

Storifying Samsøs Renewable Energy Transition

Papazu, Irina

Document Version Accepted author manuscript

Published in: Science as Culture

DOI: 10.1080/09505431.2017.1398224

Publication date: 2018

License Unspecified

Citation for published version (APA): Papazu, I. (2018). Storifying Samsøs Renewable Energy Transition. Science as Culture, 27(2), 198-220. https://doi.org/10.1080/09505431.2017.1398224

Link to publication in CBS Research Portal

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy If you believe that this document breaches copyright please contact us (research.lib@cbs.dk) providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 18. Jun. 2025







Storifying Samsøs Renewable Energy Transition

Irina Papazu

Journal article (Accepted manuscript*)

Please cite this article as: Papazu, I. (2018). Storifying Samsøs Renewable Energy Transition. Science as Culture, 27(2), 198-220. DOI: 10.1080/09505431.2017.1398224

This is an Accepted Manuscript of an article published by Taylor & Francis in *Science as Culture* on 16 Nov 2017, available online:

DOI: <u>https://www.tandfonline.com/doi/full/10.1080/09505431.2017.1398224</u>

* This version of the article has been accepted for publication and undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the publisher's final version AKA Version of Record.

Uploaded to <u>CBS Research Portal:</u> January 2019











Transition stories and their ethnographic counterparts: Samsø's renewable energy transition

Journal:	Science as Culture
Manuscript ID	CSAC-2017-0065
Manuscript Type:	Original Paper
Date Submitted by the Author:	05-Jul-2017
Complete List of Authors:	Papazu, Irina; Copenhagen Business School, Department of Management, Politics and Philosophy
Keywords:	ethnography, transition stories, renewable energy, local energy transitions



Transition stories and their ethnographic counterparts: Storifying

Samsø's renewable energy transition

Irina Papazu

Copenhagen Business School, Department of Management, Politics and Philosophy Porcelænshaven 18B, 2000 Frederiksberg, Copenhagen, Denmark

+45 29 72 51 20

ip.mpp@cbs.dk

Abstract

Through a joint community effort Denmark's Renewable Energy Island Samsø became selfsufficient 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 knownwidely-known model of community building, public participation and shared ownership in renewable energy technologies and transition processes. What has allowed the Samsø narrative to travel so widely has been the effective 'transition story' created about the islanders' exertions efforts. This transition story, however, has become fixed with the years and has assumed an ideal-typical character. Meanwhile, the challenges and costs inherent in the complicated socio-material process of transition are underestimated and largely forgotten. While such transition stories are indeed inspiring, the ideal-typical narrative may stand in the way of the development of further local energy transitions, as challenging elements of the process are downplayed to strengthen the narrative power of the story. By presentingE-ethnographic stories about Samsø that interfere with complicate the island's transition narrative and , the analysis adds nuance to the Samsø story, highlighting discusses its discrepancies and problematizingzes the effects of such strong well-crafted transition narratives. This tendency towards the 'storification' of transition

Formatted: Space After: 10 pt, Line spacing: Multiple 1.15 li

Field Code Changed

processes is not restricted to Samsø; it is employed as a tactics by environmental organizations operating globally.

Keywords

Ethnography, transition stories, renewable energy, local energy transitions

Introduction

Samsø, a Danish tourist and farming island of four thousand inhabitants, was appointed Denmark's Renewable Energy Island (REI) in 1997 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 wind turbines, straw-based district heating plants and solar systems. Ten years from 1997, the islanders could call themselves 'CO₂ negative'; they had become not just energy selfsufficient but managed to produce more electricity than they consumed. The surplus electricity produced by offshore wind turbines is 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 (e.g. Williams, 2007; Hansen, 2013; Spear, 2014; Tagliabue, 2009; Cardwell, 2015). Representatives of Samsø Energy Academy, the organization still carrying out projects in relation to environmental sustainability and energy on the island, continue to travel the world telling stories about the island's energy transition, turning the local endeavor into a globally recognized example to be followed (Papazu, *forthcoming*). Especially Søren Hermansen, the Energy Academy's director who spearheaded Samsø's transition process, is a crucial character in this regard, well-known in global environmental circles and proclaimed as a Time Magazine *Hero of the Environment* (Time Magazine, 2008).

Science as Culture

Energy transitions such as Samsø's are social as well as technological achievements; they are 'social and economic assemblages' (Miller, Iles and Jones, 2013: 135) involving and affecting the lives, homes, jobs, practices, relationships and culture of the people involved in the transition. And they are necessary, inevitable, even, in the light of today's combined challenges of climate change, hard-to-reach fuel sources and geopolitical conflicts. The world, therefore, arguably needs examples like Samsø's to lead the way and show what such processes of change may look like and bring with them in practice.

However effective, during my months of fieldwork on the island I sensed that Samsø's transition story – which was constantly told and retold by the Energy Academy staff - had turned into exactly that, a *story*. And the elements of this story, I learned, had become far removed from the empirical grounds that had brought the project into being more than ten years ago. If we accept that Samsø and places like it have an important role to play in terms of providing a concrete alternative, a recipe, almost, for how similar energy transitions might be carried out – and this is the very premise underlying the intense circulation and communication of Samsø's example - then this 'storification' might be problematic.

The questions I ask are twofold: (1) How was Samsø's accomplishment turned into an ideal-typical transition story? (2) What have been the effects, positive and negative, of this process of 'storification'? In addressing these questions, I take as my starting point Sovacool and Brossmann's (2013) words of caution that while transition stories do serve as sources of inspiration, they may come to stand in the way of the replication and implementation of further energy transitions. Cumbersome and challenging elements of the process – the hard day-to-day work and the political tactics involved in realizing a project that affects many people's lives and require their cooperation - may be covered up in order to strengthen the narrative power of the transition story. An illusion is produced that a successful transition process accomplished in one place can be straightforwardly transferred to a completely different context. This tendency toward what I call the

'storification' of transition processes is not restricted to Samsø; it is indeed, as the analysis will show, employed as a political communication tactics by environmental organizations operating globally.

