Rights or resources? Local actor roles in ‘participation’ and ‘co-creation’ in wind energy transitions

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A B S T R A C T

Co-creation has been heralded as a potential solution to the often controversial implementation of renewable energy projects. In this paper, we therefore investigate how such co-creation processes work in practice. We present a case study of an onshore utility-scale wind power project in Denmark that developed into a nexus of interaction among a range of actors seeking to materialize their preferred configuration of the project. By applying situational analysis, the paper demonstrates how citizens can assume different roles when engaging in co-creation and participation respectively. While the co-creation situation allows actors to become involved in new ways, it also produces tension with regard to other participatory formats employed in the governance of wind power projects. Local actors engaging in co-creation were able to shape the project more directly and materially than citizens involved in the standard procedural spaces typically offered in wind-energy transitions. However, the co-creation process did not manage to include all local perspectives and local citizens who did not engage with the co-creation format, but resorted to the standard procedural spaces of ‘hearings,’ making them feel increasingly marginalized during the process. Consequently, whether co-creation is a ‘better’ form of participation depends on the perspective one adopts.

1. Introduction

Since the outbreak of the war in Ukraine and the consequential desire to become independent of natural gas from Russia, the European Union (EU) and its member states have emphasised the need to transition to renewable energy (RE) sources to support a sustainable transition and ensure Europe’s energy security. To facilitate this transition, the EU proposes that planning approvals should be issued faster, and in any case within a maximum of one year, when placed in RE-suitable areas [1]. Simultaneously, many already wind turbine-rich countries propose to speed up the implementation of both on- and offshore projects to accelerate the transition [2–4]. Denmark, for example, proposes quadrupling its onshore wind and solar capacity before 2030 [3]. These tendencies echo across the EU in many countries where the implementation of wind power projects has been opposed in recent years.

The challenges to the implementation of onshore wind capacity in particular have been linked to the framing of decision-making as solely a matter of spatial planning and (technical) energy policy [5]. Scholars suggest that such a framing impedes RE implementation because it makes participatory systems and mechanisms incapable of considering local citizens’ concerns [6,7]. As a solution to or mitigator of the discontent that is thereby caused, scholars suggest that procedural formats ought to be strengthened and citizens included earlier and/or more effectively to secure the possibility for creating more substantive changes based on their participation [8]. Some argue that, to facilitate this type of participation, new approaches, such as co-creation, are needed [9,10].

Co-creation is considered a viable approach to public involvement in wind-energy transitions due to its openness to different actor roles and the inclusion of citizens in setting the boundaries of what is at stake, instead of merely making decisions or stating opinions within already decided boundaries [10]. In this paper, we investigate a case of co-creation in the Danish wind-energy sector to understand how local actors position themselves to acquire influence over the configuration of a utility-scale wind power project. The developer of this wind power project was originally planned it as a top-down, developer-led, utility-scale project, with citizen participation corresponding to what is required by law in Denmark—primarily consultation through formal
hearings. However, local dissatisfaction with the prospects of hosting a project configured in accordance with these principles led to the formation of a local association that sought influence on the project and its socio-technical configuration. Specifically, the association sought to obtain ownership of parts of the project to use the electricity sales revenue to support local (rural) development. To obtain such ownership, the association engaged in year-long negotiations with the developer to ensure and define their role in the project. At the same time, another group of local citizens tried to halt the project by employing different strategies. These actions of the two local groups position them in different roles and simultaneously promote different understandings of energy justice, which we analyse and unfold in the discussion. Other research has highlighted the critical role of understanding the prospects and pitfalls of projects combining commercial actors and local associations, in particular in terms of perceived energy (in)justice [11]. The present article contributes to the literature by presenting an in-depth case study of the formation of such a relationship around such a project. The analysis demonstrates how local citizens mobilize different participatory systems and strategies to pursue their own interests, thus contributing to the scholarly interest in how interest-driven behaviour shapes participation in RE transitions [12]. We conceptualize this engagement as co-creation and contribute to a growing interest in if and how co-creation could constitute an alternative to participation in RE projects [9,10,13]. To do this, we have been guided by the following research questions: How do local citizens co-create an onshore wind power project in their local area? What are the consequences in terms of participation and controversy of this type of engagement?

With a focus on their own ways of participating in the wind power project, the paper analyses how the association attempts to co-create the project and later how their local opponents seek to halt it. We take a relational approach to the field and analyse the relationships and positionings that make the respective local actor groups capable of pursuing their goals. Subsequently, we discuss the tensions that arise between the different types of participation that emerge in the planning and development of this specific wind power project.

In what follows, we first introduce our conceptual framework by applying situational analysis in the study of co-creation, action-nets, relations and coalitions among actors. We then outline our methodology, use of materials and analytical strategy of mapping the situation empirically. Subsequently, we present our analysis of how local citizens shape the project through their different ways of participating in its planning and development. We offer this as a narrative in four acts, describing the situation and its development up until the time of writing. Based on the analysis, we discuss the relationships between the different participatory formats, their conditions and possibilities, and how they co-produce the citizen groups and their opportunities for influence. Finally, we conclude with local citizens’ possibilities for co-creating renewable energy projects.

