competition to find an island willing to commit to a full transition to RE technologies over a ten-year period. It is the central contention of this article that had it not been for the practical and hard work put into the project by the islanders, the goals of the REI project would not have been accomplished, and, further, that this type of work can be characterized as public participation of a specific kind. It is to this discussion of participation in theory and in practice that we now turn.

Public participation in theory and practice

Within and in the close vicinity of STS research public participation takes on many faces (Antonsen, Ask and Karlstrøm 2014). I will comment upon three of these 'faces' in order to make clear the ways in which these do not adequately cover the empirical reality I encountered on Samsø. This will lead me to, in the following section, propose an alternative approach to participation, still drawing on the field of STS.

A first approach is centered upon debates about knowledge and expertise and the foras of public participation. Classic settings are the consensus conference (Bruun Jensen 2005, Blok 2007), the Round Table (Felt & Fochler 2009) or a similar temporary arrangement set in what one might call an artificial environment, a site designed specifically for the participation event, in which citizens and scientists meet to discuss complex themes typically relating to the governance of science and technology in society. The purpose of these studies tends to be to “criticize particular engagement activities while... expressing a commitment to a wider principle of ‘democratization’ ” (Irwin et al. 2013: 119)⁶⁰. This democratic endeavour, the notion that other types of knowledge and expertise besides those of established science deserve a voice, is central to the branch of STS often referred to as PES (Public Engagement with Science).

Another academic genre from which we can take clues about public participation and which is similarly concerned with democratizing scientific debate is controversy studies. These typically deal with the participation or engagement of the public in conflict situations. In these studies, too, there is a tendency to portray the public as ‘lay persons’ who find themselves implicated in but are still outsiders to issues defined and demarcated by scientific experts (see e.g. Wynne 1992, Epstein 1995, Suryanarayanan 2013).

A third approach to public participation includes actor-network theory (ANT) with its focus on the enrolment of actors, and the sociology of innovation more broadly. In the classic ANT studies, the notion that actors must be enrolled in networks implies that if actors are not successfully enrolled, if their interests are not brought into alignment with the goals of the network, the network will fail to form (e.g. Callon 1986). A similar logic pertains to many theories of technological innovation, among others domestication theory, which posits that when new technologies are introduced, they

⁶⁰ Further, there are other, even more critically oriented contributions to participation research which take an evaluative or typologizing approach criticizing top-down techniques of public involvement, formulating criteria of success to be met by participation processes and identifying ideal typical participation mechanisms (see e.g. Lawrence 2006, Stirling 2008, Rowe & Frewer 2000).

must be accepted and adapted by their users to become part of everyday life (see. e.g. Sørensen 1994). This joint focus on acceptance and compliance, and the logic that there are spokespeople (ANT) or producers (innovation) who push for a certain development, attempting to subordinate actors or users to their interests, is an underlying current in this tradition.

The Samsø case departs from the reviewed literature in a number of ways. Firstly, these studies place debates over science and technology at the heart of STS-oriented participation research. On Samsø, while RE technologies certainly provide the material setting for the local projects, the technologies are means rather than goals. They are the reason to get organized, they are the subjects of discussion and the objects of collaboration. Still, it is the collaboration that is praised as the end product. To repeat director Hermansen's words: "We wanted to establish a platform of citizens capable of taking responsibility for their own community. It matters less whether the end product is windmills or a new Internet connection or a new ferry...". The RE technologies were not dispensable, as such, but in line with the director's words, they may have been replaceable; they were what the islanders acted *through*, rather than *towards*.

Secondly, there is a focus on knowledge and expertise in the literature on public participation which does not apply to the Samsø case. The literature tends to foreground knowledge either as an impediment to public involvement (can citizens be involved in problems obscure to them? (Felt & Fochler 2009; on the 'knowledge deficit model' see e.g. Wynne 1991)) or as an argument for involvement (citizens can contribute valuable local knowledge (Kastens & Newig 2008, Wynne 1992)). On Samsø, everyone involved in the REI project, apart from an engineer from the mainland engaged in the early stages of the project, was a local 'lay citizen'. At the onset of the project, no one was an expert. Knowledge was not a key resource; instead, the willingness to educate oneself and acquire new skills became an important prerequisite for certain actors' commitment, as we shall see.

Lastly, a fundamental dichotomy frequently encountered in the participation literature is that of substantive vis-à-vis instrumental arguments for citizen involvement (Hoff forthcoming, Stirling 2008). *Instrumental arguments* for citizen participation focus on how participation can improve the implementation or realisation of a given decision, technology or project. Accept, confidence and ownership are key concepts. The logic is that by involving the public, opposition is avoided. *Substantive arguments* for public participation, on the other hand, focus on the outcome, claiming that results will improve in “quality, substance and robustness” if the public is involved (Hoff forthcoming). While the latter is closer to our purposes, what permeates both approaches to public involvement is the sense that citizen involvement is an *optional*, not vital component of project realisation. Contrarily, on Samsø, as mentioned, participation and collaboration were the end products. Public participation did not improve the REI project; it *made* the project, as we shall see.

Everyone is a participant⁶¹

In this article I wish to show how the REI project became a reality, and this, in my view, is best done by focusing on the specific forms of participation through which the island community brought this new reality into being. If participation cannot be reduced to acts of compliance, acceptance or support how, then, can participation be approached in the case of Samsø’s energy transformation? The argument I would put forth is that the islanders’ level of activity, the way they cared for the projects, the sheer amount of work that was put into the RE projects by ‘lay islanders’ - are important activities, and they are not captured by notions of acceptance, enrolment, etc. However, I still find participation to be the adequate frame for my empirical observations. As noted by Kelty, participation in itself can be a valuable resource (Kelty 2012: 5). On Samsø, the islanders’ willingness to join the RE projects, to get engaged and put in the work were what mattered most of all to the realisation of the projects. What we need in order to understand the case of

⁶¹ Watts 2014: 31.

Samsø is an approach to participation that allows for an appreciation of the island public's involvement not as 'communication' or 'consultation' (Rowe & Frewer, 2000), not as a means to avoid public opposition (Barnett et al. 2012), but as a necessary precondition for the realisation and success of the REI project.

As Walker et al. note, the participation literature has tended to focus on participatory measures and mechanisms, which has led to a centering on the formal moments of engagement which are "only part of the picture of how 'the public'... factors into processes of sociotechnical change" (2010: 931-32). I want to include into my notion of public participation informal practices, practices that are not stabilised as participation through the common apparatuses and sites of participation (elections, public meetings, consensus conferences etc.). But when participation becomes a less fixed and predefined phenomenon, how do we identify that which makes an act a characteristic 'act of participation'? I will approach this in two ways, one theoretical and one empirical. The empirical aspect I will elaborate on in the following section. My theoretical approach follows here.

The type of participation encountered on Samsø resonates with what Noortje Marres and others have called 'material participation': "Rather than see 'participation' as an abstract political ideal, Marres investigates how it is enacted in everyday settings, how it is a practical achievement" (Hawkins forthcoming: 4). Understanding participation as a material accomplishment "invites an interrogation of the means by which participation is accomplished", just as it involves "a sense of public engagement as an embodied activity, taking place in particular locations and involving the use of specific objects and technologies" (Marres 2011: 511; see also Marres 2012). This move from 'public' to 'material' participation implies the shifting of registers from the normative or evaluative tendencies of the participation literature reviewed above to the practical and empirical investigation of participation as it takes place on the ground.

Departing slightly from Marres' 'device-centred approach' (2011), however, my analysis focuses less on energy technologies' (such as smart electricity meters and green

electric kettles) ability to ‘materialize’ public participation in environmental issues. I focus instead on how the materialization of energy (the transformation of natural resources into energy) through collaborative achievements (district heating stations, windmills and solar systems) brings the Renewable Energy Island into being. The islanders’ engagement with renewable energy, in Callon & Rabeharisoa’s words, “enabled [the islanders] to change their ontological status” (2008: 231). By being “heavily engaged” in “the production of entities... that participate in shaping their identities” (232), Samsø’s status changes from that of a peripheral society under constant threat of closure to a hopeful and self-assured society known world-wide as Denmark’s Renewable Energy Island. The processes that led to this change are of a more ‘social’ character than the ones described by Marres, as cooperation and the strengthening of the community were essential to the REI project.

This approach which, directly or indirectly, takes energy as its starting point, is in line with Gabrys, according to whom “there may be more ways to materialize energy that are less directed toward instrumental objects of management, and more attentive to inventing new arrangements of practices and political possibilities” (2014: 2101). The materialities of energy “may articulate... the possibility for togetherness and attachment” (2100). This opening up of our expectations and investigations of what the materialisation of energy in RE projects can do will allow us to appreciate the diverse ways in which Samsø’s RE projects came together as closely connected to our notion of material participation. Furthermore, when we apply this logic to community-based energy transitions, we notice how the social, economic, political and technological dimensions involved in the project blend. They cannot be kept separate in practice, because energy transitions and sustainability projects leave few aspects of life untouched (on this point, see Marres 2011). This allows us, further, to appreciate the REI project as a community-building project.

How do we identify moments of ‘material participation’? How do we know that we are “identifying instances of participation in the wild” (Fish et al. 2011: 14)? The

costs of taking participation out of the confined space of the consensus conference or the open space meeting and into everyday life is that it becomes a distributed phenomenon. Material participation is variable, it cannot be fixated into specific forms but must be analysed in the particular setting in which it unfolds and followed as it moves from one setting to the next. One way of pinning down what ‘counts’ as acts of participation, I will argue, is to focus on how the REI actors themselves stage specific acts and events as instances of participation, thus making these events count as, exactly, *public* participation: participation made public. This makes participation first and foremost an empirical phenomenon, the definition of which is left to the implicated actors, the participants themselves.

Authoring participation

Marres defines participation as a performance or a demonstration. According to her, inherent in material participation is an element of publicity (2011: 516). When bringing material objects into the study of public participation, the materiality involved in acts of participation – objects, technologies, settings which facilitate or emerge from participation – become the visible traces of participation in practice.

At its heart, the REI project is a demonstration project. It was devised by the Danish Ministry of Energy to showcase Danish technologies and demonstrate Danish leadership in climate and energy innovations (Energistyrelsen 1997). Public participation also played a role in the Ministry’s project description and in the nomination of Samsø among four other islands. The Ministry’s press release reads, “We chose Samsø because they submitted a convincing project proposal which is supported by all relevant interest groups on the island”. The Ministry furthermore states that to secure support for the island’s technological development, “the *demonstration* of innovative organisational, financial and ownership forms is a central element of the project”(Bünger 1997, my emphasis). The REI project was never just about implementing RE technologies; the

original purpose was also to demonstrate the ‘doability’, the realism of such community-wide energy transformations.

The REI project, then, was originally conceived as a project in which public participation would play a central role. But the specific form this participation would take was left up to the island’s project developers. In the following sections I will go into more depth with this empirical question, but for now I will draw attention to the activities undertaken by the Energy Academy staff to communicate and demonstrate the role of the participatory processes in the REI project. The argument is that these framing operations – PowerPoint presentations, tours around the island to visit windmills and district heating plants, etc. – participate in articulating certain activities as public participation.

For many of Samsø Energy Academy’s five thousand annual visitors, the RE technologies are not the main attraction. The Academy’s daily manager: “Our visitors don’t come to see the world’s newest, fanciest plant. Our offshore wind farm may have been among the largest in the world when we built it, but today it’s probably the smallest. That’s not how we sell tickets. Instead, it’s about ‘How on earth did we get people to accept it?’ It’s about the [social] processes, not the technologies” (field notes, September 2013). According to the manager, the RE technologies are the products of successful ‘social processes’, the material results of participation. Following the logic of material participation, the RE technologies become “material devices of engagement... help[ing] to enact a particular *form* of environmental participation” (Marres 2011: 517). This form is one that highlights accept (the absence of opposition is vital when it comes to implementing landscape-changing technologies), cooperation (as we shall see, Samsø’s workers had to handle the practical tasks in collaboration), coordination (project developers and citizens’ groups worked hard to secure necessary signatures, licenses etc.), and, simply, hard, time-consuming project work. The RE technologies stand proudly in fields and villages as public enactments of material participation, and this is what is highlighted in the Academy’s arranged tours around Samsø: how the community

came together to build the RE Island. The demonstration of participation in this way becomes internal to the practices of material participation on Samsø; demonstration and practice cannot be separated.