Taking this potential problem of 'storification' of local energy transitions as my starting point, the article proceeds as follows: After describing the Samsø community in more detail, I present the Samsø transition narrative in short form. Next, I characterize this narrative as a nearly ideal-typical energy transition story. Confronting this genre of storytelling with the ethnographic genre, the analysis focuses on four aspects which disturb complicate the Samsø story and offers a closer look at the processes that led to Samsø's achievement of the title of Denmark's Renewable Energy Island. These aspects are: *the storytelling organization, the little controversies and tactics of the RE Island project, recontexting the story: from coffee to crisis,* and *the construction of crisis.* First, however, after a word on methods, I turn to an exploration of the analytical perspectives guiding the article and then outline the methods.

Methods

I spent five months on Samsø in fall 2013 and spring summer 2014. From my office space at Samsø Energy Academy I participated in and observed the activities of the project organization; I had countless informal conversations, conducted interviews and document analysis. My fieldwork also naturally led me around the island in my attempts to understand the processes through which Samsø had become Denmark's RE Island and what significance this title carries today, as Samsø continues to assert its status through new RE projects and dissemination of the islanders' experiences. Since 2014 I have remained in contact with Samsø Energy Academy, visiting the island several times and participating in various activities, maintaining the bond with the ever-evolving island and organization.

The analysis will focus on the stories told by the Energy Academy staff in their attempts to communicate Samsø's transition to onlookers. Specifically, I set out to

complicate Samsø's transition narrative. Through a Science and Technology Studiesinspired ethnographic sensitivity to the crafting of stories as well as to their effects, in line with STS ethnographers Winthereik and Verran, the analysis will 'point out both the single vision and the many headed monsters in socio technical practice. Both single visions and many-headed monsters must be dealt with through careful re-presentation' (2012: 39). The analysis will present ethnographic stories that bring attention to cracks and inaccuracies, to certain strategic moves of the island's storytellers and to discussions among them about how to communicate the island's accomplishments. In this way, I open up the story of how Samsø became self-sufficient with renewable energy and provide it with 'more robust contact points with the real' (Jensen 2014a: 194-95).

Analytical perspectives

The transformative capacities of stories

In our thinking and theorization of energy futures, technologies and transitions, 'how people imagine energy technologies and their futures is clearly important to understanding how and why people invest in them, financially, personally, professionally, and otherwise, and it is thus a critical social facet of energy transitions' (Sovacool and Brossmann, 2013: 211; Sovacool and Brossmann, 2014). With the literature on energy transitions tending to focus more narrowly on the technological and political dimensions (Verbong and Geels, 2010; Essletzbichler, 2012) and on how to avoid public resentment (the so-called NIMBYism) (Devine-Wright, 2009; Walker, 2008; Krauss, 2010; Roberts *et al.*, 2013; van der Horst, 2007), there is a need to explore the relations between expectations, stories and actual implementation of such large-scale processes of change affecting whole communities. What is needed is a focus on what we may call the 'social' dimensions of the energy transition (Miller, Iles and Jones, 2013; see also Papazu 2016a, 2016b).

In *Science and Technology Studies* (STS) there is an interest, fitting with this concern in the literature on energy transitions and parallel to the interests of the Samsø actors, in

the crafting of stories, and in their effects. Following Latour, stories do not simply represent; they *re-present*, they transform; they shape our reality (Latour, 2001: 10; Hacking, 1983: 136). This potential is inherent in ethnographic stories as well as in the grand, single visions, and the Energy Academy staff and I thus 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 outsiders inspired by the stories. Our interests converge as I attempt to tell ethnographic stories about the stories the Energy Academy employees have spent a decade crafting and spreading.

Challenging the apparent singularity of the Renewable Energy Island (REI) narrative is no easy task. It takes work to create the impression of coherence and, as I will show, once coherence is established, it can be very difficult to contest, as the coherent object tends to take on an existence of its own (Latour, 1987; see also Linde 1993). The "heterogeneous and hybrid ontology" of the transition process becomes, in essence, "irrelevant" (Cussins, 1996; 600).

The stories I build the analysis around do not just differ from one another in terms of content but also with regard to genre and agency. Some of the stories function as ordering devices, technologies for transferring knowledge which foreground some carefully selected facts while omitting other. The transition narrative of the REI project which will open the analysis is an example of this: a carefully constructed story with strong, inspirational messages of collaboration and community, of taking risks and succeeding. This well-crafted story, designed to travel smoothly, exists alongside other stories, and even controversies, seeking to complicate the REI narrative. Themselves less accomplished, these ethnographic stories function less as devices for transferring knowledge and instead assume a role of disrupting or disfiguringcomplicating the grand narrative, thus inserting a slight critique.

Herein lies the interventionist potential of the ethnographic story. Ethnographic stories make intervention possible by making visible this tension between singularity and complication, the 'many-headed monsters' captured by the ethnographer's data, thus enabling an alternative and partial gaze on the fraction of the world under study (Winthereik and Verran, 2012: 39). Winthereik and Verran term analyses that foreground the *partiality* of stories '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. Which part is foregrounded is a political question – 'it wants to achieve something in a particular context' <u>(Winthereik and Verran, 2012: 48-49)</u>. Moreover, as the analysis will demonstrate, the context itself also becomes an open question, since, as Asdal and Moser note in introducing the concept of *contexting*, 'contexts are being made together with the objects, texts and issues at stake (2012: 303). Secondly, partiality <u>chymes with(?)</u> is related to partisanship as it refers to the researcher's commitment to use the incomplete stories drawn out of the empirical material to make a difference in the reality that fostered them (Winthereik and Verran, 2012: 48-49; Verran 2014).