2. Conceptual framework

2.1. Co-creation, actor roles and arenas

Since the proclamation of co-creation as an innovation paradigm [14], research on co-creation has increased steadily [15]. The vagueness in its application and often idealistic use of the term [16–18] has led some to refer to it as a ‘magic concept’ [20], indicating a watering down of its explanatory value. This has led to a blossoming of papers seeking to define what co-creation means and entails [9,10,20,21], alongside another strand of literature investigating the empirical complications, e. g., resistance [22], challenges and difficulties [23], or struggles in having multiple roles [24] in collaborative initiatives, in an attempt to create a more nuanced representation of co-creation as a tool or approach.

Broadly defined, co-creation describes or facilitates a diverse set of actors – usually including end users or citizens – coming together to find mutually beneficial solutions to problems (i.e., creating value) based on their respective resources, interests and stakes in the problem [20,25]. In the context of wind-energy transitions, it has been argued that the concept has different meanings, i.e., it is at once an approach to innovation in socio-technical systems, a way of understanding relations between wind-energy technology and the co-production of identities and representations, and finally as a way of doing participatory governance [10]. While the three perspectives on co-creation overlap, this paper mainly treats co-creation as a governance approach. Conceptually there is a degree of overlap between the two concepts of co-creation and co-production, with reviews finding that the terms are often used interchangeably [20,26]. In this paper, we use co-creation because this is the term that is most usually applied when referring to participatory governance in wind energy transitions.

A central feature of co-creation shared across both public-sector innovation [18,27] and business-oriented [14,28] works of literature is the configuration of end-users or citizens as active partners in (co-) creating or delivering solutions on a par with other relevant actors. While the business-oriented literature has been concerned with understanding how co-creation creates opportunities for increased value creation and competitiveness [29], the public sector literature has been particularly concerned with the different roles of the citizen and the institutional factors that shape the co-creation process [20]. Generally, these theorizations, examples and empirical investigations of co-creation tend to analyse the interacting actors (individuals or organizations) as disconnected from their contexts. Recent theoretical development suggests linking (co-)creation to interaction among actors (human and non-human) and their ‘system environments’ [25].

This paper responds to this suggestion by seeking to understand both how co-creation is conditioned by the situation and whether co-creation can help create productive relations and solutions in cases of contentious RE projects in ways that traditional forms of participation cannot. Accordingly, we investigate a contentious situation that arose in the planning of an onshore wind power project and seek to understand how the situation produces different ways of organizing locally. Thus we emphasise and explore how new ways of organizing emerge from a contentious situation and see conflict as potentially productive, as other scholars have also emphasised [30]. Instead of looking at tensions among the actors involved, often limited to humans, we analyse the tensions that may arise when different local citizens inhabit different social arenas in attempts to shape the wind power project. To do this, we employ the terminology of relations and social arenas borrowed from situational analysis [31,32]. Thus, we use situational analysis to situate the unfolding participatory engagement in its broader situation and reveal the arenas, negotiations and forging of relations that condition the actors.

2.2. Situationally mapping arenas for participation

Situational analysis (SA) builds on grounded theory (GT) but, paraphrasing Clarke [32], pushes GT more fully around the postmodern turn by emphasising positionality and relationality and foregrounding complexity, contradictions, instability and multiplicity [32]. SA maintains GT’s approach to analysis as moving back and forth between analysis and the empirical data. Instead of coding and synthesising codes into aggregate themes and theories, SA works with maps that are gradually abstracted by analysing actors’ relations, positioning them in their social worlds and arenas and subsequently abstracting them into a positional map outlining the discourses and positions taken [32].

Drawing on actor-network theory, SA treats the technical, human, discursive, mediated, environmental, etc., entities as equivalent in a given situation [32]. These entities are mapped in situational maps that
include all the elements found in the situation and emphasise the relations among the entities and the relational contingency of the questions asked about the situation. SA abandons the idea of context as something that surrounds or provides a background to events, situations, or other research objects. Instead, it considers all mapped elements to be part of and conditional to the situation [33]. By employing a situational analytical approach, we assume that, when something changes, so does the entire situation. However, in the analysis, we focus on the local citizens and on how their positions, relations and possibilities change in order to investigate their ability to influence the configuration and development of RE projects.

Having defined the situation, we present the maps and mapping process involved in the analysis. The SA approach outlines three types of map: the situational map (which comes in three different versions: messy, ordered and relational), the social worlds/arenas map (where we focus primarily on arenas rather than social worlds) and the positional map. The messy situational map includes all elements that matter to the situation. The ordered and relational maps are more focused; in the ordered map, the elements are categorized, omitting some of the less essential elements from the messy map, while the relational map has a single actor at its centre and depicts all the relations between this and other elements and/or actors. The social worlds/arenas maps outline all collective actors, negotiations and their arena(s) of commitment [31]. The social worlds/arenas maps visualize which groups ‘are centrally involved in an arena and which are not’ [31, p. 175]. Social worlds are collective groups with shared perspectives and identities (relative to the situation and issues); individuals typically participate in different social worlds simultaneously. Arenas are constituted by social worlds that are committed to particular issues and are prepared in some way to act on them. Negotiations, contestations and controversies over the issues that draw social worlds together unfold in arenas. We apply the idea of arenas to disentangle how negotiations among collective actors over particular issues are conditioned by the arenas in which they take place. When entering into negotiations, not everything is possible, nor are all solutions open and available. While the relational map depicts the relations of each actor and makes it possible to group actors based on their commitments, the social worlds/arenas map visualizes more explicitly the differences among collective actors, thus giving clues to power differentials, exclusions and marginalization. In this paper, for example, we use the social worlds/arenas map to conceptualize different groups of local citizens in different social worlds (association and opponents) and to outline how they participate in various arenas to act on the matters to which they are committed.