When Academy employees in their presentations at the Energy Academy show a photo of a farmer and windmill owner sitting at the top of his windmill overlooking Samsø (see photo below); when visitors at the district heating plant in Ballen-Brundby are invited to take pictures of the calendar with each date carrying the same name, Arne, signifying that Arne is day in, day out doing his job of making sure the plant is functioning (see photo page 16); and when ten-year-old summaries of meetings in e.g. ‘the woodchip and fuel pellet working group’ are found in the attic of the Energy Academy, carefully scanned in and uploaded to the Academy’s digital archive of the REI project, www.energiinstitutet.dk (‘the energy institute’); then those activities frame these acts as acts of participation central to the realisation of the REI project. This type of participation, which is manifested in hard work, is usually not as well-documented as more traditional types of public participation taking place e.g. in public meetings. In connection with the REI project a large number of citizens’ meetings were convened inviting the islanders to share their visions for Samsø and discuss how the REI project might help realise these visions. These meetings are amply documented (see. e.g. Møller et al. 1999). But so are the mundane meetings of which there were hundreds; the budgets and applications for funds; even email correspondences have found their way into the digital REI archive as just as valuable, but less readily visible and less sensational, instances of participation on Samsø⁶².

The demonstrations are what make certain practices into ‘practices of participation’. Understanding participation in this way means leaving up to the actors what counts as participation rather than relying on theory to identify which acts can be defined as ‘acts of participation’. Accordingly, the object of participation (science and technology, or community-building), the issues of participation (democratic legitimacy,

⁶² It should be noted, however, that while the digital archive has generously made various materials available, there was never any systematic collection of documents related to the REI project.

knowledge, or cooperation) and the participants (experts, ‘lay citizens’, or simply citizens) become empirical open questions as the actors themselves become authors of participation.



Photo: Farmer Jørgen Tranberg in his windmill

For the analysis I have selected examples which are both decisive moments on Samsø’s trajectory toward becoming Denmark’s Renewable Energy Island *and* instances of material participation taking place in various sites and assuming different faces. They are examples chosen to illustrate how, without the islanders’ participation of the specific type which we call ‘material’, the REI project would not have been realised. The selected stories, furthermore, all relate to the building and maintenance of Samsø’s district

heating plants. To conclude the article I return to the discussion of the role and character of participation on Samsø.

An inclusive project

It was the REI project that brought climate change to Samsø. Hermansen, the director, describes how at the beginning of the REI project it came as quite a shock to the local project developers, himself included, that “the opportunity to make the world a greener place” was not welcomed by the islanders as sufficient reason to join the project. “The citizens think differently”, the director remembers, “their concern is, ‘but what about my job?’ So we started turning risk into possibility instead of focusing on climate risks. We started calculating how many jobs the project would generate” (Nov 2013).

Especially the farmers and workmen who became implicated in the project by virtue of their jobs – the farmers owners of the fields where the onshore mills would be placed and therefore prospective windmill (co-)owners, the workers’ labour essential to the realisation of the projects – stress the importance of the business opportunities built into the project. “A poor bugger like me doesn’t invest DDK twenty million [EUR three million] for the sake of idealism!”, the farmer in the above photo who owns one land-based windmill and half an offshore wind turbine, remarks (interview, Nov 2013). From the landscape windows in his newly built house overlooking his fields he can follow the movements of his windmill. A windy day means money in the bank for him, he tells me⁶³.

When the islanders talk about the survival of the island community, they talk about preserving their jobs, their livelihoods and homes. Renewable energy did not become a shared concern for the community until it became the means through which life as the islanders knew it could be sustained. This is the strength of what Gabrys calls ‘the diverging materialities of energy’ (2014): acting through energy allows for

⁶³ Several news articles have been written about the Samsø wind farmers and their business-oriented approach to their RE investments. The latest can be found on www.sysla.no. The heading, translated from Norwegian, reads, “Here the farmer makes money on wind power” (Hirth, 2015).

translations between various registers. Energy transitions can be framed in economic terms, as being about securing a sustainable flow of income and jobs. They can be about the environment and/or about how climate change demands that we shift our energy sources, habits and modes of production. They can be linked to moral, social and political issues. These diverse registers do not exclude one another but exist in parallel. While the farmer in the above quote coolly emphasises the financial gains from his wind investments, he later in the interview describes the personal costs of being a central participant in a large RE project. The farmer chaired the local association building Samsø's offshore wind farm which was completed in 2002. He vividly remembers the planning period: "If it was financially risky building the offshore mills? You bet it was! I had red wine running in my veins, I suffered from stress, I couldn't remember names – it was horrific!" While it is easy to brush off the wind-investing farmers' engagement as simple self-interest, they took risks and placed themselves in demanding roles serving not only their own narrow interests but the island community as a whole.

I argue that through the perspective of material participation we can analyse and appreciate energy transitions as involving processes of inter- or co-articulation (on this concept see also Marres 2011, Callon 2009, Cochoy 2007) connecting the environmental, the economic, the social and the political, and that, while we might find it provoking that a major wind energy investor is apparently only 'doing it for the money', we should resist the urge to see these registers as antithetical. Instead, they work in tandem, supporting each other. The inclusiveness of the REI project opened up the project to a broad range of actors, including the businessmen without whose participation (through financial investments, through membership of the associations organizing the activities) the project goals could never have been realised.

Making district heating plants

The analysis is centered upon instances of material participation relating to the development and maintenance of Samsø's district heating stations and will illuminate how, without the collective effort of the islanders, district heating would not have become part of Samsø's low-carbon reality. I limit the analysis to the district heating projects for reasons of space, but also because other large projects under the REI umbrella such as the on- and offshore wind turbines were to a lesser extent a *collective* undertaking. Twenty-one wind turbines were erected in the span of the REI project, and while all are locally owned, only three are owned by co-operatives of islanders. The majority of the mills are owned by farmers and five offshore windmills are financed by Samsø Municipality. Building wind turbines is, furthermore, a more specialised endeavour than organising district heating plants and therefore involves 'lay citizens' to a lesser degree. I focus on the establishment of the district heating plants because they offer more fruitful instances of material participation in practice.

Sixty percent of Samsø homes are heated by one of the four district heating stations on the island. Of the remaining forty percent not within the range of the plants – district heating is very local due to heat loss from the underground pipes – twenty-five percent have invested in individual renewable heating systems, and many households have replaced their oil-fired burners with more eco-friendly alternatives following campaigns in the local newspaper. District heating is a common energy technology in Denmark, and prior to the REI project Samsø already had one district heating station in place in the biggest village Tranebjerg. The plant was established in 1993 and is straw-based like three in four of the island's heating stations. The straw is provided by local farmers on a contractual basis. The burning of straw heats up water, which is directed to the customers' houses through underground pipes. The ashes are returned to the farmers' fields for fertilization. It is cheaper than gas-, oil- or electricity-based heating, and the process is waste-free and produces a minimum of CO₂ (www.ramboll.com).

Learning to cooperate

The islanders' and especially the workers' previous experiences with the technology played a role in paving the way for the district heating stations in the REI project, but it is one of *experience* rather than *expertise*. The chairman of Samsø's business council and owner of a plumbing and heating business engaged in the island's reorganization here tells a typical Samsø story about how the original Tranebjerg plant came into being and what the process meant for the later REI project:

“It [renewable energy on Samsø] actually started really big. In 1991 in Tranebjerg a citizen group took the initiative to build a straw-fired district heating station in order to lower their heating bills. A postman took the initiative, and the local working group did a good job. Tranebjerg was a good spot for it, too [most of Samsø's central institutions are based in Tranebjerg]. The group contacted the utilities company ARKE and asked if they were interested in running a local heating plant. ARKE became the building owner and we were left to carry out the task, which we as local workmen were conscious to gain from as much as possible. Since none of us could cope with the full task alone, we had to stand together. We created a construction which allowed local blacksmiths and contractors to work together. That's how we learned the value of cooperation, and that's how we managed to keep all the jobs on the island – even in the middle of a recession. That was the first time we collaborated on a large scale like that and got a good thing out of it. The heating station proved its worth, so when the masterplan for the REI project was disclosed, neither workmen nor consumers were reluctant to support the plans for the new plants.” (interview, May 2014)

This is a carefully crafted account of the events. As chairman of the business council and one of those islanders you encounter at all kinds of events around the island, the

plumber has refined his story and tailored it to fit a narrative of collaboration between local enterprises, adding his own twist stressing the importance of keeping local jobs on the island. Again, it is the social and economic features of the project that are highlighted along with the prospect of lowering heating bills, while the environmental benefits of biomass-based heating go unmentioned. The chairman's story is crafted to demonstrate how new practices of collaboration between Samsø's workers grew out of necessity, underlining the islanders' flexibility and ability to handle change.

The account also communicates the sense that if no one takes the initiative and gathers a group, nothing will happen, but that the initiative is open to all, even the postman. Again, expertise means little. This sense of initiative combined with fragility permeates the island: everything you see, from the closed slaughterhouse to the functioning sports centre, has a story and everyone knows who built it. Ethnographer Laura Watts captures a similar experience in her descriptions of her fieldwork in the Orkney Islands, which have been similarly singled out for their work in meeting the challenge of climate change: "The fragility of Orkney is an everyday experience for the people who live there. The dependent infrastructures of contemporary living, forgotten and literally buried in urban places, are visible and embodied in the weather-reliant ferries, in the occasional electricity blackouts, in the 'not spots' of absent broadband and mobile phone signal: *insistent infrastructure...*" (Watts 2014: 30). Everyone is a participant, because if you do not invest your life, your labour, your time and resources to make island life function, it might break down. The REI project was an opportunity to build something together, to continue this tradition, and as such it was not a new departure, although the scale and the framing of the project – energy self-sufficiency, carbon-neutrality – were new to Samsø.

Forming working groups

In the course of the REI project, a citizens' group formed around the idea of building a district heating plant in the northern part of the island, an area typically exempted from

RE technologies because of its scenic beauty and preserved nature. As part of the REI project a masterplan was developed laying out in some detail which RE technologies were to be built where (Samsø Energiselskab et al. 1997), but the initiative to embark on the projects often lay with groups of islanders not involved in the development of the REI project. If no such group existed in an area, there would be no one to take care of the practical work involved in the project. The then mayor of Samsø remembers: “They showed up from Nordby asking: ‘Where are we in the line? We also want a heating station!’ So we got the group going, and we ended up with a plant fuelled by woodchips from the local forest and solar collectors [a necessity because of the many tourists wanting to heat their houses during summer], the only one of its kind as far as I know. That kind of group never existed in Besser [another village] so they never got a district heating plant” (interview, Nov 2013). The realisation of the different parts of the REI project thus depended on the willingness of the inhabitants of the relevant areas to take the initiative and put in the work. According to the chairwoman of the Nordby working group, the group consisted of ten people “representing all relevant interests”: there was a representative of the village church, one from the school; a blacksmith and one of the area’s big farmers were also involved, as well as someone from ARKE, the utility company which ended up the main investor in the project (two of the four district heating plants are owned by ARKE, now NRGi, while the remaining two are local cooperative associations). Creating support for the project and recruiting customers for the plant involved a lot of coordination work on the part of the working group, including distributing letters door-to-door to all households, public meetings and house calls. “There was an incredible drive and faith in the project!” the chairwoman remembers (interview, Nov 2013).

Although it only took a working group of ten people to get the projects off the ground, the district heating plants needed the support of seventy percent of the population within the plants’ reach to be viable. If less than seventy percent signed up as customers of a plant (usually ranging from 50 to 200 households), the project would be

dropped. This never happened, but it took a lot of work to turn the majority of the relevant villages' populations into customers of the plants. Information meetings were held and letters distributed door-to-door carrying the message that if the household signed up as a member from the beginning, the price would be only DDK one hundred (EUR thirteen). If the household waited a few months, the price of connection would go up to DDK one thousand (EUR one hundred and thirty), and if the household did not sign up until after the heating pipes had been dug in, it would be considerably more expensive. This price-focused strategy was combined with distributed folders urging the villagers to 'do the green deed of the day', adding an element of environmental concern to the campaign (Svendsen 1999).