The researcher <u>hereby</u> emerges as complicit and activist, an intruding character open to the fact that her intervention in good faith *might* come to make a difference – but might as well not (Holmes and Marcus, 2008; Zuiderent-Jerak, 2015; Whatmore and Landström, 2011). An analysis in good faith 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, 2014b: 352), all the while acknowledging that the account will always be 'embodied, embedded, particular' (Verran 2014: 536) and partial (e.g. Haraway 1988, Strathern 1991).

This interventionist potential and ambition is more appreciative than critical (Jensen <u>2014a</u>, 2014b: 354). Since Latour and Woolgar's laboratory studies, many STS scholars have been interested in employing ethnography to debunk truths and myths, to show how contingent realities are built and how they can be challenged and destabilized

(Latour and Woolgar, 1979). In 2004, however, Latour famously argued that such 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 and partial does not have to be critical in the negative sense of the word; it can be a way of calling for appreciation of the hard work that goes into building durable realities, just as it can be a way of destabilizing fixed_<u>taken_for_granteds_'truths'</u> that may stand in the way of learning.

Methods

I spent five months on Samsø in fall 2013 and spring-summer 2014. From my office space at Samsø Energy Academy I participated in and observed the activities of the project organization; I had countless informal conversations, conducted interviews and document analysis. My fieldwork also naturally led me around the island in my attempts to understand the processes through which Samsø had become Denmark's RE Island and what significance this title carries today, as Samsø continues to assert its status through new RE projects and dissemination of the islanders' experiences. Since 2014 I have remained in contact with Samsø Energy Academy, visiting the island several times and participating in various activities, maintaining the bond with the ever-evolving island and organization.

The analysis will focus on the stories told by the Energy Academy staff in their attempts to communicate Samsø's transition to onlookers. Specifically, I set out to complicate Samsø's transition narrative. Through a Science and Technology Studiesinspired ethnographic sensitivity to the crafting of stories as well as to their effects, in line with STS ethnographers Winthereik and Verran, (2012: 39), the analysis will 'point out both the single vision and the many-headed monsters in socio-technical practice. Both single visions and many-headed monsters must be dealt with through careful re-presentation' (2012: 39).

The analysis will present ethnographic stories that bring attention to cracks and inaccuracies, to certain strategic moves of the island's storytellers and to discussions among them about how to communicate the island's accomplishments. In this way, I open up the story of how Samsø became self-sufficient with renewable energy and provide it with 'more robust contact points with the real' (Jensen 2014a: 194-95).

The case of Samsø

'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 4400' (Turner, 2007: 27).

Since Turner wrote these words in 2007, the population on Samsø has declined and is now close to 3700. A shared sense of vulnerability characterizes the islanders' attitude to their home. A community at the outskirts of Danish society (characterized as 'Udkantsdanmark' – 'Outskirts Denmark - as the Danish media have named Denmark's peripheral, rural-peripheral areas) faced with the steady loss of jobs and closure of institutions, the demographic development works against Samsø with ever more elderly people and still fewer families with children (Samsø Kommune 2012). There is a predominant sense of being at the mercy of the national politicians' decisions covering everything from ferry ticket prices to strategies for the development of the rural-peripheral areas. This state of vulnerability is not new. In the nineties, it was the precariousness of island life that created the urge 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).

While the Renewable Energy Island project could not save the island from its position of disadvantage, the project did strengthen the islanders' hopes for the future and belief in their ability to survive as a community (Papazu 2016a). The project brought with it work for the local craftsmen; local products such as straw were purchased for the district heating plants and the local sale of RE installations for private households dramatically increased. And while a few individual farmers invested great sums in wind turbines, the bank created loan schemes allowing everyone, regardless of financial standing, to invest in shares in the co-operatively owned wind turbines. On average, each islander invested one hundred thousand DDK (15.000 USD) in the REI project (Hermansen *et al.* 2007).

The islanders actively supported the project because it became a way of securing the survival of the island community (Papazu 2016b). The island's<u>Samsø's</u> energy transition was, in that sense, fundamentally social: it deeply affected the islanders' lives (see Miller, <u>lles and Jones - et al.</u> 2013). Energy transitions are processes which change people's lives. The process of transforming the island's energy systems brought with it new activities and investment and work opportunities for the islanders and allowed them to renew their belief in the future as well as revitalized the Samsø inhabitants' historically innovative culture.

As an interviewee told me, 'Samsø's history is very special, exactly because Samsø has always been this delimited area' (Nov 2013), making it a place especially wellsuited for experiments and demonstrations of various kinds. Samsø is known nationwide for its 'Samsø potato'_[,-Denmark's earliest spring potato originally developed by a local farmer]; as well as (according to locals) for being the first in Denmark to artificially inseminate cows and eradicate bovine tuberculosis. This is the culture the REI project was born into.

Samsø's transition storyⁱ

Science as Culture

Faced with the threat of closure of Samsø's biggest employer the slaughterhouse, Samsø was in a deep crisis. With its peripheral location, it seemed the island would fall victim to the winds of globalization and centralization. In 1997, however, 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 to the islanders as a new opportunity to the islanders. The project did not come with public funds or support; the winner of the title would have to set up its own system for realizing the goals. At the time, Samsø was no 'greener' than the rest of Denmark with a degree of energy self-sufficiency of twelve percent. This was one of the reasons Samsø was picked as Denmark's RE Island: comparable to 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 <u>exertions accomplishment</u> would demonstrate to foreign countries Danish RE solutions (wind power, bio and solar energy) in practiceⁱⁱ.