Accordingly, the maps can help us distinguish why some groups might be more central (and maybe more powerful) than others by looking at the technologies and discourses that different groups use and engage in. Notably, the social worlds/arenas maps make the organizational and institutional situation and constraints on actors and the situation visible. Borrowing from Foucault [34], Clarke refers to this as the ‘conditions of possibility,’ which she explains as ‘Given the givens, what can – and perhaps cannot – be done?’ [31, p. 179]. One of our central aims in mapping the arenas of interaction is to show how different possibilities are conditioned—by constraints, opportunities and resources—and how this makes some positions and ways of interacting possible and others impossible [33].

SA is a fruitful approach to studying emergent participatory practices because it allows us to include multiple positions and to investigate how different coalitions and participatory spaces or modes of interaction co-occur. SA builds on conflict theory and focuses on negotiations of various kinds that are activated to navigate differences among actors (individual/collective, human/non-human, etc.) [32]. Accordingly, it does not have consensus or consensus-seeking as an underlying script (as much participatory theory has) but instead often ends up analysing situations of ‘cooperation without consensus’ [32, p. 73].

3 This figure represents our narrative of the project, and is intended to help the reader understand the story and the arguments we present in the analysis. As outlined and discussed in depth elsewhere [55] many stories can be told about the project, what happened, when and how. This is therefore only one representation of the project out of many other possible ones.

3. Methodology

The wind power project we are investigating in this paper is a utility-scale onshore wind power project situated in northern Jutland, Denmark. The project was designed as an extension of an older project constructed by the same developer. When research for this paper commenced in 2018, the project had been underway for four years. In the article, we focus on developments from 2015, when the formal participatory engagements started with a consultation phase and citizens’ meetings, to 2020, when the project was at least temporarily halted due to complaints filed with the Environmental Appeals Board and the Planning Appeals Board by a group of local citizens. We include a timeline of the main events in Fig. 1.

The first author did desk and field research between November 2018 and January 2020. To begin the research, the first author started the messy situational map in November 2018 by identifying, relevant laws and regulations, potential cases and interviewees on a large sheet of paper. Throughout the research process, she continually expanded the messy situational map following discussions with colleagues and experts who had theoretical and empirical knowledge of the topic. Similarly, she updated the map during fieldwork and the following interviews. She used this map to guide the research process by continually adding elements and using it to think about relations among actors, blind spots and silences in new ways.

The materials involved in the analysis include documents, fifteen semi-structured interviews and ten days of observations at different project-related sites. The first author identified relevant documents by systematically searching through the websites of the public and private institutions and international, national and local media outlets involved and applying for right of access to the records of municipal and governmental institutions. The documents included an environmental impact assessment, local and strategic plans, visualizations, citizen consultation responses and complaints, strategic and communication material from organizations’ websites, debate pieces by citizens and organizations’ representatives in newspapers and social media debates on Facebook. These materials were used to map actors, organizational discourses and relations among actors. In parallel with the desk research, the first author performed fifteen semi-structured interviews with key actors, some identified through the document analysis and others using snowball sampling [35]. The interviewees were detected through their pre-defined roles in the project, for example, as planners or developers, or through public expressions of opinions about the project, for example, through consultation responses, media statements, formal local associations or official complaints. The interviewees who were identified in this way were used to snowball our way to other relevant interviewees. Thus, all the included interviewees one way or another had tried to influence the project and its trajectory in distinct ways and were chosen because they attempted to do so. Appendix 1 presents an overview of the interviewees with a short description of each. This appendix also outlines how we refer to them in the analysis.

The interviews took the form of semi-structured interviews based in a list of topics aimed at getting the interviewees to talk about their experiences of the project, how they had become involved in it and how they had tried to shape its configuration throughout the process. Interviewees were explicitly asked when and how they had become aware of the project, what their reaction was, how they had subsequently acted and which other actors they had interacted with, whether on the same side or not. All the interviews were recorded and later transcribed by the first author. In all presentations of cases and data, interviewees are...
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During interviews, interviewees presented the first author with different artefacts, such as letters they had written to politicians and a book some participants had published based on an art project that had involved discussions and workshops concerning the project and its location in the local area. Some also told the first author about specific elements around to visually represent relations among them and that had been or could potentially be destroyed. Others told of opponents, municipalities, politicians involved and the developer, and that had been or could potentially be destroyed. Others told of the future in which a local health facility or a co-op shop could be (re-) opened based on revenue from potential ownership of the wind power project. The first author visited these destinations between interviews and observed these and other local areas. She recorded the observations in pictures and took detailed notes in a field diary. All these data helped us define the situation and create the various situational maps that we will now present.

In the words of Marres [32,36, p. 4], “a situation is first and foremost marked by the possibility of dispute about ‘what is going on here’”. Accordingly, one of the aims of mapping the situation is precisely to figure out what is at stake in it and who is involved in assembling it. Taking the planning system and the formally outlined participatory spaces as the starting point and unit of analysis would potentially exclude other participatory activities that might be happening simultaneously. However, by empirically constructing the situation and unit of analysis, we attempt to avoid letting such assumptions steer the data production and analysis. Accordingly, by mapping and elucidating the key elements, materialities and conditions that characterize the situation, we have constructed the situation, and thereby the unit of analysis, empirically. Throughout the research process, we have used situational messy and relational maps to keep an overview of data and find new directions for data production. The social worlds/arenas maps were important in singling out and presenting central arguments concisely when writing up the article.