A lot of practical work was involved for the working group volunteers in going from door to door, following up on the letters and enrolment contracts that had been distributed by mail. The minutes from a working group meeting offer a glimpse into this work. Eight members of the local working group and five representatives of the energy company were present. The locals provided the space for the meeting at the local continuation school as well as the coffee; the representatives from the energy company brought the bread, the minutes duly note. The meeting, held in the late afternoon, would, in accordance with Danish tradition, involve plenty of coffee and an afternoon snack. The rest of the document consists of a table listing all the village households which have yet to sign up, and the actions to be taken by the working group members in each case. The table e.g. reads: "Address 1: Has been contacted numerous times. Awaiting reply. Address 2: Haven't received their contract. XX investigates this. Address 3: The contract is on its way, the owner currently abroad... The house is for sale... New owner... Will be contacted by XX..." and so on (Jepsen, 2000).

The process of getting seventy percent of the households in the area to register as customers of the plant involves meticulous work on the part of the working group members trying their best to keep track of and contact everyone who has yet to sign up individually. But turning customers into participants also requires some work and effort.

Changing your home's heat source takes some level of engagement. The homes, especially those which were heated by oil-fired burners, experienced not insignificant changes due to the transition: burners were removed by workers, pipes were dug, gardens turned into construction sites for a while. Everyday life was, if briefly, affected. If the villagers had not accepted this disturbance, the project would have come to nothing. I count this as an instance of material participation as this is participation as a resource and necessity, and it involves some concrete work. Although the intensity of this participation is lower than that involved in being a member of a working group, it is still concrete, it is practical, and it takes consideration.

Reorienting duties and livelihoods

Once a district heating plant has been established, it does not need a lot of looking after, or significant repairs, but some everyday maintenance is needed. I visited the cooperatively owned straw-fired plant in Ballen-Brundby and spoke to the elderly farmer responsible for the daily maintenance (see the photos from the visit on page 16-17). He shows up every morning around seven, and in the winter in the afternoon as well, to make sure that all machines are running. There have been no major failures in the plant's thirteen years' lifetime, but while I was there for the interview the local electrician showed up to make a minor repair. The farmer tidies up, sweeps the floors and places five to seven bales of straw on the conveyer belt (more in winter). Every day after fulfilling his tasks, as noted above, he signs his name on the wall calendar in the large hall (see photo below). He – together with the two cats living in the straw bales that keep down the mice population – keeps the plant going. Without his daily work there would be no functioning plant. I ask him how he feels about the role he continues to play in the REI project. His reply: he is happy about it because the plant functions; because straw-based heating is fifty percent cheaper than oil “so we can keep the money on the island instead of sending it down to the Arabs”; and because it sustains workplaces (administration, minor repairs etc.) (interview, May 2014). The motivations for being

part of the REI project are diverse, and this farmer is known for his aversion against 'Arabic oil'. But Arne was not the only islander whose workday and skills were redefined through his participation in the REI project.

The image shows a Danfoil calendar for the year 2014, which is a detailed work schedule for a farmer. The calendar is organized by month, from April to January. Each day is marked with specific tasks, dates, and equipment used, such as 'MultiDose Injection 1-6 pumper' and 'AirBox 18-24 m'. At the bottom of the calendar, there is a large number '3' and the Danfoil logo. Below the logo, the slogan '- less is more...' is written, followed by a list of benefits: 'less liquid consumption', 'greater capacity', 'less weight', 'more spraying hours', 'less fuel consumption', and 'more efficient spraying'. The contact information for Danfoil is also provided: 'Sjællandsvvej 8 | 9670 Legstø | Tlf. +45 98 67 42 33 | info@danfoil.dk | www.danfoil.dk'.





Photos: the Ballen-Brundby district heating plant, taken by the author, Nov 2013.

One final aspect which I will describe as material participation is the way in which the REI project necessitated the reorganization of the professionals' livelihoods. The farmers were urged to sell their straw instead of letting it rot on the fields to manure the soil as was customary. The plumbers who specialized in operating the islanders' many oil-fired burners were asked to accept the gradual phase-out of this technology, the foundation of their business, and had to go through further training to acquire the skills involved in the operation of the RE technologies introduced by the REI project.

The island electrician had to attend courses to learn how to make minor repairs on the windmills and district heating plants. He remembers, "We [the workmen] felt like the REI project was an incredibly comprehensive undertaking, and many were sceptical at first. The plumbers' core business, for example, had to be completely transformed. But as things began to take shape it snowballed as we understood that it was actually good business." (interview, May 2014). According to the blacksmith who was president of Samsø's business council at the time and the first to introduce the Ministry's REI project proposal to Samsø, the project has created "an incredible amount of work for the island's workers, it's been bloody great for all the workmen. My attitude was that everything that could be done locally had to be done locally. My honourable job was to create employment, as simple as that." (interview, May 2014). Once again, green ambitions did not make the blacksmith sign Samsø up to be a Renewable Energy Island. He simply viewed the project as an opportunity to keep and create jobs on the island.

To sum up, when we understand participation as 'material', we distance ourselves from an understanding of participation as a neatly delineated but also limited phenomenon, found in bounded spaces unpolluted by the concerns of the everyday. Samsø's energy transition involved people and their lives on a more dispersed scale: islanders with different backgrounds and motivations joined to work toward what became the common goal of creating a Renewable Energy Island. Some had to

reorientate their livelihoods, others experienced disturbances to their homes, and people spent a lot of time and energy on their involvement, but the various motives and dimensions attached to the RE projects never seemed to produce fundamental conflict or exclude one another. Rather, the flexibility of the REI project, the way it managed to satisfy and accommodate a great array of interests, proved to be its strength. This flexibility can be thought of as connected with the diverging materialities of energy (Gabrys 2014): the versatility that comes with climate and energy initiatives as activities that leave few aspects of life untouched and possess the ability to activate registers of life that tend to be understood as alien to ‘purer’ accounts of public participation.

Conclusion

Social science research on public participation tends to want to ‘decide’, to define independent of empirical analysis, what counts as participation. This turns public participation into a phenomenon that takes place in arenas specifically designed for the purpose, where the public is involved in order to secure acceptance and support, to gain knowledge about lay people’s perspectives, or to strengthen the democratic legitimacy of an endeavour. While the reasons for involving the public vary, the power to decide what counts as participation stays with the theorists. I have attempted to show the actors on Denmark’s Renewable Energy Island as authors of participation. Samsø did not join the REI project to experiment with CO₂ neutrality. Samsø’s energy transition was first and foremost about creating jobs, about building something together. It was about strengthening faith in Samsø as a viable community.

This focus on the community made the REI project valuable to the islanders. The islanders were not asked to ‘accept’ the new RE technologies, they were not ‘informed’ about the projects; they were invited into the heart of the processes because without their involvement there would have been no projects. The participation of the public became a resource in itself. Therefore, I shifted the vocabulary slightly, defining the processes of participation on Samsø not as ‘public’, but as ‘material’, drawing

attention to the ways in which this participation played out, in everyday settings, paying attention, with Gabrys (2014), to how the materialization of energy into RE technologies helped articulate new ways of being for the island community. Villagers formed working groups bringing together different interests. Workers learned to cooperate and they acquired new skills, because this was what the projects demanded. Farmers took risks, invested, reorganized their businesses, set up new business plans, made room for windmills on their fields, and started selling straw to the heating plants.

Noortje Marres (2011, 2012) defines participation as a performance or demonstration as well as a practical act. This element of publicity inherent in material participation has informed our understanding of what ‘counts’ as participation. When, during my fieldwork, I contacted village representatives or farmers, asking for interviews about the roles they played in the REI project, their consent alone showed me that they consider themselves participants in the project. The interviews attest to their positions as actors in the REI project. This goes for Samsø Energy Academy’s presentations and tours as well. While the windmills from the nineties they take their visitors to see may once have been impressive technological achievements, today they are manifestations of a cooperating community. These objects, technologies and settings – including 15-year old minutes from a meeting – become the visible traces of participation in practice, when we are not there to witness it ourselves.

The focus on strengthening the viability of the local community is a frame not often associated with green energy transitions, where technological achievements and technical challenges tend to be in focus. This article has attempted to describe a local energy transition as a practical challenge involving the entire community, bringing with it a revitalization of that community and new hopes for the future. This shift to a more hopeful or visionary frame for thinking about green energy transitions is a central contribution of this article: providing a sociological framework building on theories of material participation through which we can appreciate in positive terms the ways in which large-scale RE projects need not foster public opposition but may instead bring

new life to a community on the many registers that are activated by the encompassing project: economic, social, environmental, political.

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Paper 5 Nearshore Wind Resistance on Denmark's Renewable Energy Island: Not Another NIMBY Story⁶⁴

Abstract

The Danish island Samsø is world-famous as Denmark's Renewable Energy Island. 21 wind turbines supply the island's electricity. Today, public hostility toward a projected nearshore wind farm off the island's preserved northern coast is growing. This paper takes its main theoretical cue from Gomart and Hajer's (2003) call to open up political questions to empirical inquiry and to pay attention to the material settings in which political questions unfold. The paper seeks to make sense of the islanders' unexpected opposition to a new wind farm, and it does so through a critique of the unexperimental and depoliticizing attitude – found in the empirical case as well as in some academic scholarship – of the NIMBY (Not In My BackYard) logic. Replacing the NIMBY logic of closing down deliberation with an empirical and 'cosmopolitical' (Stengers 2005) approach to open up the space of politics to close investigation, the paper focuses on the empirical settings which give the controversy its specific shape and asks how the projected wind farm is interrogated, negotiated and recast as it travels through the socio-material politics of the wind controversy.

Keywords: NIMBY, publics, renewable energy, public participation, controversy studies

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1. Introduction

An idyllic landscape – rolling, green hills, blue sky, the Danish flag on a pole – appears on the computer screen accompanied by light music. A hand enters the picture, waters a patch of land, and from the soil shoot baby wind turbines, perfectly nested among the trees and grass of the hills. The wind turbines are picked up by a pair of hands and put into the water at the foot of the hills while a speaker talks about how in Denmark for many years now, wind turbines have delivered environmentally friendly, CO₂ neutral electricity. Soon, the speaker goes on, the Bay of Aarhus will have its own wind farm, a farm in which everyone will be able to invest. “The wind turbine guild of the Bay of Aarhus is for *you*”.

The stop-motion promotion film on the wind turbine guild VAAB’s website (www.vaab.dk) is accompanied by black and white videos in which members of the guild – teachers, students, nurses – explain why they have joined the project. Their statements centre on the importance of being part of a positive change in society; they talk about being granted a say in a meaningful project, exercising their democratic duties as citizens, and leading Denmark towards a fossil free future.



Screenshot from the promotion video on www.vaab.dk

Meanwhile, on Samsø, an island of four thousand inhabitants in the Bay of Aarhus. A man, the vice-president of VAAB and Samsø resident, is walking in the preserved hills of northern Samsø – hills which bear no small resemblance to the landscape in the film described above. According to an islander, the vice-president knew that if certain members of the island community were to oppose the wind farm the project's realisation would be jeopardized, so the vice-president went to the homes of key islanders, hoping to put a lid on the protests to come over a cup of coffee (interview1, Samsø resident, Nov 2013). Despite his efforts, soon after the announcement of the wind project in the bay area called Mejlflak, protests broke out on the island, turning the project into a heated political issue and the development of the wind farm into a sociotechnological controversy.

This is the story of the still unfolding Mejlflak controversy as seen from the island of Samsø. Samsø is not just any peripheral farming and tourism island. In 1997, Samsø was appointed Denmark's Renewable Energy Island by the Ministry of Energy, a nomination that set an island-wide, locally managed energy transition in motion, transforming the rural island landscape into one marked by on- and offshore wind turbines, district heating plants and solar systems. Ten years from 1997 the islanders had managed the transition to energy self-sufficiency and could call themselves 'CO₂ negative', thanks to the surplus electricity produced by offshore wind turbines which is exported to the mainland to offset the islanders' transportation practices which remain fossil fuel intensive.