The development and implementation of the project was facilitated by the local organization *Samsø Energy Company*. No energy company in the traditional sense, in Samsø Energy Company all relevant parties were represented and no one group was allowed to dominate the others, thus securing the democratic basis of the REI project - what has become known as *'energy democracy'ⁱⁱⁱ*. The members of the organization counted local business men, farmers, the municipality (two politicians, the mayor and one administrator) and four members of the newly founded NGO representing the island public, *Samsø Energy and Environment Office*. 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, would secure the support of the islanders while Aage Johnsen, an engineer from the mainland, would develop the technical plans for the RE projects. This 'dynamic duo' is believed to be one of the great forces of 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 grandson of Samsø farmers.

Many innovative projects were on the table in the planning process, but the projects that were realized were 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 on^{iv}. While Samsø had a few windmills, a local wind energy guild and a district heating plant prior to the REI project, three new district heating plants were built (two of them straw-fired, one based on wood chips and solar panels), and eleven land-based wind turbines, an offshore windfarm and many household RE technologies were installed over the ten year-period. While some RE technologies were collaboratively owned, other were owned primarily by farmers. This mix of ownership forms made the RE Island project realizable 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 came up. The islanders at first 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 portraying 'going green' as a reward in itself did not catch on. But Hermansen soon changed tactics, realizing 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 RE 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 tasks^v.

Through this pragmatic approach, the islanders got engaged in the RE Island project. The goal of energy self-sufficiency was realized in 2007, ten years after Samsø's nomination as Denmark's Renewable Energy Island.

The islanders I talked to corroborated the above account 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 local business could handle the tasks involved in the RE projects on its own. The mayor emphasizes the importance of the unique 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 dimensions of the RE Island project rarely make it into the stories I heard. The RE technologies implemented on Samsø were not considered innovations; they were well-known and well-tried Danish technologies, most notably wind power. Participatory processes, *'energy democracy'* and community-building inspired the island's storytellers more than technological innovation.

Transition stories as genre

Samsø's transition narrative has all the elements of a good transition story. First, we have the prominent protagonist at the head of the project, Hermansen, without whose ability to create networks the RE Island project might never have been realized. Hermansen is still the RE Island's main representative, occasionally referred to as 'Denmark's Al Gore' (www.dr.dk). Secondly, there is 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 community-based energy transitions. The Green Economy Coalition (GEC), a global network of organizations - NGOs, research institutes, UN organizations, business and trade unions - recently 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. '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 and created to inspire and attract diverse audiences. The RE Island story is a story crafted to travel and engage communities world-wide in similar doings; it is created to have strong effects.

Samsø, moreover, is not alone in its exertions<u>efforts</u>. *The Transition Network*, for example, is an organization and a movement with 'hubs' all over the world, based on permaculture principles and dedicated to engaging communities in 'reclaiming the economy, sparking entrepreneurship, reimagining work, reskilling themselves and weaving webs of connection and support' (transitionnetwork.org). According to the organization, this approach_____which brings together a focus on the community and local collaboration with a concern for the local economy, the environment and practical projects____has spread to over 50 countries and is perhaps more widely known as the Transition Town Movement. Samsø's REI project preceded this movement, but by the time the islanders reached their goal of energy self-sufficiency in 2007, the Transition Town Movement had developed to foster transition processes similar to Samsø's, if on a smaller scale. Brixton, for instance, previously one of the poorest, most deprived neighborhoods in London, is today a wellknown Transition Town engaged in a multitude of initiatives from solar energy projects to developing a local complementary currency, the Brixton Pound, and various urban gardening initiatives (transitiontownbrixton.org).

American permaculturist Toby Hemenway remarks about the movement's success: 'Most people just want to be told how to solve their problem. They want recipes, not a lecture in design principles. And therein lies Transition's strength. Transition... tells you exactly what to do. It is a recipe' (Hemenway 2013). These 'recipes' for successful transition processes - the GEC's 'ten essentials for telling the story of transition' and the

Transition Network's '7 essential ingredients for doing Transition' (transitionnetwork.org) – create inspiring, attractive and accessible *transition stories* produced to signal their easy replication.

Samsø's transition story differs slightly from these examples by being embedded in a particular locality populated by named characters. Hence, in certain ways, the Samsø transition story is slightly different from the abstract recipes for 'doing transition' presented here. They do, however, share similar aims – to create ripple effects and elements. With their foregrounding of such ideals as 'local heroes', entrepreneurship and innovation, Samsø, the Transition Network and others risk, as I have argued, to preclude rather than further replication and learning.

Specifically, the analysis will demonstrate how one of these ideals, namely that of 'energy democracy', is at best an inaccurate label for Samsø's transition process, as this process was more strongly top-down than the notion of 'energy democracy' would lead Samsø's followers to believe. Will local communities be prepared for the hard work and personal investments involved in the transition process if all that is handed down are the success stories and a glossed over image of what energy transitions demand in practice? Motivated by this concern, we now turn to a different genre of storytelling; one that promises more detail and less singularity, namely the ethnographic story.

Ethnographic stories that intervene

The analysis is made up of four stories which complicate Samsø's transition narrative in different ways. Together they offer a closer look at the processes that transformed Samsø into Denmark's Renewable Energy Island. As described above, this project is not a critical but an appreciative one (Jensen 2014a, 2014b: 354). The ethnographic intervention is made 'in good faith' (Winthereik and Verran, 2012), with the aim of offering a richer image of how Samsø's energy transition took place as well as perspectives on how such ideal-typical narratives as Samsø's are produced.