During the research process, the first author compiled all of the elements detected during fieldwork by producing the messy map and by going systematically through all the data, noting actors and elements on individual sticky notes in Miro. During this process, she made memos about the characteristics of the relationships between the elements to help the relational mapping exercise, which was performed as step two and also produced initial analytical insights. Having the elements on sticky notes eased the creation of relational maps as we could move elements around to visually represent relations among them through proximity and clustering. Importantly, moreover, we could quickly make copies and duplications of the iterations of the maps to ensure we kept a history of the development of the analysis. Accordingly we would save an edition of each map following every update made based on an interview, round of observations or analytical session. When data analysis did not add new elements to the messy map, we would go on to make the relational maps based on the messy map. The first author produced relational maps over select actors, including the association, opponents, municipalities, politicians involved and the developer, analysing how these actors related to all the other elements on the messy map. We used the relational maps to analyse which actors were involved in the same social arenas (e.g., were concerned about the same technologies or tendencies or making relations with the same actors), resulting in the creation of the social worlds/arenas map. We visualize the research process and the relationship between the different maps in Fig. 2.

In support of the insights presented in the analysis, we also include situational maps as appendixes to illustrate parts of the research and analytical process. The maps have been central in singling out when and where different actors and elements make a difference to the situation and shape it accordingly. The latest iteration of the messy map contains 877 elements and is too large to be meaningfully represented in this article. Instead, we include an ordered map in Appendix 2 to create an overview of the situation for the reader. This map contains the elements that are most important to the analysis. The first author produced ten relational maps of central actors, of which we include that for the association as an example in Appendix 3. Lastly, we include the social worlds/arenas map, which builds on the relational maps, as in Appendix 4.

It is important to note that the production of maps might create an illusion of fixity and stability that we know from street or country maps: this is not the case for situational maps. The situation will continue to evolve; some elements will become more and others less central. Some will probably cease to be important and, therefore, be excluded from maps produced at later points in time (and by other researchers). We concluded the work with the situational and relational maps when they reached a point of saturation, meaning that iterations of mapping did not reveal any new elements that significantly altered the situation, but this is, of course, a temporal construction.

4. Results

Our analysis outlines how local citizens participate in and reshape the project. We have chosen to represent this as a narrative in four acts that describe the situation’s development (for now). The first act describes what the association did to open up the initial situation so that it could include their concerns. The second act shows how they position themselves as co-creators and owners. The third act shows how this new role (and arena) places requirements on how the association acts and defines its role. The fourth act presents a twist in the narrative by focusing on how the opponents manage to halt the project despite their limited networks.

4.1. First act: setting the scene for co-creation

The developer initially proposed the wind power project as a ‘regular’ top-down project that was not intended to involve citizens beyond what is stipulated in the planning regulations. At that time, at the beginning of the 2010s, this meant citizen involvement in the ideation phase; consultation on the specific project proposal; the possibility for locals living within 4.5 km of the project to buy 20 % of the project as individual shares; the provision of a community fund for the municipality; and the possibility to sell houses located within a distance of four times the height of the turbines [37,38].
When deciding on the technical design of the wind power project, the developer stated that they ‘go to the limit [defined by noise and distance regulations] of what can fit within the site, and then we reverse a bit, maybe buy a few houses to create a larger distance from our neighbours. [...] because no one is interested in us being too close to the limit. We like to have a bit more distance than is required by law’ (Developer 1).

Accordingly, before the project is presented to the public, the developer has made what they feel are the necessary adjustments to the technical design based on their expertise. Therefore, the developer considered the project's configuration and the local citizens' ability to participate to be fixed along these lines.

However, concerns posed by local citizens, including talk about democracy and fairness, the relationship between the social and technical aspects, and between the state and market, created a situation in which the developer's proposed project plan appeared illegitimate and in need of amendment in the local public debate. For example, many local citizens stressed that the project would be the largest onshore project in Denmark and would therefore have a significant impact on the landscape and the area more generally (Association 2; Opponent 1; Opponent 2). They also expressed discontent with the notion that a ‘Swedish corporation’ would be harvesting all the benefits of ‘our wind’ (Association 4), ‘our area’ (Opponent 1) and ‘our land’ (Landowner), leaving them with only the downsides. Therefore, some local citizens took the initiative to mobilize other citizens to form a common front (taking the form of an association) and together attempted to shape the project to be more acceptable to them by working to obtain local co-ownership for the development to propagate funds they could channel into the local area. Several other elements probed the formation of an association; for example, the general impression among the local citizens that the project would be implemented one way or the other (Opposition 1) based on the municipalities' strategic plans already indicated a significant expansion of capacity in wind turbine-compatible sites (Politician 1).

Furthermore, there was talk of a new political economy of land, where ‘large companies already occupy all land plots relevant for wind energy development’, meaning that local citizens could not circumvent the developer to develop a wind power project independently (Association 1). Such perceptions created a situation where the pursuit of co-ownership with the developer appeared to be the most viable route of action. Very importantly, local politicians helped them in this endeavour, defining local acceptance as a condition for their approval of the project:

‘If we had to go through a storm with citizens, you know, the citizens who live out there, being against the project [it would be difficult]. But maybe there was another way whereby we, with local co-ownership, could clear the way for the project. So we chose the latter. It was not that the developer was... really, they thought we were bloody annoying that we could think of making this kind of demand. [...] but we said: that's a condition, and if you don't work with it, you can – by and large – forget about the project. That was pretty much the message to them because I could see that politically [...] it would be damned difficult to vote that big a project through without local support’.