This article examines how and why on this Renewable Energy Island still engaged in alternative energy initiatives resistance is mobilised against a new wind project. The aim is to go beyond the tendency to write off public resistance as NIMBY (Not In My BackYard) reactions and take a closer look at the dynamics at play in this unlikely case of opposition against renewable energy. Without a deeper understanding of the dynamics of opposition encountered by many large-scale renewable energy projects,

the road toward the de-carbonization of our societies will be bumpy at best. How do the Mejlflak turbines become controversial objects on Samsø? is the question that will guide the inquiry. The analysis will be structured around the settings or forms (Gomart and Hajer, 2003) in which the controversy comes to life: the project's environmental impact assessment report, the public hearing process, the newspaper debate, the public meeting and the reactualised role of Samsø's previous experiences with renewable energy projects.

1.1. Materials and methods

I conducted fieldwork on Samsø in the fall of 2013 and spring of 2014. For five months I lived on the island and took part in the everyday life and work at the Energy Academy, the public non-profit organisation behind most of Samsø's energy initiatives. I considered the ten Energy Academy employees my colleagues, attended relevant meetings and executed minor tasks for them. In addition to countless informal conversations with Academy employees and other islanders, I carried out some thirty semi-structured interviews with central island actors as well as with Energy Academy employees and ploughed through reports, newspaper articles and books about Samsø. During my fieldwork, I hardly came across any negative accounts of the Renewable Energy Island (REI) project⁶⁵. This led me to focus primarily on the islanders' positive experiences with the community-driven renewable energy project, and I largely came to view Samsø's energy transition as a success story without strong signs of disagreement or contestation. But an ongoing conflict caught my attention: the controversy surrounding the Mejlflak nearshore wind farm project.

As part of my fieldwork, my investigation of the Mejlflak case was one focus point among others. The data material supporting this analysis consists of qualitative interviews with citizens based on Samsø – both summer house owners and full time residents – and ethnographic field notes along with publicly available documents,

⁶⁵ This is not to say that there never was conflict in the years 1997-2007, only that the conflicts that might have been have not carried into the present and have been widely forgotten.

websites, newspaper articles and readers' letters related to the Mejlflak project (all documents accessed and newspaper searches conducted between September 2013 and April 2014).

The Mejlflak project was discussed in fifteen of my thirty interviews: three of the municipal officials (including the director of the technical and environmental administration in Samsø Municipality and the head of tourism and business on the island) made critical comments about the project, as did two Energy Academy employees. I interviewed the spokesperson of the protest group "Southern Jutlanders Against Wind Turbines at Mejlflak" (www.aarhusbugtenog-kyster.dk) as well as the previously mentioned vice-president of the wind turbine guild behind the Mejlflak project development, a farmer who also played a central part in the REI project. Of the citizens I interviewed who are not part of the project some expressed critical opinions while others expressed surprise that a wind project could meet such resistance on a renewable energy island.

The interviews were conducted at an early phase in the Mejlflak project. The business model and building contractors not yet in place, what was completed was the siting, the environmental impact assessment and related reports as well as the public hearing process. During the months in which I discussed the project with the islanders, people generally felt in the dark regarding the progress of the project, as the developers seemed to have drawn the curtains after the initial publicity phase. This article focuses on the publicity phase, the phase dominated by public meetings, hearings and debate. It is the phase in which the controversy has found its most visible and loud expressions and where all kinds of records of the case are readily accessible (Venturini, 2010: 264).

I have not interviewed the project developers. They make their views clear in numerous articles, reports, minutes of meetings in the wind turbine guild, in communication materials as well as through their actions. The aim of this article is not to provide a balanced, in the journalistic sense, account of the development of a renewable energy project, but to apply a view from Samsø in order to further our understanding of

opposition to renewable energy projects. I investigate how positions of resistance commonly disqualified as NIMBYism (Not In My BackYard) can be appreciated as positions from which statements are made that can help articulate the issues at stake and make contributions to the definition and understanding of the object of concern. My hope is that such a deepened understanding of positions of resistance might point to more constructive ways to approach the planning of the RE projects integral to a future less dependent on fossil fuels. Moreover, by approaching the planning of large, potentially controversial projects as genuinely political and democratic exercises involving the entire affected community, we might learn how CO₂ emission reductions can give rise to community development rather than conflict; something Samsø managed during the island's energy transition in the nineties, I will argue. In the following I sketch the analytical approach underlying the analysis.

2. Theory

2.1. Studying controversies: studying politics in practice

In their article “Is *That* Politics?” Gomart and Hajer argue that the distinctly empirical approach of science studies can benefit the study of politics (2003). Instead of “thinking that we can know a priori what (democratic) politics look like” (34), we ought to make politics into an empirical question, they argue. A strong empirical commitment prompts us to venture into a serious engagement with the various settings in which our phenomenon of interest takes place, as these settings, according to Isabelle Stengers’ experimental constructivism, “deform the phenomenon in an interesting way, giving a novel spin to the ordinary word ‘interesting’(...) The interesting setting is one where the person or creature or thing is not left alone, authentic, but transformed by what occurs, and transformed in ways which induce its interference with the project” (Gomart and Hajer, 2003: 39-40). This interest in the settings in which a political problem unfolds and the attempt to turn the study of politics into an empirically grounded effort mirrors

Latour's (2007) call to investigate the trajectory of an issue as the issue evolves and enters and leaves distinctive *stages* (settings or forms).

Scholars in science and technology studies (STS) have long been concerned with the association between issues or controversies and the way in which they tend to 'spark new publics into being' as they call upon the parties affected by the controversy to get engaged and try to solve the problem (Marres, 2005). The controversy as an object of interest within STS is understood as an instance of politics in practice; a politics which departs from traditional political theory on especially one important parameter. This is not a politics confined to a specific 'political' domain, to the institutions of representative democracy and related venues in which policy-making is known a priori to take place. According to Latour, 'political' "*is what qualifies a type of situation*". Politics turns around issues, "instead of having the issues enter into a ready-made political sphere to be dealt with" (Latour, 2007: 815). 'The political' thus assumes different forms in different settings and is changed through the interaction with the setting (Whatmore & Landstrom, 2011: 3).

This 'politics' is not a stable figure but should be understood as a changeable movement, only to be known through careful empirical investigations. In a similar manner, the public is not equally engaged, nor does its composition remain unaltered, throughout the trajectory of a political issue. For instance, a seemingly apolitical situation operating out of the public eye, such as a government agency's technical-environmental investigation of a renewable energy project, a well-regulated process following strict, pre-established guidelines, is made up of political moments and decisions (what is taken into account, which elements are left out?), but the process towards finalising the reports typically only involves a select cast of experts and consultants, not a public.

I trace the different political 'states' assumed by the issue as it travels through the settings of the RE project: from development and planning to the public involvement phase. By tracing the trajectory of the political issue – closely resembling the way in which actor-network theory taught us to trace the associations of the social through the

analysis of heterogeneous networks of human and non-human actors – we gain a deeper understanding of the workings, tensions and dilemmas of the ongoing wind controversy⁶⁶. With Gomart and Hajer, we can experiment with a new definition of politics, namely: “what does a setting (practice, form) *do* to those who are engaged in it?” (41). This understanding of the political invites an exploration into the “*form* of politics, examining the particular sort of engagement it enabled or delimited” as each investigated practice or setting constitutes politics in its own way (47). The overarching setting in which the islanders are involved is northern Samsø itself, the part of the island which will be affected by the turbines. While I take the public meeting or the newspaper debate as settings which allow the controversy to unfold in distinct ways, the island itself is to be understood as an ever-present setting which affects those engaged with it.

While this is a single-case study, I will remind the reader of Andrew Barry’s concept of ‘the political situation’: “Controversies are neither static locations nor isolated occasions; they are sets of relations in motion, progressively actualised... They contain multiple sites and events” (Barry, 2013: 10). Barry points to the fact that controversies, no matter how specific and local, are embedded in political situations composed of different disputes which provide the implicated actors with their understanding of the unfolding situation. This is not to say that smaller controversies are simply instances of larger, more general phenomena, but rather that the question of whether a controversy has wider significance and is connected to larger issues, say, of resource dependency or political energy targets, will be contested questions fuelling the controversy (Barry, 2013: 11).

On Samsø, the island’s status as Denmark’s Renewable Energy Island since 1997 is drawn into the controversy over the projected Mejlflak turbines. The narrative about the island’s successful transition to renewable energy is used by both proponents and

⁶⁶ A crucial difference between this endeavour of ‘tracing the political’ as opposed to classical actor-network theoretical interests in ‘tracing the social’ is that the purpose of the analysis of the political is not to reach any (if momentary) stabilisation of the network(s) analysed, but rather to point to the fluidity and changeability of the political issue.

opponents of the wind farm and thus takes part in the political situation under investigation. To proponents of the new project, Samsø is simply offered a chance to consolidate its position as a green front runner. On Samsø, by contrast, the Mejlflak project is brought out as an example of how *not* to go about creating a renewable energy project, thereby highlighting the practices of citizen participation developed and the hard work put into realising the REI project. People's stories about and experiences with the renewable technologies already in place live on and are mobilised to play their parts for and against the projected Mejlflak wind farm; this is one inescapable setting of the current controversy. The islanders' experiences living on a Renewable Energy Island shape their reactions to the Mejlflak wind farm and the analysis presented here.

2.2. *The problem with NIMBY*

A ghost that has been haunting public debate and controversy around new RE developments is the NIMBY (Not In My Backyard) syndrome. A quasi-scientific idea found in both (critical) academic research (e.g. Delicado et al., 2014; van der Horst, 2007), policy documents and among the affected parties of controversies, the NIMBY hypothesis posits that although people (according to *some* opinion polls, see e.g. Devine-Wright, 2007: 4) tend to support RE projects *in general*, they are likely to oppose *specific* project plans in their local area. They want to enjoy the benefits of clean, CO₂ neutral energy, but not in their own 'backyards' where the plants are feared to be noisy, disturb the landscape and perhaps even harm the health of affected neighbours. NIMBY is seen as a knee-jerk, self-interested, even hypocritical reaction not to be taken seriously, as NIMBYs are people who reject the public good on particularistic and thus illegitimate grounds.

While academic scholarship engaged with the study of public opposition to and acceptance of RE projects has increasingly taken issue with the NIMBY thesis which is generally deemed unconstructive, insufficient and an empirically "inaccurate and unhelpful way of characterising opposition to siting" (Burningham et al., 2014: 2. See e.g.

Barry et al., 2008; Cass & Walker, 2009; Devine-Wright, 2007; Devine-Wright, 2009; Freudenburg & Pastor, 1992; van der Horst, 2007; Walker, 2008; Warren & McFadyen, 2010; Wolsink, 2007; Delicado et al., 2014; Walker et al., 2010b; Devine-Wright, 2011; Roberts et al., 2013), in this article I hope to open up a space that takes us even farther from the logics underpinning the NIMBY thesis.

In keeping with many of these studies the present analysis of the Mejlflak controversy stresses the importance of local ownership, trust, community and participation. But my main appeal, my fundamental argument against the NIMBY logic is not that it is empirically inaccurate and that other factors can be identified which constitute more pertinent barriers to public acceptance and carry more explanatory power. In this article I will not focus on identifying factors that drive or impede project implementation. My main argument is political. The problem with the NIMBY attitude which I will focus on here is that it closes down deliberation. By calling people NIMBY, opposing voices are being silenced. ‘NIMBY’ is a depoliticizing move (see Eddkins, 1999: 9) which reveals the managerialist, instrumental logic characterizing some large-scale development projects. The project *must* be realised, that fundamental point is beyond discussion, and the public becomes nothing but an impediment to project realization with its foreseeable negative attitude and well-known counterarguments. With every counterargument automatically debunked as an expression of the catch-all NIMBY category, all objections against the project are made equal: they become ‘barriers’ to be overcome rather than articulations of concern worth engaging with and taking seriously.