<u>Formatted:</u> Formatted: Font: Not Italic aspects you raised in the theory section — include references to the literature in that <u>section</u>]

Formatted: Font: Not Italic

The storytelling organization

While I wait for the ferry to take me back to the mainland one Friday afternoon on Samsø, I discuss the Academy's role as what the Energy Academy director Hermansen terms a 'storytelling organization' with Hermansen and his adult daughter in his home near the harbor. The director: 'We might be a storytelling organization, 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 are [the Academy staff], telling the story as if they were part of it. That's when it becomes narrative, and the stories become myths.' He is visibly frustrated, and his daughter chips in: 'But those are the conditions of the organization 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 the transition story which, as noted, adheres to a particular logic, it follows from the logic of ethnographic stories 'that there are many, many differing sorts of indexes that could be created' (ibid.). Ethnographic stories tend to be honest about their contingent, uncertain status; they are situated, local pieces of knowledge without a claim to hegemony or objectivity. 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 story exactly that: a handed down story that no longer has roots in the personal experiences of most of its tellers.

Science as Culture

This is one factor behind the solidification of the REI story: the representatives of the story know little more than what they tell. It seemsThis is a necessary evil for the Energy Academy, an organization with a high turnover of staff. Especially during summer, when visitor numbers peak and 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 organization', 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. But it is an openness that affects the RE Island story. It accelerates its singularization and generalization, turning it into an ideal-typical *transition story*.

The director witnesses how this generalization of the story into a narrative that fits its multiple storytellers as well as the mold of the transition story genre comes with certain costs. He has been a driving force in building the strong-REI narrative. He is the protagonist, the hero of the story. But the universalistic elements of the story that make the narrative work as a transition story and allow people from all over the world to identify with it; simultaneously constitute its Achilles' heel. When Hermansen tells the story, he gives it life; he changes it to fit the context and 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 mold 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, partial story, and through its flexibility it continues to fascinate his audiences.

The effect of the Samsø story is thus 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-complicate and offer new perspectives. These stories rework the tight narrative about the RE Island project slightly; 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. Such reworkings might prevent Samsø's experiences from being relegated to the past, as they can help export the REI story from the realm of the 'single vision' to the 'many-headed' realm of practical achievement, hard work and risk-taking needed in future projects (Winthereik and Verran, 2012: 39).⁻

The little controversies and tactics of the RE Island project

Controversies are a seemingly inevitable part of both small- and large-scale energy projects (e.g. Roberts *et al.*, 2013; van der Horst, 2007), and the management of these ought therefore to play a central role in the stories of successful energy transitions. Transition projects do not miraculously materialize; they must be negotiated and built, and this requires the careful alignment of many actors and interests. Dispute and disagreement, however, rarely find their way into the transition stories disseminated. Tactical manoeuvers and reluctant citizens also do not factor into the generalized REI narrative according to which, after limited initial resistance, citizen participation and support blossomed.

In my talks with Hermansen, however, 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 forgotten controversies of the RE Island project, however small. The 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 of the circle, and to the right of that, the chairman's proposed alternative site for the plant. Smoke is rising from the plant's chimneys.

The director: 'The chairman opposed the heating plant in Onsbjerg because he was afraid the chimney would shade the old medieval church. We produced a lot of expensive visualizations 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, we moved 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. 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, but still a story that adds some detail to an otherwise frozen narrative. If anything, rather than imply a critique, 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, making our engagement with this small controversy an appreciative one (Jensen, 2014b: 352, 354). Expensive visualizations, the story shows, were constructed to appease one person's anger. In general, Hermansen told me, resistance was taken seriously. Plans to build biogas plants were never realized due to public opposition. Ten-fifteen wind turbine locations were dropped due to public resistance. No wind turbines were erected on northern Samsø because of its treasured nature. The offshore windfarm was moved slightly to one side to avoid disturbing the view from the landowner's estate, significantly increasing the cost of the project.

'What we can agree on' became a mantra for the REI project as well as a device for sorting the projects; it became a way of deciding which projects were viable and which were not. Since the project proposal - referred to by the project developers as 'the master

plan' but never mentioned by the 'lay islanders' <u>(non-project developers)</u> I talked to cleverly listed many more projects than were feasible or necessary to achieve energy selfsufficiency, 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, the master plan has never found a place in Samsø'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 an Academy project manager 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 up'.



Figure 1. A hand-drawn Samsø controversy, drawn by Søren Hermansen.

Re-contexting the story: From coffee to crisis

On the Samsø ferry I talk to a filmmaker involved with the Energy Academy. He told me: '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 social processes', as the Academy employees phrase it. Bringing the islanders together around the various projects and initiatives of the RE Island project gave the island community a new direction, a common goal to work toward. To the Academy director, *that* is the inspirational story Samsø has to offer. In his lectures, he stresses how the stories about wind turbines and district heating plants are only subsidiary to the *real* issue. The three communally owned wind turbines communicate this story about what the community can accomplish if people

work together; the remaining eighteen wind turbines, still locally but not communally owned, do not as <u>stronglyconvincingly</u>.

______ '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 REI project to storytelling and back, blurring the line between the practical work and the narrative, he adds: '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 transition 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 as the material changes made to the island. Stories, as noted, foreground some aspects while rendering aspects that do not serve the purposes of the story outside the frame_(Winthereik and Verran, 2012: 40).

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 <u>(see Asdal and Moser, 2012)</u>. In 1813, so the story goes, 'Denmark faced total collapse. On the losing side of 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 are members. The group has 184 members and is a network of people involved in the Danish folk high school movement and other progressive educational programs, in politics and public debate, and in green transition projects.

Science as Culture

_____By attaching the RE Island story to this narrative of turning crisis into possibility, the RE Island becomes part of a wider national context. Samsø fought its way out of 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, activities of re-contexting (Asdal and Moser, 2012) widen the applications of Samsø's experiences, broadening the focus from *energy* 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!' The coffee storyline draws attention to the specific character of the participatory processes. It communicates that they were time-consuming and social, 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, over a cup of coffee. It is an easy-to-communicate and memorable point that resonates even with Japanese top executives eager to learn about modern Western business management; these, too, come to Samsø to learn. It is a simple 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, as described above, considers Samsø's REI story his life story (Linde, 1993).