(Politician 1)

When the local politicians make it a condition that the local citizens are included in the project’s plans, the developer and the association enter into negotiations with each other because they need to in order to reach the solutions (or outcomes) they each pursue. Probed by the perception that the wind power project can be a possibility to at least some local citizens, the association works within these conditions to tweak the constellations and configurations of actors and resources to their benefit. When local politicians support these initiatives by stating that they can only formally approve the project proposal if it is acceptable to local citizens living in the area, the existing interactional scripts of consultation procedures in the form of hearings etc., are
rendered useless to the developer because they cannot provide the requested support. At this point, the involved actors start positioning themselves in other ways in order to make the project move forward. This is the focal point of the next act.

4.2. Second act: making the association competent for co-creation

Local politicians and council employees continually stress that their role in planning specific RE projects is administrative. Questions concerning ownership are outside their sphere of influence due to legal constraints. However, sharing the belief that wind power projects ought to be locally acceptable and benefit rather than drain and marginalize the local areas of implementation, the local politicians work on the boundaries of the question of ownership. They creatively set requirements to the project’s configuration by requiring harmony in turbine size and layout, stating that the planning process must be integrated and effectively that they will only approve a single composite project, and only if it is acceptable to local citizens. Accordingly, without touching upon the matter of ownership, the local politicians create a situation in which the developer cannot circumvent the local citizens and their wishes regarding the project’s design by requiring a shared solution.

“So that’s where we told the developer, you have to reach an agreement with the association. It was about to come to nothing many times; I have been sitting with the mayor from the other municipality, and we could not interfere because we are the planning authority, so we have just kind of serving the purpose of entering the room to say: ‘Come on, reach an agreement!’ and then leave again. ‘We will wait down the hall, and then you will reach an agreement.’”

(Politician 1)

Prompted by local opposition, the local politicians end up supporting the inclusion of local citizens in the negotiations over the project’s ownership model. Thus, by creating constraints for the project, local politicians provide the local association with the support it needs to negotiate with the developer, but they also effect a change in the institutional design governing the planning and development of at least this particular wind power project.

At the same time, the local politicians also make their support conditional on the association by requiring proof that they represent a majority of the citizens living within the catchment area. To secure this position and the legitimacy it attributes to the association, association members canvassed the area and had more than 50% of citizens enrol in the association. They also promoted themselves in art projects, debated in social, local, national and international media, and gained the support and interest of consultants, investors, NGOs, a French radio program and a wind-turbine seminar ‘far up in Norway’ (Association 3). In this way, they make their association come more and more into being, with a stable identity and a position to negotiate from.

To negotiate effectively with the developer, the association realizes that, in addition to political support, they need expertise and the financial capacity to develop and own a wind power project at the given scale in order to be taken seriously as a potential partner in the project. This is secured through the enrolment of an investment fund, which has its own interest in participating in locally inclusive wind power projects and plans to integrate the co-ownership model suggested in future projects into their portfolio (Association 6). The investor gave an assurance that they would support the association, ‘of course contingent upon different things like an agreement with someone who would purchase the produced electricity’ (Association 3). The association uses this relationship to pressure the developer and local politicians to take them seriously and enter into the situation with bargaining power:

“I attended the meeting with the mayor [in one of the municipalities], and they sat there lecturing us: ‘Are you aware of the price of such wind turbines? […] It is not something that you just put up! This is a massive project’. They were simply (sighs)… they really talked down to us. ‘And are you aware how much it costs and that sort of thing, you know’. And [consultant’s name] just sat there calmly: ‘Well, we have the money’. Because we had the assurance from those investors… I don’t remember their name […]. So the mayor, he was about to tilt off his chair […] But then [the mayor] had to start taking us seriously.”

(Association 2)

To obtain a position from which it can negotiate with the developer, the association needs resources and relations that make it competent in the arena of concern. Despite politicians’ initial concerns about the association’s ability to participate as owners, they end up supporting the association in co-creating their role in the project and consequently turning the situation around. Local politicians are keen to see the project materialize because it would help them fulfill their strategic targets for emissions reductions. Moreover, having to balance the interests of the citizens in their electorate, they seek to support a model that can involve both the developer and local citizens. However, this sort of participation cannot be facilitated within the boundaries of the formal system. This is why the support of such a model and type of local participation effectively involves a shift in roles such that the members of the association stop being ‘merely’ citizens and rather become co-owners or co-creators. We will reveal the consequences of this change in role in the third act.

4.3. Third act: navigating a new role in a new arena

Having achieved a legitimate position from which they can become owners, the association needs to realize this new situation by becoming a new type of actor. This shift has consequences that we will reveal in this section.

Initially, the association worked with two models, one in which it sought to develop its part of the project, corresponding to seven turbines, unilaterally, and another in which it bought the project from the developer at cost price (Association 3). Its preferred solution, in which it takes on the role of developer and owner of the project, would require approval from the Minister of Energy, Utilities and Climate, which was not granted for legal reasons (Association 3). Therefore, the association opted for a model in which the corporate developer plans, develops and constructs the project and sells the association’s share to it at cost price to make it co-owners of the project. This agreement was made after years of negotiations involving many different actors and resources.