Instead of viewing public opposition as something to be simply “overcome” (Aitken, 2010: 1840), I propose that we, in line with the STS literature introduced above, consider the formation of publics a resource and a productive moment of democratic politics. I will argue, in line with Walker et al. (2010b), that ushering the public into the heart of processes connected with the development of more sustainable ways of producing energy has the potential to bring not just CO₂ reductions but also benefits for the involved community on a more general level, as was the result of Samsø’s own RE

transition. Such results require an open-ended, participatory process experimental in character; a process emphasising “mutual learning and an exploration of the unknown, the result of which cannot be methodically guaranteed” (Jensen 2005: 223). With the costs and resources involved in large-scale RE projects, introducing an experimentalist element into the process will seem demanding and risky, and resorting to shutting down engaged publics through allegations of NIMBYism may seem a more straight-forward solution. What I propose, however, is that we – researchers as well as project developers – strive for an open and genuinely political engagement with these publics. I suggest that we dive into the empirical magma of each project (Venturini 2010). As such, my proposition is a ‘cosmopolitical’ one.

2.3. Proposing a ‘cosmopolitical’ approach

What might we learn from opposition if we listened closely? This attentive attitude resembles what Freudenburg and Pastor in an early article (1992) termed ‘the prudence perspective’:

“If the prudence perspective is closest to the truth, it would suggest a need for a broader range of citizen concerns to be taken much more seriously. In fact, citizens would then seem to be proper experts for making decisions on values... From this perspective, much of the NIMBY problem would seem not to result from the greed or shortsightedness of local residents, but from the questionable credibility of companies, agencies and others having fiduciary responsibilities” (Freudenburg and Pastor, 1992: 50).

As I do not consider it my business to call the credibility of the project developers into question (although the empirical data might to some extent do so), I will propose a more empirically grounded approach to taking citizen concerns seriously. What takes the place of NIMBYism is the proposition found in the writings of Gomart and Hajer and others

telling us that “no one can define *a priori* what is ‘politics’ ” (Gomart and Hajer, 2003: 56). Instead of positioning RE projects a priorically on the side of the public good and ‘NIMBY’ responses thus inescapably particularistic, our empiricism forces us to interrogate such logics and take citizens’ decisions and values seriously.

One final point to be derived from writings in STS brings us to Stengers’ “cosmopolitical proposal” (2005). Stengers’ proposal is instrumental in turning the NIMBY logic on its head. While concerned citizens’ ‘situated knowledge’ (Haraway, 1988) tends to be considered illegitimate due exactly to its ‘situatedness’, their concerns dismissed as self-interested, Stengers proposes an alternative understanding, turning citizens’ grounding in the concrete settings of their lives into exactly that which makes them *sensible* and their concerns *relevant*. After all, they are the ones whose lives are immediately affected and, following Stengers, we ought to ‘design the political scene’ in a way that accommodates those whose attachments are at stake instead of disqualifying citizens’ positions exactly because their attachments are the ones that are threatened:

“...there is no knowledge that is both relevant and detached. It is not an objective definition of a virus or a flood that we need, a detached definition everybody should accept, but the active participation of all those whose practice is engaged in multiple modes with the virus or with the river (...) [H]ow to design the political scene in a way that actively protects it from the fiction that ‘humans of good will decide in the name of the general interest’? How to turn the virus or the flood into a cause for thinking? But also how to design it in such a way that collective thinking has to proceed ‘in the presence of’ those who would otherwise be likely to be disqualified as having idiotically nothing to propose, hindering the emergent ‘common account’?” (Stengers, 2005: 1002)

The analysis of the Mejlflak wind controversy falls in four parts, each representing a new setting in which the controversy is dealt with and transformed. In the *first* setting, the nearshore wind farm is presented as a complicated fact emerging from an environmental impact assessment report and other statutory documents. A *second* setting takes the shape of the islanders' past experiences with becoming Denmark's Renewable Energy Island. Here we see how past practices of citizen participation shape expectations and criticisms of the Mejlflak project. In the *third* section, two central settings are investigated and juxtaposed: the public hearing process and the local newspaper debate. Both transform and challenge the Mejlflak project and the people involved on both sides of the debate, but they do so in distinctly different ways. The *fourth* setting is the statutory public meeting held on the island, which curbed rather than invited opposition. The analysis of these empirical forms will allow us to answer the question What makes the Mejlflak wind farm controversial on Samsø? This understanding will allow us to appreciate 'NIMBY' responses as meaningful reactions that could not only serve as cues for future projects but also allow RE projects to deepen rather than challenge democracy.

3. Analysis

3.1. Emerging from documents: The development of the nearshore wind farm

The idea behind the Mejlflak project came from a group of members of a local branch of the Danish Society for Nature Conservation. The members founded an association in 2010, VAAB I/S, and got a large, local energy company, NRGi, on board together with four smaller energy companies along the Bay of Aarhus. The group then created HAAB A/S (ironically translates as HOPE INC), the development company behind the project. The chairman of HAAB, Søren Egge Rasmussen, is also chairman of NRGi's executive committee as well as a member of Aarhus municipal council, representing the Red-Green Alliance (Enhedslisten), the most left-wing party in the Danish political system. The project has thus had both a distinct political and a commercial air from the onset, despite being a grassroots initiative.

In the introduction to the project’s environmental impact assessment report (EIA) it is stated that “the starting point was the wish to establish an offshore wind farm which citizens, businesses, municipalities and others around the Bay of Aarhus could take part in and become co-owners of” (Energistyrelsen [the Energy Agency], 2012a: 2)⁶⁷. According to the EIA, the initiators were inspired by Samsø’s positive experiences establishing an offshore wind farm on the southern side of the island in the early 2000s as part of the Renewable Energy Island project. The introduction to the EIA also mentions that a new offshore wind farm will be in line with Denmark’s energy policy and the goal of having wind energy cover 50 per cent of Danish electricity consumption by 2020. The project in itself, however, the reader will recall, is not a government project but a private initiative.



⁶⁷ The EIA is conducted by consultants hired by the project developers and has yet to obtain its final approval by the Danish Energy Agency, among other reasons because porpoises have been observed in the area, complicating the analysis (VAAB, 2014).

Map illustrating the position of the projected wind farm in the Bay of Aarhus. To the left, Aarhus. In the bottom right corner, Samsø's northern tip.

Source: www.oddernettet.dk, Odder Municipality.

The Mejlflak wind farm is to consist of twenty *nearshore* sea turbines of 150 meters with a capacity of 60-120 MW. In 2009, only one percent of Danish wind turbines were taller than 75 meters (Energi- og Miljødata, 2009), and since then technological development has been somewhat stagnant (Energistyrelsen, 2012b). To Danes, then, 150 meter turbines in an enclosed bay area do not compare to earlier experiences with wind power (on wind power development in Denmark, see Karnøe 2013). In comparison, Samsø's offshore wind farm of 2003 consists of ten offshore turbines with a capacity of 23 MW. Readers' letters in the local newspapers label the turbines 'monster mills' due in part to their unfamiliar size (Gudmundsen-Holmgren, 2013).

Nearshore wind turbines – new in Denmark; the first nearshore project has yet to be completed – designate wind farms set up within 20 km of the coast and no closer to the coast than 2-4 km. Nearshore wind turbines have the advantage of being cheaper and less complicated to erect and maintain due to the shallow coastal waters. The Danish government wants to establish 500 MW nearshore sea turbines before 2020. Closer and larger turbines will, all things equal, be expected to be more visually and audibly present, a concern present in my interviews with critical islanders as well as in the newspapers' debate pages. Furthermore, with a new concept, an emerging, still uninstitutionalised technology, comes intensified financial and legal insecurities: at which price can the electricity be sold, which transfer prices and feed-in tariffs to count on? Which rules and protocols apply? Does the project count as an 'experimental project', which would imply larger state subsidies?⁶⁸ Such questions are to date (primo 2015) still open and contested (VAAB, 2015).

⁶⁸ 'Experimental' or 'trial projects' are, according to the Danish Ministry of Climate, Energy and Building, smaller projects designed to test new types of wind turbines and other technologies and procedures related to the development of wind energy. Such projects go through a strict application

Without going further into the complex situation which the project is still struggling to settle, it is fair to say that establishing a wind farm is an inherently political situation which mobilises various institutional contexts as parts of the larger process of investigation connected to the establishment of the turbines. Although the wind turbine is a well-known technology in Denmark (see e.g. Devine-Wright 2005 and Karnøe 2013), project development is marked by uncertainties for all parties involved. There exists a schism between the fully standardized environmental impact assessment process securing the technical-environmental approval of the project and the legal-financial confusion which still characterises nearshore projects. Not all aspects of a RE project can be measured and calculated beforehand (the sudden occurrence of the preserved porpoise which has disrupted the EIA process being a case in point); however standardized, the process is long and uncertain and might come to nothing in the end.

One fact about the project has, however, been firmly fixed from the onset: the *location* of the wind farm – the sticking point of most disputes over RE. One of the requirements of the EIA is that it must include a paragraph on the ‘zero alternative’, i.e. not implementing the proposal, and alternative locations. The Mejlflak project’s EIA bypasses this consideration of alternatives. Regarding the ‘zero alternative’, the EIA states that, considering the Danish long-term goal of becoming independent of fossil fuels, there is no real alternative to the construction of the wind farm, as sea turbines are expected to provide a large part of the renewable energy needed. It is *not possible not* to set up the wind farm. It is, however, possible to choose a different location, the report briefly states. But, as the following paragraph on alternative locations asserts, since the “*ultimate goal*” of the developers is to create a wind farm which can engage and involve actors in the Bay of Aarhus area, there is “*no real alternative*” outside the bay (Energistyrelsen, 2012a: 4). The EIA therefore investigates no concrete alternatives and constructs the Mejlflak wind farm as an unavoidable reality, closing down the space for deliberation and politics.

procedure as there are substantial state subsidies connected to the status of ‘experimental project’ as these are not expected to function on market conditions (Energistyrelsen, [the Energy Agency] 2011).

The EIA has been preapproved by the Danish Energy Agency despite the fact that the report does not live up to the legal requirement of seriously discussing alternative locations, thus throwing the legality of the project further into doubt in the eyes of an alert public. According to the former spokesperson of the protest group ‘Southern Jutlanders Against Wind Turbines at Mejlflak’ (www.aarhusbugtenogkyster.dk) and summer house owner on Samsø, “it’s a Wild West Project. A governmental screening report on nearshore turbines has been published, but the Mejlflak project doesn’t figure in it because the preapproval of the EIA came before that report. So maybe it doesn’t have to live up to the same requirements as other nearshore projects, no one knows. Legally, it’s a mess...”⁶⁹ (interview2, Nov 2013). Against this, the chairman of HAAB portrays the organizational and technical uncertainties surrounding the Mejlflak wind farm as “a strong selling point” of the project (Energivatch, 2014): Mejlflak is taking the lead in the green energy transition. Experimenting means taking risks, moving the RE industry forward, being a frontrunner. As the reader will recall, a degree of technical experimentation might also involve considerable financial supplements as ‘experimental projects’ warrant larger state subsidies, turning uncertainty into a commercial strength and possibly even a necessary precondition for the realisation of the project. The logic of experimentation at play here, needless to say, is far from the STS-informed notion of experimentation as mutual learning and exploration of the unknown introduced above.

While the chairman has his vision and ideals and tends to refer to a general interest in reducing CO₂ emissions when arguing in favour of the project, the islanders worry about their quality of life, the view from the northern hills and about the social, financial and environmental impacts of the project which, as they see it, have not been fully justified through the EIA process. Some islanders remember the difficulties and

⁶⁹ There is an uncertain relation between the official governmental screening report of possible areas for nearshore wind farms (created by the Danish Energy Agency) and the Mejlflak EIA: the plans for the project and the preapproval of the Mejlflak wind farm came before the rules regarding nearshore wind farms had been settled. Great uncertainty therefore prevails as to which rules pertain to the Mejlflak wind farm.

resources involved in turning the northern part of the island into a preserved nature area. According to Samsø Energy Academy's director, while it took years to secure the area, this status only includes the coastline and not the coastal *waters* – a distinction thought to be wholly arbitrary – and thus does not prevent the establishment of projects such as the Mejlflak wind farm in the area (interview3, Nov 2013). This difference in views on the project – differences which turn the wind turbines into objects of controversy – is by no means surprising, as the actors occupy opposing and well-known positions vis-à-vis the wind farm which evoke memories of classic NIMBY accounts: the islanders are reluctantly sucked into the project anticipating that the turbines will come to affect their close surroundings. Their interests are first of all particular and local as they are dragged into the project through their personal implication. To the developers, the wind farm is a prestigious political project motivated by references to the public good: taking the lead in the major energy transitions to come. In what follows I will attempt to disrupt this familiar structure, this logic of particular vs. general, public vs. private interest, a distinction found at the heart of NIMBY accounts, and instead view the islanders' opposition and the developers' idealism as distributed phenomena challenging ready-made, preconceived distinctions.