The struggle over the wider significance and applications of the RE Island story became apparent to me one day about a month into my fieldwork. A tense exchange of words made me aware of the ongoing reworkings of the Samsø narrative, making visible 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 has been invited to talk at a government conference in Copenhagen the next day. To this, 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 thereafter, quite undeterred, the same employee shows a journalist from the influential 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 pleased everyone at the Academy. 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 of crisis to the story? In the previous section I described the struggle over and variability of the overall framing of the RE Island story, but one of the internal components of the story also remains contested, namely the alleged chronological relationship between the closing of Samsø's largest employer and the initiation of the RE Island project. The dispute over this connection is central due to the significance of the island's crisis to the narrative arc of the transition story and thus to the functioning of the story as one capable of *transforming* our reality rather than simply representing it (Latour, 2001).

Formatted: Font: Italic

In fact, the slaughterhouse did not close until the summer of 1999, more than two years into the RE Island project. This can be asserted by reading old copies of the local

Science as Culture

newspaper and by putting the question of chronology to the involved island actors. 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 to whom the connection between the slaughterhouse closing and the RE Island project has become real. The chronological dislocation placing Samsø in a state of crisis functions as a catalyst for the story and has become a matter of fact to the storytellers.

If the Samsø narrative is to function as a well-crafted, <u>apparently singular</u> transition story <u>(Winthereik and Verran, 2012)</u>, 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 <u>driver inin</u> the transition narrative and therefore cannot be disputed by the Samsø storytellers without questioning the transition narrative itself.

On a trip around the island 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. There does not seem to be much to see with only the empty buildings left. Puzzled, he answers with 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, 'the atmosphere was incredibly bad. We basically won the competition 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 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 well-crafted that the original chronology of events has become irrelevant (Cussins, 1996: 599-600), what is stressed 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 universal. Indeed, Samsø is often used as an example of rural or regional development rather than as an energy or climate project.

Conclusions

In the introduction, I posed the questions of how Samsø's accomplishment was turned into an ideal-typical transition story, and what the effects of this process of 'storification' have been. I have argued that the answer to the first question lies mainly in the proliferation of storytellers of the Samsø story. The crafting of Samsø's REI story into a powerful transition narrative was more a bi-product of the circumstances than a conscious choice on the part of the Academy actors.

Theis proliferation of storytellers became a necessity as Samsø started toreceive global media interest and thousands of energy-interested tourists each year. The responsibility of communicating Samsø's accomplishments was dispersed to storytellers, hired by Samsø Energy Academy, most of whom had not lived on Samsø during the years of the Renewable Energy Island project. For these reasons – and probably less for strictly tactical reasons - Samsø's transition story took on its ideal-typical qualities, all the while the protagonist of the story, Academy director Hermansen, has kept trying to keep the story open and alive, to play with it and develop it; something he was especially mindful of when communicating the events of the REI project to me. Formatted: Indent: First line: 0.91"

Science as Culture

The roles of the ethnographer and the protagonist telling his life story in this way approximate each other, establishing symmetries between the transition story and the ethnographic story, as the protagonist consciously feeds the ethnographer valuable detail to disrupt-complicate the ideal-typical narrative; to prevent it from becoming, as he says, 'a myth'. As exemplified through Hermansen's slightly disruptive role in my narrative, the act of intervention, which is more than anything an act of caring for the story, is not reserved to the ethnographer. As noted by Winthereik and Verran, ethnographic stories are 'instruments that make intervention possible' (2012: 38). It is this potential that interests me, just as it seems to interest the Academy director.

My interventions - the four ethnographic stories detailing how the Samsø narrative is toyed with, elaborated on, altered to fit shifting organizational aims, 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, the analysis has drawn out the diversity and complicatedness inherent in being and becoming an internationally renowned 'transition story'.

In response to the second part of the research question about the effects of the story, I demonstrated how Samsø's transition narrative has been built around attractive concepts such as 'energy democracy', thereby concealing the muddier realities of the REI project. Realities, I have argued, that may be instructive to Samsø's audiences interested in replicating the island's success: the pragmatic attitude needed of the project developers, the hard work, strategies and tactics that must be developed and exertednecessary to get the community on board. The transition narrative glosses over these perhaps less 'democratic' but nonetheless central maneuvers, all the while this might be where the real learning potential of Samsø's experiences lies. If the guidelines that can be derived from the Samsø story have lost their empirical basis, their 'contact points with the real' (Jensen 2014a: 194-95), outsiders attempting to follow those guidelines will likely not succeed in producing similar results, since every local context and community will have its own specificities and

Formatted: Font: Italic

politics. The positive effects of the Samsø story have been the story's capacity to capture and inspire large audiences. The negative effects, however, should be clear as well.

Affirmation, here, blends with critique; problematizing Samsø's success story is a move I have made to make learning from Samsø's example possible and to elucidate the value of a fuller, but also more complicated and perhaps less readily inspiring, transition story. When it comes to facilitating further transition processes, this move may be risky, since the 'many-headed monster' that is the complicated socio-technical transition process may not have the immediate appeal of the grand, single vision. It makes the transition process seem difficult and, indeed, complicated. But aAs Sovacool and Brossmann put it in their investigation of the rhetorical fantasies surrounding energy transitions, 'energy fantasies and exaggerated rhetoric become particularly hazardous if they blind us to the realities' (2014: 852). They note that this tendency to turn cumbersome socio-material processes into 'energy fantasies' causes us to 'overestimate benefits and underestimate challenges' (837).

As Winthereik and Verran argue, ethnographic stories, however complicated, also have in them the potential to be 'generative' (2012: 37) and transformative (Latour: 2001). If stories, in this way, 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 and intervening through ethnographic storytelling, we open up central narratives to new reflection, to creating new versions and new futures, with the potential of making storytelling an <u>driverengine for of</u> change.