Because the local association seeks to obtain ownership of the project, it needs to establish itself as a new form of actor—an owner—by making relations with resources such as capital, acquiring knowledge of ownership constructions, technical knowledge of wind power project development etc. As all these resources are located in a market, the association has to develop a role as a market actor. It therefore pursues access to capital in the form of loans and responsible capital, which it attempts to reach through different types of investors and banks. In this new development of the co-creation situation, it must devote almost all its attention to understanding the different types of loans and organizational formats and make relations with institutional organizations and actors that work professionally with investments and consultancy. For example, one association member goes to great lengths in our interview to describe the difference between organizational formats based on limited partnership and private limited partnership and how this shapes the responsibilities and risks that local citizens have to take upon themselves (Association 5).

‘We founded a limited partnership, and that is related to co-ownership. It has something to do with the ownership, [that is] that the ownership of the turbines needs to be located in the limited partnership. The association cannot own the turbines, but the limited partnership can. Then the association can own the limited partnership. It is something purely technical, […] and the trick is that there is no risk involved’.

(Association 3)
In talking about the project and explaining the role and objectives of the association, members are very attentive to unknown factors, such as the cost of the turbine—unknown because turbines are to be procured through an EU tender—and the costs related to construction. These factors can potentially increase the total project price and make the investment so unattractive that it will become impossible for the association to raise the necessary investments. In such a situation, the developer would have the right to develop and own the entire project, and all the working hours invested by local actors, as well as their dreams and visions of returns to go into local development, would be wasted.

At this point, we notice a shift in the focus of the association’s members. The intense engagement with technical and economic factors and the questions that facilitated their transition from citizens to owners and allowed them to negotiate as market actors appears to reduce or overshadow their original dreams, values and ideals. If prompted, they will still justify their commitment to the central vision of community development and local life. However, their time and resources seemed to be focused entirely on negotiating contracts, ownership structures and technical knowledge of wind turbines, such that their perceived role can be seen to have changed from local citizen participation to economically guided market behaviour.

This is all the more visible because, at the time of writing, the project and all the actors involved are in a waiting position due to the complaints made by other local citizens that forced a pause in the project. In the fourth act, we will return to the complaints and their role in shaping the project and the potential positions for the citizens. This pause has been interpreted in diverse ways by different association members. Some perceive the lack of communication about the project to be a result of discretion clauses in the agreements made with the developer and suggest that the relations with the developer are leading the association (‘leadership’) to compromise its commitment to associational democracy to please the developer. Others think that, since there is still no project and therefore no revenue to spend, there is nothing for association members to meet about and thus no need for members to communicate much with one another.

These differences present a schism between different understandings of the democratic and communitarian aspects of the association’s engagements: is it the process or the outcome (funds) that is supposed to reinvigorate the local rural area? Co-creating the project has been made possible by creating a coalition of willing actors who use their resources based on situations of mutual concern, but also by making compromises. According to the central members of the association, they had to become market actors to realize the project and the bigger dream despite multiple intra- and extra-organizational challenges. However, not all members of the association understand this in the same way. At the same time, another group of local citizens worked to make their vision for the local area matter by halting the project altogether. This is the topic of the fourth and final act.

4.4. Fourth act: interfering with co-creation

Despite the association’s success in obtaining the possibility to co-create the project’s configuration and to own parts of the wind power project, not all local citizens are pleased with the project, or the association. In this paragraph and the following discussion section, we will refer to them as the opponents. At the beginning of the project, local actors of all kinds started discussing the project, which had emerged as a situation of shared concern for many citizens living in its vicinity. They made petitions against it, posed consultation responses when the process allowed, sent emails to local politicians across political affiliations and enrolled in the association when it was formed:

‘Actually, many of us [immediate neighbours] enrolled [in the association] initially, but almost everyone resigned because the objective was not what we thought it would be. [...] We were under the impression that we might have had different starting points, but maybe we could collaborate to find a reasonable solution [for us all]. Maybe if they had said we would get [a total of] five turbines, we could negotiate where to site them. So that there was some dialogue.’ (Opponent 2)

The local people opposing the project mainly talk about the spatial, environmental and health impacts and inconsistencies in the decisions made by the municipal administration. Furthermore, they situate the project in more overarching discourses and transition strategies by, for example, questioning the capacity of technical infrastructures to support more wind power capacity, and even questioning the feasibility of wind power altogether. However, in the specific project planned for their local area, they target landscape values, flora and fauna, and the handling of these matters in the casework leading up to the project’s approval because they see this as their only chance of making an impact.

‘We have received help from someone who has been involved in similar cases in other locations. He detected what he believes to be errors and mistakes in the casework and the assessment of impacts on the environment […] you know, that is the only thing we can complain about. We cannot complain and say that we think the project is a nuisance… or we could do that, but it is not really what is at stake here. That’s the handling of the case’.

(Opponent 1)

This layperson, who was ‘also just tired of wind turbines’ (Opponent 1), helped them compile complaints to two relevant appeals committees, pointing out inconsistencies in the casework and deficiencies in the VVM approval issued by the municipalities (Opponent 3). Based on the complaints, the appeal committees annulled the planning approval issued by the municipalities, stating that the assessment of impacts on the environment had not sufficiently considered the affect on a rare bat species. Accordingly, the opponents end up making their interests and voices heard by enrolling a different type of actor into their networks: a rare bat species. Due to its classification as threatened, the rights of the bat are elevated, making it an ideal partner for the opponents. The same goes for the church, which, unlike the local opponents, manages to reduce the size of the project by four turbines, arguing for the protection of cultural heritage. With the annulment of the planning approval, the situation changed again, with the opponents in the (for now) winning position. At the time of writing this article, this is where the negotiations had ended, but another act might very well unfold in the years to come.