3.2. The past and future in the present: expectations of involvement

Let us first take a closer look at what is causing the affected communities around the Bay to form a public against the Mejlflak project. In Denmark, after the publication of an EIA a compulsory public consultation process ensues, inviting scrutiny of the EIA. Going through the Mejlflak consultation responses from affected organisations and citizens, a number of objections can be identified. These include: worries about nearshore turbines near protected natural reserves; concerns about the visual effects of the turbines as seen from the coast (their size and colour, their formation and blinking lights, potentially dangerous low-frequency noise); criticisms of the EIA process and the report, especially regarding the lack of alternative locations. Few also mention concerns

about the wind farm's effects on tourism. In addition, there is uncertainty as to how the wind farm will affect plant and animal life in the Bay (Energistyrelsen, 2012c).

All these concerns sound like well-known NIMBY arguments and are similar to arguments voiced in other controversies over renewable energy projects (for an analysis of the rhetoric of wind opposition, see Barry et al., 2008). In that sense, we are dealing with a specific 'genre' of public protest, one that tends to follow quite predictable logics. The categorization and ensuing delegitimization of negative responses as NIMBYism is an easy move, but it is the aim of this article to move beyond such labelling. In this section I will focus on a criticism against the project which is raised across all platforms – in the public consultation process, at public meetings, in my interviews and in the local newspaper debate – by public institutions such as Samsø Municipality as well as by private citizens. This is the concern about the Mejlflak project's democratic deficit.

A number of the consultation responses (to which we shall return in the following section) criticize the project for being 'an investment project' rather than a public involvement project. Denmark has a strong tradition for involving the public in RE projects, and there is a statutory rule of 20 percent local ownership (defined as citizens with officially registered addresses in the municipality) in wind projects (www.windpower.org). While the Mejlflak project was instituted by grassroots from the Danish Society for Nature Conservation, the main investors are energy companies based all over the country as far from the Bay of Aarhus as Copenhagen, where the capital's largest utility company HOFOR has bought shares in the project (VAAB, 2014). It is thus proving difficult for the project developers to realise the "ultimate goal of the project" (Energistyrelsen, 2012a: 4) – to create a wind farm engaging actors in the Bay of Aarhus area.

The Samsø resistance against the project is surprising seen from the perspective of the literature, which tells us that "familiarity with wind farms in the landscape breed[s] contentment" (Warren & McFadyen, 2010: 210). In this case, the opposite seems to be true. The islanders are used to wind turbines, but they are also used to being actively

involved in the local energy projects. A banal but essential point in trying to understand the islanders' resistance to the Mejlflak turbines is that the initiative does not derive from the island. The Mejlflak project is perceived as a foreign initiative which will not benefit Samsø in any way. The RE Island project, by contrast, was initiated by island actors and realised with the help of local labour and materials. The two projects cannot be directly compared, but both sides of the controversy tend toward comparison, e.g. when the Mejlflak EIA mentions Samsø as a role model for the Mejlflak project.

The story of Samsø's transformation into Denmark's RE Island is one that stresses *energy democracy* and *commonity* (commons + community, Hermansen and Nørretranders, 2011) as key values. During my fieldwork at Samsø Energy Academy I witnessed the director, Søren Hermansen, a leading figure in Samsø's energy transformation, tell the story of the island's transition to groups of visitors from all over the world. The story, which has been told, retold and refined since the nineties, is one which foregrounds processes of local democracy. The following is an example of Hermansen's storytelling, in this instance to an odd group of Dutch students, Danish top managers from a large bank, and the newly-appointed Hungarian ambassador to Denmark. All are seated in the Energy Academy's spacious main hall:

“We made energy democracy. We didn't really talk about climate change, that's abstract. But we created jobs. If we cannot gather people around the burning platform, it's not worthwhile. Then people will say: We know what we have, we don't know what's going to happen. On Samsø we talk about community and the commons as a value. As 'commonity'. It's a matter of defining the commons, defining what we are interested in, our common challenges and solutions. Defining the commons means defining the different interests at play and figuring out ways to work together with our different interests” (Field notes, Nov 2013).

Remember Stengers' spin to the word 'interesting': Hermansen is talking about creating a setting where no one and nothing is "left alone, authentic, but transformed by what occurs..." (Gomart and Hajer, 2003: 39-40). He talks about transforming the island by engaging and transforming the local community. The setting is in focus in his narration; the setting as the community and the diverse interests at play among the islanders, all of which must be accommodated as the focus is on collaboration. The goal of energy self-sufficiency is not mentioned. The logic of this narrative – the prominence given to the island community, to creating public support for the REI project and using the project to further the islanders' various interests, thus strengthening the community as a whole – is absent from the Mejlflak project. This is not to claim that no controversies arose in connection with the REI project, but I encountered no islanders with a strong recollection of conflicts or disagreements. The project was concluded in 2007, and what lives on, apart from the RE technologies, is the story of community involvement and local democracy. The Mejlflak project has come to serve as a counterpart to this Samsø story; a contrast representing all the pitfalls which the Samsø project allegedly managed to avoid, reactualising Samsø's experiences as exemplary while fuelling public resentment against the Mejlflak project.

The Mejlflak project developers' refusal to name alternative locations has come to highlight the practice of responsiveness of the REI project developers. When the offshore wind project south of Samsø was developed as part of the REI project, three locations were in play (and the preserved northern area of the island was never part of the project plans). In the end, the chosen location was the least advantageous with regard to the wind and seabed conditions and it was the most expensive alternative, but it was the least controversial and the visually most pleasing location as the turbines cannot be seen from the manor on the island, which was a demand on the part of the landowner. As a key player on the island and one of the main investors (as well as the only actual 'neighbour' to this offshore wind farm), the landowner's consent and cooperation was seen as a precondition for the realisation of the project.

Siting is a key concept in the NIMBY literature, as well as in the academic literature contesting the NIMBY proposition, as the location of the renewable energy technologies tends to become the main point of contestation (the common disagreement over location is, of course, what gives the NIMBY concept its name). In Corvellec and Risberg's (2007) analysis of Swedish wind farm developers, a developer states: "The value lies in the site, actually. Wind turbines are only a means for exploring sites" (311). The authors elaborate: "When asked how they start developing wind farms, developers usually answer that they begin by looking for a site with good wind conditions, since this is a key requisite for the profitability of the project" (310). The focus on the site is thus related to profitability, and this is a further distinction between Samsø's REI project and the Mejlflak project. The former was not a commercial project but a cooperative, local project. While the Mejlflak project is dependent on the support of large investors, primarily utility companies, the REI project secured its funding locally: farmers, citizen cooperative societies, and Samsø Municipality, which bought five of the ten offshore wind turbines. On Samsø, the value did not lie in the site but in what the RE technologies came to represent: a resourceful community, local democracy, and, lastly, the possibility of a fossil free future. Hermansen of Samsø Energy Academy sums up the islanders' position on Mejlflak:

"The Mejlflak project gives Samsø the green benefits but it keeps the rest, the jobs and the local development. There's no narrative of 'What's in it for us?' in that project. They don't want to share the yields; they are following an old industrial paradigm where you keep your gains to yourself. In the beginning [of the REI project] I was a bit like the Mejlflak guys, I thought a green project would sell itself. It turned out to be more difficult than that. We had to establish a quorum of citizens willing to take responsibility for their community, we had to learn how to cooperate. 'What we can agree on' became our mantra" (interview3, Nov 2013).

3.3. Attacks, appeals and accusations: different formats for public debate

The setting which lends the Mejlflak controversy its specificity is Samsø's experience of becoming Denmark's Renewable Energy Island. In this section, two further settings of the controversy introduced are the public consultation process and the local newspaper debate. These are the formats in which the affected public gets a chance to speak. I inspect the arguments voiced and attacks launched and pay attention to the ways in which the newspaper debate and the public hearing process provide different formats for the public to become vocal.

The newspaper debate

My online searches for articles (conducted September 2013 and March 2014), particularly readers' letters, regarding 'Mejlflak' in the local newspapers returned a large amount of heated and personal expressions of the controversy. The arguments cover a lot of ground as they stretch from concerns about north Samsø's nature ("The Mejlflak turbines will result in environmental destruction of gigantic dimensions", Osbahr, Feb 2014), the wind turbines' size and character ("monster mills", Gudmundsen-Holmgreen, Sept 2013) and worries about the financial viability of the project ("The Mejlflak project is a mixture of Stalinist planned economy and an incredible naivety on the part of the project developers", Breenggaard, June 2013) to personal attacks ("OBJ's knowledge of the planet's climate is not impressive", Birkedal, Sept 2013). Newspapers' debate pages have tight word limits and for a reader's letter to be accepted it needs to have an edge. Furthermore, a reader's letter often takes the form of a response to a previously published letter by a named person to whom the new letter is addressed. Rather than providing a deliberative forum for conversations, the format of the newspaper debate encourages bickering and exacerbates differences. An example of the confrontational style of the debate: "Søren Egge Rasmussen's [director of the Mejlflak project] sole

argument against my criticism in my latest reader's letter is that I own a summer house on Samsø overlooking Mejlflak" (Skou, Oct 2012).

There is a tendency among the debaters to seek to delegitimize one another's positions through labelling and categorization. In a locally situated conflict, and one in which accusations of NIMBYism play a central role, the location or positioning of the actors is important. When the situatedness of the protesting islanders' positions becomes clear, they are accused of expressing NIMBY standpoints, e.g. when they refer to concerns about low-frequency noise or the visual impact of the turbines on the landscape, effects experienced only by neighbours to wind turbines. At the same time, as is evident from the above citation, the position of critics without permanent residence on Samsø is delegitimized through reference to their status as "summer house owners". Paradoxically, the "summer house owners' " position as outsiders to the conflict makes their concerns even less legitimate than the islanders'. "Summer house owners" are not directly vulnerable to the accusation of proximity, the classic NIMBY charge, but by being slightly farther removed from the problem they become tourists without any legitimate stake in the controversy; they become simply meddlers whose sole interest must be to secure their holiday destination from disturbances. In following this strategy of delegitimization, the director of the Mejlflak project in a lengthy contribution to the debate consistently throughout his discussion refers to the above Skou, the former spokesperson of the protest group against the project, as 'summer house owner Skou'. He ascribes all criticism of the project to a group of secondary home owners who attend all public project meetings in order to create a fake sense of controversy and local resistance. He concludes that there is no strong opposition against the project (Egge Rasmussen, Sept 2012).

The Mejlflak project, in turn, labours to brand itself as a local grassroots project. The brand of localism of local grassroots organizations is different from that of critical individuals; it is a responsible and altruistic localism aiming at improving the local area. In this case it involves accepting to do one's share to mitigate climate change despite the

costs. As mentioned, with energy companies all over Denmark as investors in the wind farm and a nation-wide campaign recruiting paying members for the guild, the localism of the organization is questioned in many readers' letters, and the director Egge Rasmussen is accused of astroturfing; of parading the project as a grassroots initiative engaged in saving the planet while in fact being motivated by self-interested political and financial concerns. As a local politician representing the far Left in Aarhus Town Council and chairman of the executive committee of NRGi, the utility company that owns 40 percent of the project shares, readers' letters accuse him of "*wearing too many hats*" (Gudmundsen-Holmgreen, Sept 2013), putting further into doubt the director's position as a local actor primarily interested in reducing the CO₂ emissions of the Bay of Aarhus area. In his own words: "There is certainly a difference in approach and perspective from the summer house owner who wants to preserve his unobstructed view of the coast line to the local citizen or electricity company concerned with how the Bay of Aarhus area may contribute effectively to the solution to the climate problems" (Egge Rasmussen, Sept 2012). The climate, in this way, is drawn into the political situation of the controversy, the director strategically placing himself and the Mejlflak project on the side of the climate with the 'summer house owners' and critical islanders on the opposing side where one self-interestedly wants to keep enjoying one's unobstructed view. We will now turn to the public consultation process, a process with fewer casualties, where arguments take center stage over blunt attacks.