Acknowledgements

I would like to thank Brit Winthereik and Kristin Asdal for their thoughtful and engaged comments and criticisms of earlier versions of this paper.

References

Asdal, K. and Moser, I. (2012) Experiments in Context and Contexting, *Science, Technology, and Human Values* 37(4), pp. 291-306.

Bünger, J. (1997) *Pressemeddelelse: Samsø bliver Danmarks Vedvarende Energi-Ø (Press release: Samsø becomes Denmark's Renewable Energy Island),* The Danish Ministry of Environment and Energy. Available at www.energiinstituttet.dk/335/ (accessed August 2015).

Cardwell, D. (2015) Green-Energy Inspiration off the Coast of Denmark, *The New York Times,*

January 18 2015. Available at http://www.nytimes.com/2015/01/18/business/energyenvironment/greenenergy-inspiration-from-samso-denmark.html (accessed April 2015).

Cussins, C. (1996) Ontological Choreography: Agency through Objectification in Infertility Clinics, *Social Studies of Science* (26), pp. 575-610.

Devine-Wright, P. (2009) Rethinking NIMBYism: The Role of Place Attachment and Place Identity in Explaining Place-Protective Action, *Journal of Community and Applied Social Psychology* 19(6), pp. 426-441.

Essletzbichler, J. (2012) Renewable Energy Technology and Path Creation: A Multi-Scalar Approach to Energy Transition in the UK, *European Planning Studies* 20(5), pp. 791-816.

Hacking, I. (1983) Representing and Intervening: Introductory Topics in the Philosophy of Natural Science (Cambridge: Cambridge University Press).

Hansen, J. L. (2013) Danmarks små øer går forrest i den store omstilling, *Information*, June 15 2013. Available at https://www.information.dk/2013/06/danmarks-smaa-oeer-gaar-forrest-store-omstilling (accessed November 2016).

Haraway, D. (1988) Situated Knowledges: The Science Question in Feminism and the Privilege

of Partial Perspective, *Feminist Studies* 14(3), pp. 575-599.

Hemenway, T. (2013) Trojan Horses, Recipes, and Permaculture, *Transition United States*, September 1 2013. Available at http://www.transitionus.org/news/trojan-horses-recipes and-permaculture (accessed June 2017).

Hermansen, S. and Nørretranders, T. (2013) *Commonities = Commons + Communities*. (Samsø: Samsø Energiakademi).

Hermansen, S., Johnsen, Aa., Nielsen, SP., Jantzen, J., Lundén, M. and Jørgensen, P. J. (2007) Samsø, a Renewable Energy Island: 10 years of development and evaluation (10-year report),

Samsø Energy Academy. Available at http://energiinstituttet.dk/101/ (accessed June 2015).

Holmes, D. R. and Marcus, G. E. (2008) Refunctioning Ethnography. The Challenge of an Anthropology of the Contemporary. In Denzin, N. K. and Lincoln, Y. S. (eds.) *The Landscape of Qualitative Research*, pp. 519-537. (Thousand Oaks: SAGE Publications).

Jensen, C. B. (2014a) Continuous Variations: The Conceptual and the Empirical, *Science, Technology and Human Values* 39(2), pp. 192-213.

Jensen, C. B. (2014b) Experiments in Good Faith and Hopefulness: Toward a Postcritical Social Science, *Common Knowledge* 20(2), pp. 337-362.

Krauss, W. (2010) The 'Dingpolitik' of Wind Energy in Northern German Landscapes: An Ethnographic Case Study, *Landscape Research* 35(2), pp. 195-208.

Latour, B. and Woolgar, S. (1979) *Laboratory Life. The Construction of Scientific Facts.* (Princeton, New Jersey: Princeton University Press).

Latour, B. (1988) *The Pasteurization of France*. (Cambridge, Massachusetts and London, England: Harvard University Press).

Latour, B. (1987) *Science in Action. How to Follow Scientists and Engineers through Society.*

(Cambridge: Cambridge University Press).

Latour, B. (2001) 'Thou shall not take the Lord's name in vain' - Being a Sort of Sermon on the

Hesitations of Religious Speech, Res 79(39), pp. 215-234.

Latour, B. (2004) Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern, *Critical Inquiry* 30(2), pp. 225-248.

Law, J. (2004) After Method: Mess in Social Science Research (London & New York:

Routledge).

Law, J. (2002) *Aircraft Stories. Decentering the Object in Technoscience*. (Durham and London: Duke University Press).

Law, J. (1999) After ANT: Complexity, Naming and Topology. In Law, J. and Hassard, J. (eds.) *Actor Network Theory and After*, pp. 1-15 (Blackwell Publishing/The Sociological Review).

Linde, C. (1993) Life Stories. The Creation of Coherence (Oxford: Oxford University Press).

Maach, M. L. (2013) Kaffedrikkeri har gjort Samsø til verdensberømt klimaduks, *Politiken*, September 27 2013.

Miller, C. A., Iles, A. and Jones, C. F. (2013) The Social Dimensions of Energy Transitions, *Science as Culture* 22(2), pp. 135-148.

Papazu, I. (forthcoming, 2017) Demonstrating Doability: The Networking Practices of a Danish Renewable Energy Island, *Demonstrations, Journal for Experiments in Social Studies of Technology* 1(1).

Papazu, I. (2016a) Management through Hope: An Ethnography of Denmark's Renewable Energy Island, *Journal of Organizational Ethnography* 5(2), pp. 184-200.

Papazu, I. (2016ba) Authoring Participation, *Nordic Journal of Science and Technology* 4(1), pp. 17-31.

Formatted: English (U.S.)

2015).