5. Discussion

In the analysis, we have traced three acts that made the co-creation of a wind power project possible and a fourth act that questions the inclusiveness of the co-created solution. In the remainder of the paper, we will discuss what this means for how we understand co-creation and participation in transitions.

5.1. Energy justice implications of co-creation and participation

The two local actor groups, the association and the opponents, both seek to implement their own solutions and configurations of the wind power project. In doing so, they also promote different perceptions of energy justice. The energy justice framework includes three tenets of energy justice: distributional, procedural and recognition justice [39–42]. Other research on energy associations has found that in practice the prioritization between these tenets is negotiated [41]. In this section, we further this research by demonstrating that this prioritization happens not only internally among association members, but also between different groups within the local community.

Public participation in wind energy development generally focuses

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4 The Danish version of an environmental impact assessment.
on consultation and awareness-raising in pre-established, procedurally defined spaces of participation [6,8,43]. Research has shown that the concerns that can be made relevant within these participatory formats are not necessarily the concerns held by local citizens [6]. In this case, this is also the starting point for the group formation and positioning, where both local groups initially experience a lack of recognition justice. To address the feeling that an unfair burden has been placed upon them the association seeks to become co-owners, while the opponents seek to reduce the size of the project dramatically and preferably to halt it entirely. However, neither of these wishes materialize through their participation in the formally established procedures. Therefore, both groups try to form coalitions to exert pressure on politicians outside of these procedures.

When suggesting a change in the project's configuration, the association indicates that local acceptance can be facilitated through a higher degree of distributional justice in the form of local direct and collective ownership. By doing this, it seeks to position itself as a participant in a financial market arena that is not available to them from the outset. This shift in arena away from the formal procedural arena of commitment towards the market-based arena is also a shift in roles, as we showed in section three of the analysis. In the formal procedural arena, local actors are configured as citizens with pre-established rights and possibilities for being heard (not to be mistaken with a right to choose or decide). In the market arena, local actors mobilize resources and relations to position themselves to co-create with the developer.

The shift in roles is also a shift in the form of participation. In the formal procedural arena, citizens have the right to information and deliberation, and locally elected politicians can act on and affect the wind power project based on the citizens' inputs into the project's plans. Citizens do not have the right or ability to shape the project's configuration directly. By relocating to a market arena, the association's members leave their pre-established rights as citizens behind to negotiate based on capabilities and resources. In negotiations concerning ownership formats, local actors do not have any pre-given rights, and there are no established procedures that can ensure procedural justice. Instead we observe a centralization of the association aimed to ensure efficient deliberation, and locally elected politicians can act on and affect the wind power project based on the citizens' inputs into the project's plans. By doing this, the association seeks to become co-owners, while the opponents seek to reduce the size of the project dramatically and preferably to halt it entirely. However, neither of these wishes materialize through their participation in the formally established procedures. Therefore, both groups try to form coalitions to exert pressure on politicians outside of these procedures.

5.2. Co-creation and marginalization

With its focus on including citizens in defining the stakes, openness to interests and different actor roles, co-creation differs from the typical planning mechanisms in which institutional decision-making derives legitimacy from following pre-set procedures correctly [12]. Furthermore, instead of emphasising deliberation and consensus, as many participatory approaches to planning and participation do [6,45], co-creation focuses on the creation of robust solutions [46] that include various actors and their private interests alongside a more material form of participation [47–49] in which participants together do the energy transition and perhaps do democracy more generally [48].

Despite this search for robust solutions, the analysis reveals that not all interests can be reconciled within the same solution. The local opponents continuously express discontent towards the system, but still seek remedies through the established procedures. Though this is the formal way of doing things according to the established governance system in the arena, they express dissatisfaction with going through these routes because they and their actual concerns are not ‘listened to’. Though they showed up for meetings aimed at co-creating a solution and also presented themselves as willing to compromise, they found that they or their opinions are not legitimate or practically possible participators in the process. Instead, they find themselves confined to the participatory spaces produced by a system they do not trust and which is also not attuned to handle the issues they raise. To manoeuvre in this situation, they enrol a hearing partner that has rights in this system (the bat) and that has the possibility to create the solution they seek, namely halting the project.

Enrolling such non-human partners is a well-known course of action in EIA procedures that local opponents use to further an agenda (i.e., their own), which is not within the scope of the planning system’s technical and regulatory framing [6]. Some scholars argue that this kind of participation by proxy indicates that the actual concerns of people do not have a proper space within the system’s boundaries, resulting in undemocratic procedures and outcomes [6]. In this analysis, we find that the two groups of citizens try to advance their interests and positions in relation to the project by forming mutually beneficial relations with other actors. Which of the local groups end up materializing their preferred solution depends on which group mobilizes the strongest networks. We also see that this positioning creates new actor roles (and potentially identities) for the local citizens. For the association, relations with investors and consultants open up the possibility that they become ‘co-owners’ and entrepreneurs (behind a new responsible wind energy development model). In contrast, the local opponents’ inability to forge ties means they become even more entrenched in the position as opposed and marginalized. Accordingly, the situation makes them opponents due to their exclusion from the coalition behind the solution. Thus, we see that at the same time as actors make relations, relations simultaneously make actors and situations.