The public consultation process

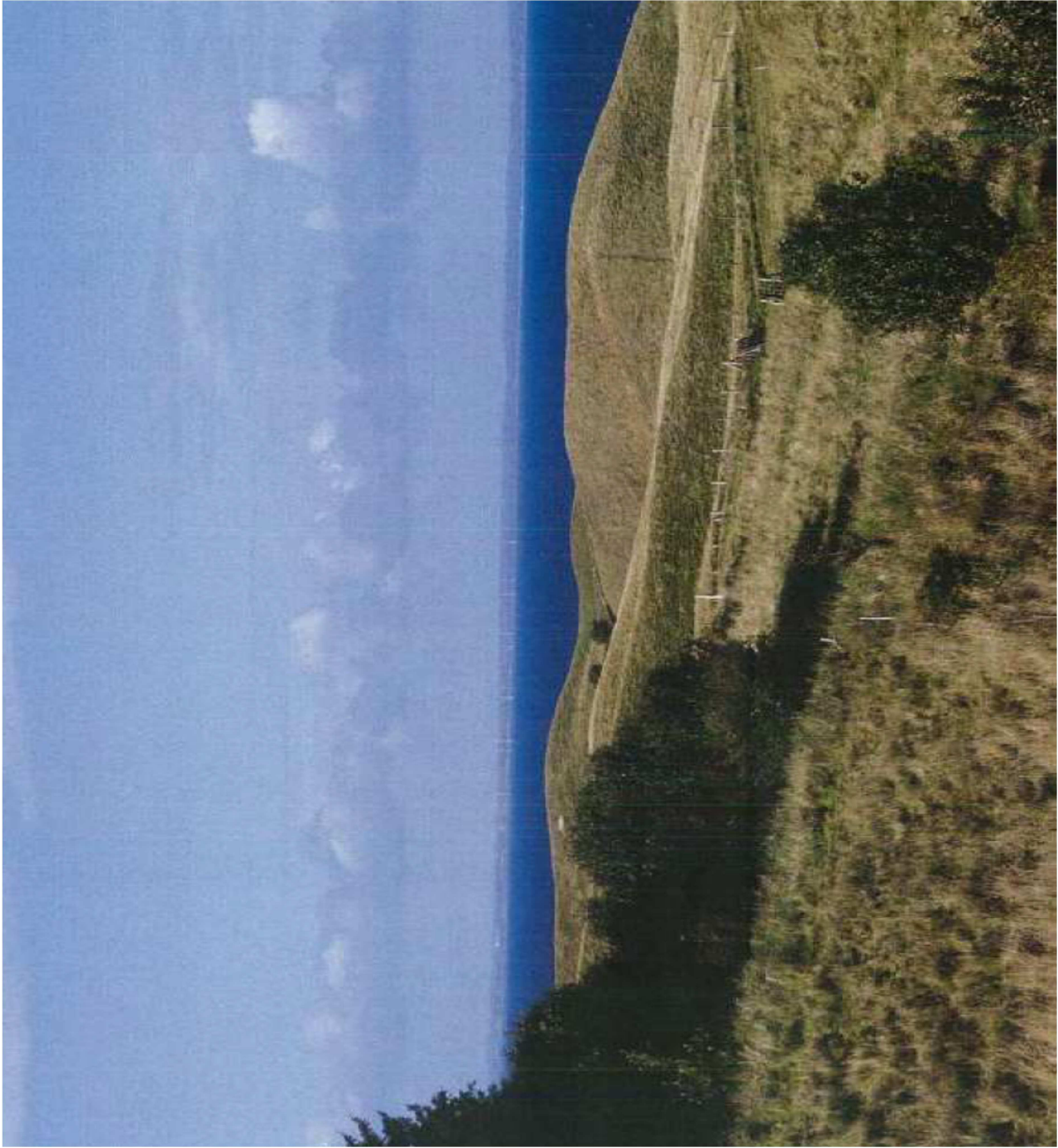
In September 2012 the Danish Energy Agency sent the Mejlflak EIA report out to consultation. Out of 102 replies from affected parties – organizations and private citizens – only four responses strongly endorse the project. The arguments voiced in the responses do not raise new concerns about the project as such, but the style of argumentation and the strategies employed differ markedly from those encountered in

the newspaper debate. The responses tend to fall in one of two categories: the (lay) expert analysis and the emotional-personal contribution.

As for the latter, the newspaper debate left little room for expressions of personal attachment as these would leave the contributor vulnerable to NIMBY accusations as well as personal attacks. Since the hearing process does not allow for exchanges of opinions but simply serves to inform the authorities about the attitudes of the public, this format sets the stage for more elaborate arguments and analyses, and the contributors do not as readily risk having their inputs used against them. Among the numerous personally angled responses I will emphasize one, written by an elderly woman and one of the leading figures in Samsø's REI project. In her response she has allied herself with the island's journalist. His input consists of a photograph showing the northern hills and the sea, taking up one A4 sheet (see below; notice the likeness to the still photograph from HAAB's promotional video on page 1), accompanied by a hand-written description of the camera settings used to produce the photo. Below, typed, the woman writes:

“The picture is taken just outside my house, which is placed exactly north-south and lies about 850 meters from the water to the west and about 20 meters above sea level. We bought the grounds, which cover the statutory 4.08 acres, in 1969, and we later built the house in accordance (of course!) with the regulations in force due to the protection of the area. I have lived here for over 40 years.

-‘It is through such openings that the earth breathes’ – Thorkild Bjørnvig [the woman's deceased husband, a local poet who lived in the northern hills until his death, famous throughout Denmark; translated by the author] in the collection of poems ‘Morgenmørke’. 1977-79” (Energistyrelsen, 2012c: 26-27).



The photo of the hills as it appears in the response to the hearing – turned on its side.

Recall Stengers’ proposal to take concerned citizens seriously because of, not despite, their situatedness and personal attachments. Implicated citizens do not derive their interests from the reservoir of disinterested values and ideals known as ‘the common good’. On the contrary, their personal attachments drag them into controversies. Recall that “...there is no knowledge that is both relevant and detached. It is not an objective

definition of a virus or a flood that we need, a detached definition everybody should accept, but the active participation of all those whose practice is engaged in multiple modes with the virus or with the river” (2005: 1002). This logic runs counter to the central NIMBY-informed assumption that your situatedness makes your critiques illegitimate.

In the response to the hearing, the woman, unafraid of NIMBY accusations, plays up her attachment to the area: she has lived here for 40 years, she is practically (her husband built their house himself) and emotionally (his poem at the end) attached to the place. The large photograph with the technical settings carefully outlined brings a degree of objectivity to the letter, as if to draw in the reader, ‘see for yourselves, this place is worthy of preservation’, while at the same time serving to place the woman firmly *in* the specific site to which she claims attachment: this is her view. Several of the responses contain photographs; a move that might be thought to provide the government officers in the capital with documentation of the value of the place, as the officials may never have set foot on Samsø. The woman’s response also contains a reference to the status of the northern hills as a preserved and highly regulated nature reserve, subtly drawing attention to the fact puzzling to many islanders that while previously proposed projects in the hills have been dropped because of the area’s protected status, this is no obstacle to the Mejlflak project, since, legally, a listing of the *coast* does not equal a preservation of the coastal *waters*.

In contrast to this argumentation-through-attachment, many islanders resort to the tactic of argumentation-through-expertise, departing from Stengers’ call for situatedness and particularity as a source of legitimacy. As a concerned and highly engaged islander told me:

“My husband is a biologist, he has studied the migration of birds and even the effects of wind turbines on birds. So we wrote a response to the hearing which completely undermined the results of the EIA report. We’ve also

written a response about the past controversy about the radar pylon [a project proposed and rejected due to the area's protected status] as well as a response about the effects of the project on the landscape and tourism, because we run one of the largest tourist attractions on the island” (interview4, Nov 2013).

In a similar manner, the former spokesperson of the Mejlflak protest group, a physician, has produced two responses, one in non-specialist language outlining the perceived weaknesses of the project, and one ten-page response detailing in complicated and detached legal jargon problems regarding the legality of the project. To illustrate, one sentence starts: “It follows from §3, article 3, annex 2, in the relevant Environmental Impact Assessment order (Order.No. 815 of August 28 2000) that the EIA executive order must contain a review of the most important alternatives inspected by the entrepreneur...” (Energistyrelsen, 2012c: 198).

By bringing in biology and law, this citizen tactic adopts the expert's disinterested “gaze from nowhere” (Haraway, 1988: 581), attempting to escape their personal implication by deriving objectivity from expert language and arguments. However, by drawing on several kinds of expert knowledge – tourism, birds' migration patterns, legal and historical aspects – the citizens behind more than one response counteract their own positioning as experts, as an expert tends to be someone with extensive knowledge within rarely more than one field. Instead, they deliver would-be objective knowledge-based claims within several fields, attempting to cover as much ground and deliver as many arguments against the Mejlflak project as possible to the officials in the Energy Agency.

In these diverse ways, the dynamic of the controversy unfolds in different settings, through different strategies. If this is the face of NIMBYism, it emerges as a more varied and variable phenomenon than is commonly construed. In order to render their positions legitimate, opponents of the project experiment with different conscious positionings: personal attacks, individual attachments, expert claims, rational arguments

appealing to common sense. The controversy in this way constantly changes shape as the critics of the project refuse to be held in a position of particularity or NIMBYism.

3.4. The public meeting: an unengaging engagement exercise

Our final setting of the controversy is the public meeting held on Samsø by the project developers. Danish law lists certain requirements to secure public involvement which must be followed when developing a wind farm. The public consultation process is one such step towards inserting a degree of public deliberation into the process by legal means and, similarly, community meetings have become traditional and are now required by law. The Mejlflak project held five public meetings presenting the results of the EIA, one of them on Samsø. Gomart and Hajer pose that “[d]eliberation cannot be understood without taking the role of ‘practice’ into account...” (2003: 45), arguing that public engagement exercises run the risk of serving as nothing more than an opportunity for developers to manage people’s positions and even silence criticism. The public gets an opportunity to raise their concerns, after which the developers can continue realising the project knowing the public was given a chance to speak. The public meeting differs from the formats of the newspaper debate and the consultation process where confrontations are never direct but always mediated by writing. The public meeting carries with it the potential for the parties to critically and directly engage with one another’s positions and concerns, but there is no guarantee that such a deliberative forum arises, hence Gomart and Hajer’s call to take practice into account.

The meeting took place in one of the island’s community centres. About one hundred islanders attended. I was not present myself so this section rests on a newspaper report and my interviewees’ impressions of the meeting. HAAB’s director, according to the local newspaper article, stated ahead of the meeting that “We don’t expect to reach agreement” (JRE, 2012). Following this statement and the setup of the meeting, it seems that no real involvement of the citizens – in Gomart and Hajer’s sense of ‘constructing’, ‘transforming’ and ‘empowering’ actors into participation (45) – was

ever intended. The presentation of the results of the report took up more than half of the evening and centered on the two classic ‘NIMBY’ issues, low-frequency noise and visual impact. Experts had been invited to calm the crowd. After lengthy, technical presentations, one hour was allowed for debate. The questions raised by the public did not center on noise or visual impact but on the location of the turbines, a point the presenters had not brought up. Asked about the choice of location, the director responded that he wants “a locally anchored project” and the turbines to be placed “where they will be seen”. Representatives of the guild, VAAB, added that the project was “simply following Samsø’s example” (JRE, 2012).

To HAAB, the wind farm is a demonstration project and the visibility of the large turbines is a force of the project. To the islanders in whose everyday lives the turbines will become a visible factor, their size and impact is an unwanted change. If the wind farm is to be realised, the process cannot be fully democratic since, if the developers took the islanders’ objections seriously, the turbines would not be erected near Samsø’s northern point. Engaging in a democratically legitimate process would most likely mean abandoning the project in its current form. Since the EIA lists no alternatives to the current location, it is likely that the project developers’ interests are so tightly connected to the location close to Samsø that no alternative project would be conceived. This is the dilemma of public involvement: to practice it in a serious manner involves the risk of non-realisation. Still, had the public been involved at an earlier point and invited into the development of the project, the process might have carried with it the potential to *transform*, *construct* and *empower* the island community in ways that could have produced results that differ from those of today.