Science as Culture

1	
2	
3	
4	
5	
6	
7	
0	
0	
9	
10	
11	
12	
13	
11	
14	
10	
16	
17	
18	
19	
20	
21	
22	
22 22	
23	
24	
25	
26	
27	
28	
20	
20	
30	
31	
32	
33	
34	
35	
36	
27	
31	
38	
39	
40	
41	
42	
43	
ΔΛ	
-+-+ / -	
45	
46	
47	
48	
49	
50	
51	
51	
5Z	
53	
54	
55	
56	
57	
52	
50	
29	
60	

Roberts, T., Upham, P., Mander, S., McLachlan, C., Boucher, P., Gough, C. & Ghanem, D. A.(2013) *Low-Carbon Energy Controversies* (London and New York: Routledge Earthscan).

Samsø Kommune (2012) *Kommuneplan 2013 Samsø Kommune*. Available at http://planer.samsoe.dk/download/pdf/kommuneplan_2013.pdf (accessed August 17

Samsø Energiselskab, Samsø Erhvervsråd, Samsø Landboforening, Samsø Kommunalbestyrelse, ARKE and Planenergi (1997) *Tiårsplan: Første energiplan for Samsø*. *Project report. Samsø Energiselskab (Ten-year plan: First energy plan for Samsø)*, Samsø Energy Academy. Available at www.energiinstituttet.dk/177 (accessed August 2015).

Sovacool, B. and Brossmann, B (2013) Fantastic futures and three American energy transitions, *Science as Culture* 2013 22(2), pp. 204-212

Sovacool, B. and Brossmann, B. (2014) The rhetorical fantasy of energy transitions: implications for energy policy and analysis, *Technology Analysis & Strategic Management* 26(7), pp. 837–854.

Spear, S. (2014). Samso: World's First 100% Renewable Energy-Powered Island Is a Beacon for Sustainable Communities, *Ecowatch*, May 1 2014. Available at http://www.ecowatch.com/samso-worlds-first-100-renewable-energy-powered-island-is-

a-

beacon-for-1881905310.html and http://www.huffingtonpost.com/stefanie-pennspear/samso-worlds-first-100-re_b_5303237.html (accessed November 2016).

Strathern, M. (1991) Partial Connections (Savage, MD: Rowman & Littlefield).

Formatted: Danish

Formatted: Font: Font color: Black, English (U.S.), Border: : (No border)

Tagliabue, J. (2009) From Turbines and Straw, Danish Self-Sufficiency, The New York

Times,

September 30 2009. Available at

http://www.nytimes.com/2009/09/30/world/europe/30samso.html?_r=0 (accessed

April 2015).

Time Magazine (2008) Heroes of the Environment 2008. Scientists and Innovators. Soren Hermansen, *Time Magazine*, September 24 2008. Available at http://content.time.com/time/specials/packages/completelist/0,29569,1841778,00.html (accessed November 2016).

Turner, C. (2007) The Geography of Hope: A Tour of the World We Need (Vintage Canada).

The Green Economy Coalition (2014) *Taking the Green Economy into the Mainstream:*

Telling

the Story of the Transition. Summary Report, Global Economy Coalition, Global Meeting 1,

September 2014, London. Available at

www.greeneconomycoalition.org/sites/greeneconomycoalition.org/files/documen

ts/Taking

%20the%20green%20economy%20mainstream%20-

%20The%20story%20of%20the%20transition%20(F).pdf (accessed July 2015)

Van der Horst, D. (2007) Nimby or Not? Exploring the Relevance of Location and the Politics of Voiced Opinions in Renewable Energy Siting Controversies, *Energy Policy* 35(5), pp. 2705-2714.

Verbong, G. and Geels, F. (2007) The ongoing energy transition: Lessons from a sociotechnical, multi-level analysis of the Dutch electricity system (1960–2004), *Energy Policy* 35(2), pp. 1025–1037.

Verran, H. (2014) Working with Those Who Think Otherwise, Common Knowledge 20(3),

pp.

527-539.

Walker, G. (2008) What Are the Barriers and Incentives for Community-Owned Means of Energy Production and Use? *Energy Policy* 36(12), pp. 4401-4405.

Whatmore, S. and Landström, C. (2011) Flood Apprentices: An Exercise in Making Things Public, *Economy and Society* 4(40), pp. 1-29.

Williams, F. (2007) A Mighty Wind Outside, *Outside Online*, January 16 2007. Available at http://www.outsideonline.com/1885451/mighty-wind (accessed November 2016).

Winthereik, B. R. and Verran, H. (2012) Ethnographic Stories as Generalizations that Intervene, *Science Studies* 25(1), pp. 37-51.

www.dr.dk (2010) *Danmarks svar på Al Gore* (radio podcast). Available at www.dr.dk/arkivP1/Serier/Sommergaesten/Udsendelser/20100623111904.htm

(accessed

July 2015).

www.transitionnetwork.org (accessed July 2017).

www.transitiontownbrixton.org/groups-and-projects/ (accessed July 2017).

Zuiderent-Jerak, T. (2015) Situated Intervention: Sociological Experiments in Healthcare

(Cambridge and London: The MIT Press).

ⁱ This is an ideal-typical version of the REI story which follows the one in Papazu 2016b. Being a story, references are generally not added, but some sources will be suggested in the endnotes. For a longer and beautifully written version, see Turner, 2007: 27-44.

Bibliographical note

Irina Papazu is an assistant professor at the Department of Management, Politics and Philosophy at Copenhagen Business School with a PhD from the Department of Political Science at University of Copenhagen. She has been a visiting researcher at the Centre for the Study of Invention and Social Process at Goldsmiths, University of London, and in the Technologies in Practice research group at the IT University in Copenhagen.

ⁱⁱ Bünger, 1997.

[&]quot;Hermansen, fieldnotes, November 2013 and Hermansen and Nørretranders, 2013.

^{iv} See Samsø Energiselskab *et al.*, 1997 and Hermansen *et al.*, 2007.

v Hermansen and Nørretranders, 2013: 125-133.