4. Conclusion

What makes the Mejlflak wind project controversial on Samsø? To approach a controversy as an instance of politics which must be understood through concrete, empirical engagements is to move beyond the NIMBY logic. Each section of the analysis

has investigated a different empirical setting, allowing us to examine “the particular sort of engagement it enabled or delimited” (Gomart and Hajer, 2003: 47). The Mejlflak project’s EIA process, marked by uncertainties and by one hard fact, the location of the wind farm, created opposition on Samsø. So did the project’s commercial character and the project developers’ reluctance to involve the local communities. These practices, which stand in stark contrast to the islanders’ experiences with the community-oriented RE Island project, sparked resistance and undermined the project developers’ alleged wish to create “a locally anchored project” (JRE, 2012). A desire that finds expression in rhetoric but not in practice. The newspaper debate and public hearing process offered different channels through which the public could voice their concerns and critiques; channels of publicity which have given the Mejlflak project its public image of a controversy.

The problem with NIMBY is that it is a fundamentally unexperimental and depoliticizing move: by reducing all arguments to the positioning of the actors expressing them, it prevents us from learning from opposition and correctly appreciating the situatedness of local responses. In this article I have attempted to treat resistance as valuable expressions that might contribute to our understanding of the phenomenon of resistance. Large-scale RE projects carry with them great potentials both for strengthening local democracy and communities and for developing more environmentally sustainable societies, but they also embody the potential of the tyranny of the Good. When the voice-over in the Mejlflak project’s promotional video says “The wind turbine guild of the Bay of Aarhus is for *you*”, one remember Stengers’ question: “[H]ow to design the political scene in a way that actively protects it from the fiction that ‘humans of good will decide in the name of the general interest?’” (2005: 1002). Being critical of these ‘humans of good’ will take courage. In the video the ‘you’ is coercive, inescapable.

My proposal is that we try to pay attention to the attachments articulated by the implicated. Taking the attachments of the involved seriously involves a reweighing of the

issue and a redistribution of the dichotomy around which ‘NIMBY’ conflicts tend to unfold, particularism vs. the public good. By re-opening a space of contestation, questions of whether and how to approach large-scale energy projects become political once again, and new knowledge is generated. This new knowledge could then be put to use in future RE projects.

The RE Island project developers on Samsø accomplished this: they learned how to listen to the various interests of the islanders; they found ways to get those different interests to work together, and they built a stronger local community on the basis of those differences. I do not believe that this approach or the case of Samsø is specific to the Danish context. With governments all over the world setting CO₂ reduction goals and formulating aspirations to embark on renewable energy transitions, if project developers do not practice responsiveness and willingness to learn from citizen reactions, many projects will likely come to nothing or be realised against the public will, making the future even more difficult. But the analysis has also demonstrated the malleability of resistant publics. As the setting of the controversy changed from one format of publicity and participation to another, so did the responses and reactions, even the composition, of the public. A public is not a fixed entity that cannot be swayed or transformed, on the contrary, publics are ever-changing, and so are the issues they engage with. This points to the potential of learning that is inherent in all controversy.

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Appendix 1: English summary

In 1997 Samsø, an island of four thousand inhabitants, embarked on a ten-year-long journey toward becoming Denmark's Renewable Energy Island. Denmark's Minister for the Environment Svend Auken returned from Kyoto Climate Talks in Japan eager for Denmark to reduce its CO₂ emissions and show itself as a responsible climate actor. The minister issued a competition inviting local island communities to present a realistic plan using Danish renewable technology for how to make a full transition of the island's energy systems to energy self-sufficiency. With no funds attached, all that Samsø won when it was chosen among three other islands and a peninsula was the title of Renewable Energy Island to Denmark. Ten years later, in 2007, the island, now well-known in international sustainability circles, could call itself not simply CO₂ neutral but CO₂ *negative* thanks to the surplus electricity produced by offshore windmills and exported to the mainland.

An ambitious climate and energy project led by a group of local non-experts, the purpose of embarking on the Renewable Energy Island project was not, as one might expect, to strengthen Samsø's resilience toward sea level rise. Rather, the islanders saw in the project an opportunity to revitalize, to renew their community, to ameliorate the socioeconomic vulnerability that comes with being a community on the outskirts of Danish society. The islanders undertook a society-wide energy transition; a transition fundamentally changing not just the idyllic island landscape, but also the ways in which livelihoods are supported, local businesses organized and homes provided with electricity and heating.

A demonstration experiment in local green energy transitions, I argue that Samsø is relevant not first and foremost as a case of *technological* innovation –the island's offshore wind farm may have been among the largest in the world when it was built, but it has long since been overtaken by new technological developments. My argument lies, rather, in the potential for the case of Samsø to reconfigure what we understand as

‘innovation’ in a broad field of energy and climate change research that has perhaps been too narrowly focused on technology. Through five articles centered around Samsø’s transformation, I hope to show the potentials for *societal* or *participatory innovation* that can be built into local energy transitions, insofar as such transition processes manage to make the development, the concerns and needs of the collective central and resist prioritising technological innovation over the interests of the collective. My analyses show the centrality of the “social processes” to community-based transition projects; processes encompassing a wide range of aspects not purely social, such as public involvement, scalability and storytelling. In highlighting the potentials and challenges inherent in RE transitions the study engages with inescapably political questions such as: How are public participation and acceptance secured? What are the consequences of large-scale RE projects for local communities? Which evolving forms of participation and representation result from such projects?

The study takes its point of departure in my sustained engagement with the island actors through ethnographic fieldwork and moves from there into the field of Science and Technology Studies (STS) where I take up the notion of *empirical philosophy* to describe the constant oscillations between the empirical and the theoretical. Taking up recent debates in STS, each of the five articles discusses different aspects of Samsø’s transition. The first is concerned with how this local example has been made to ‘travel’ globally. The second and third employ different tactics to enrich the well-known story of Samsø’s transformation and challenge the ‘standard narrative’ of the energy transition, taking up debates in STS of storytelling and hope respectively. In the fourth article I contrast the notion of material participation with more classic theories of public participation through the analysis of the development of district heating plants on Samsø. And, finally, in the fifth article I turn to the analysis of a recent controversy surrounding a proposed near-shore wind farm off Samsø’s preserved northern coast. My aim in this article is to develop a theoretical framework which, contrary to the common *not in my backyard* attitude, seeks to take local objections seriously.

Appendix 2: Resumé (Danish summary)

I 1997 påbegyndte Samsø og øens fire tusind beboere en ti år lang rejse, der skulle gøre øen til Danmarks Vedvarende Energiø. Daværende miljøminister Svend Auken var netop hjemvendt fra Kyoto Climate Talks ivrig efter at sikre Danmark en position som en ansvarlig klimaaktør i verden. Ministeren udskrev derfor en konkurrence, hvori han inviterede danske øsamfund til at præsentere en realistisk plan for, hvordan øen udelukkende ved hjælp af danske vedvarende energiteknologier ville kunne omstille sine energisystemer til selvforsyning. Der fulgte ingen offentlige midler med, da Samsø vandt konkurrencen blandt tre andre øer og en halvø og dermed blev Danmarks Vedvarende Energiø. Ti år senere, i 2007, kunne øen, som nu var velkendt i internationale bæredygtighedscirkler, kalde sig ikke bare CO₂-neutral, men CO₂-*negativ* takket være øens eksport af overskydende vindenergi til fastlandet.

Vedvarende Energiø-projektet blev et ambitiøst klima- og energiprojekt ledet af en gruppe lokale amatører. Øboerne gav sig ikke i kast med projektet for at forbedre Samsøs modstandsdygtighed over for truende havvandsstigninger. Derimod så øboerne i projektet muligheder for at revitalisere og forny deres øfællesskab. De så potentialet for igennem Vedvarende Energiø-projektet at imødegå den socioøkonomiske sårbarhed, der er uundgåelig, når man er et øsamfund i Danmarks udkant. Øboerne kastede sig ud i en energiomstilling, der omfattede hele deres samfund; en omstilling, der kom til fundamentalt at ændre ikke bare det idylliske ølandskab, men også – blandt meget andet - de måder hvorpå lokale virksomheder og arbejdsopgaver organiseredes.

Jeg definerer Samsø som et demonstrationseksperiment udi lokale grønne energiomstillinger og argumenterer for, at Samsøs relevans ikke først og fremmest skal findes i den *teknologiske* innovation, der fandt sted. Øens havvindmøllepark var nok blandt verdens største, da den blev bygget, men den blev hurtigt overhalet af nye teknologiske udviklinger. Mit hovedargument ligger snarere i Samsø-casens potentiale for at rekonfigurere hvad vi forstår ved 'innovation' inden for et bredt samfundsvidenskabeligt energi- og klimaforskningsfelt, som har en tendens til at

fokuserer lidt for snævert på teknologi. I mine fem artikler om Samsøs omstilling håber jeg at vise de potentialer for *samfundsmæssig* eller *deltagelsesorienteret innovation*, som kan blive en del af lokale energiomstillinger, hvis sådanne omstillingsprocesser formår at gøre udviklingen af kollektivet samt fællesskabets bekymringer og behov centrale for processen og modstår at prioritere den teknologiske innovation over kollektivets interesser.

Mine analyser finder de 'sociale processer' centrale for fællesskabsbaserede omstillingsprocesser; processer som rummer mange aspekter, som ikke er rent sociale, herunder borgerdeltagelse, skalering og historiefortælling. Igennem understregningen af potentialerne og udfordringerne forbundet med vedvarende energiomstillinger engagerer studiet sig i grundlæggende politiske problemstillinger såsom: Hvordan sikres offentlighedens deltagelse og accept? Hvad er konsekvenserne af omfattende energiprojekter for lokalsamfund? Hvilke former for deltagelse og repræsentation udvikles som resultat af disse projekter?

Studiet tager udgangspunkt i mit langvarige etnografiske engagement med Samsø-aktørerne og bevæger sig fra felten til Science and Technology Studies (STS), hvor jeg vha. begrebet *empirisk filosofi* beskriver de konstante bevægelser imellem empirien og teorien. Første artikel beskæftiger sig med, hvordan det er lykkedes det lokale eksempel Samsø at blive et globalt fænomen. Anden og tredje artikel anvender forskellige taktikker til at berige den velkendte historie om Samsøs omstilling og udfordre 'standardnarrativet'. Artiklerne tager STS-debatter op om hhv. historiefortælling og håb. I fjerde artikel kontrasterer jeg teorien om 'materiel deltagelse' med mere klassiske teorier om borgerdeltagelse igennem en analyse af udviklingen af fjernvarmeværker på Samsø. I femte artikel analyseres en nylig kontrovers omkring en foreslået kystnær havmøllepark ud for Samsøs fredede nordkyst. Formålet med denne artikel er at udvikle en teoretisk ramme, der i modsætning til den gængse *not in my backyard*-attitude tager lokale indvendinger seriøst.

Appendix 3: Abstract

Through a joint community effort Denmark's Renewable Energy Island Samsø became self-sufficient with renewable energy over a ten-year period from 1997 to 2007. Today, the story about Samsø's successful energy transition has become a global export, and Samsø has become a widely known example of community building, public participation and shared ownership in energy technologies. Kaleidoscopic, Samsø's renewable energy transition is hard to pin down: whether a climate or energy project, a project in community-building or local development or something else entirely cannot be meaningfully decided; the project contains all these elements at once. In this study, situated in the field of Science and Technology Studies, I explore the transformations involved in becoming a demonstration island, and I ask questions about how a renewable energy community is made. Through these investigations the study argues that more attention should be paid to the political and societal dimensions of local energy transitions. Community-based renewable energy projects are co-constitutive processes leaving no domain untouched, and we should resist the temptation to focus too narrowly on the technological innovation involved in such endeavours. As an alternative I propose the term *participatory innovation*. At once down-to-earth, practical and pragmatic, and a meeting place and role model of idealists and climate change activists from all over the world dreaming of a more sustainable future, Samsø connects poles: pragmatism and idealism, hope and practicality, future and past. It is these tensions that this dissertation explores.