Employing co-creation in wind energy development does not appear to be a guarantee for the inclusion of all local actors; some citizens will most likely acquire more influence, while others will experience their opinions and positions as more marginalized. Accordingly, whether co-creation is ‘good’ or ‘bad’ [50]—or a higher form of participation [51]—is dependent upon whose perspective we take.

5.3. Local empowerment or democratic deficit?

The case investigated for this paper unfolds the tensions arising between the different ways in which local citizens seek to engage in the (participatory) governance of an onshore wind power project. Despite its local and particular situatedness, we believe that the case resembles tendencies and shifts in the democratic governance of society more generally. In his theory of the acceleration of society, Hartmut Rosa argues that today ‘decisions across increasing numbers of societal domains are relocated from democratic and political domains (e.g., parliaments and municipal councils) to faster systems such as the legal system, markets, and the private companies that populate them’ [52]. According to
Rosa, this shift requires democratic processes to work as brakes rather than accelerators of social change, as they did earlier in times of less general welfare [53]. For some, this relocation of decisions from the formally established procedures in which all citizens, animals, streams and other non-human actors have rights and a voice will constitute a loss and a slippery slope towards private interests and actors monopolizing decisions and resources that ought to belong in the commons.

Throughout this paper, we have attempted to show how two participatory tracks were active in relation to the same project and how different people and points of view were admitted to different arenas with different possibilities. We have referred to one as a formal procedural arena of participation and the other as a market arena. The analysis shows that, in some ways, the choice to approve the project or not (by local citizens and ultimately politicians) moves from the planning and formal procedural arena to the market arena. However, we also see that, though separate from the procedural space, this arena is not outside democratic control. Without support from locally elected politicians and a majority representation of all citizens of age within the catchment area, the association’s role as co-owners would not be possible.

By requiring that the association represents a majority of local citizens living within the project’s catchment area, the politicians create a situation in which the very local encounter between RE infrastructure and citizens is governed by additional democratic manoeuvres to those of electing city councils who approve projects and the formal participatory procedures. While the insights from this very specific case cannot constitute guidelines for other projects, it opens up a discussion about how local citizens can participate in sustainable transitions and specific RE developments and what the role of local government and politicians should be in governing such participation. The case also shows how a contentious situation can facilitate productive relations and innovative solutions and demonstrates that the involvement of local politicians is central to the co-creation of the project’s configuration and ownership. While all situations are different, we suggest that the creation of a process and an outcome that suits local situations might be more achievable if local government were freer to facilitate collaborative processes and seek alternative solutions and project configurations locally. This could be done, for example, by giving preferential treatment to project applications that include local ownership, supporting local initiatives financially through investments and municipal co-ownership, or making local acceptance a requirement for project approval in cases of commercial project development. This requirement might in itself provide local actors with the leverage needed to negotiate with commercial developers and thus co-create more locally appropriate RE projects.

6. Conclusion

In this paper, we have analysed co-creation and public participation in the planning and negotiating of a utility-scale wind power project. We asked how local citizens can co-create an onshore wind power project in their area and what the consequences are for participation and controversy. To answer these questions, we traced local citizens’ positioning of themselves through four acts. First, the association makes the project a shared concern. Second, it positions itself as competent by establishing a strong network. Third, it enters a new arena and adopts a new role allowing it to negotiate with other actors. Fourth, another group of citizens who experience that their perspectives and interests are being marginalized, seeks to halt the project by enrolling a non-human actor—the bat—into its network.

In the project development, two participatory tracks have been active: one following the standard procedural format with an idea phase, consultation and possibilities for complaining, and another focused on negotiating and co-creating the project’s ownership structure and technical composition. The article contributes by analysing how the two arenas of participation opens up different possibilities for the local citizens. While all citizens are invited to the first consultation-oriented participation, co-creation of the project’s technical configuration takes place among those who are willing to compromise and work for a solution. This is experienced as an unjust way of doing things by the local opponents. At the same time, the association’s members find that negotiating with the developer allows them to assume a role in the project’s development and help shape the development of the project more directly, leading to more substantial participation and an increased potential for securing distributive justice.

Employing situational analysis allows us to zoom in on these differences and negotiations and to see how local citizens participate in the project to further their (and what some believe to be shared) interests. These interests materialize in an interplay with the interests of the developer, the municipality, local politicians, the market and the rest of the situation. Accordingly, we show how co-creation can be assumed throughout a project’s development, despite continued differences between the underlying rationalities for engaging in the project. In short, we show how things can happen without a consensus being pursued. We also see that ideas, perceptions, economic preconditions etc., are not merely contextual elements but integral aspects of the whole situation, its ways of participation and the way these come into being. The many situated perspectives detected by the situational analysis reveal that whether the co-creative activities and outcomes are positive depends precisely on the perspective taken.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

Appendix 1. Overview of interviews and other cited materials

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<tr>
<th>Respondent codes</th>
<th>Brief description</th>
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<td>Planner from municipality 1</td>
<td>Interview with planner</td>
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<tr>
<td>Planner from municipality 2</td>
<td>Written communication with planner</td>
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<tr>
<td>Planner from municipality 3</td>
<td>Interview with planner</td>
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<tr>
<td>Local politician 1</td>
<td>Interview with local politician</td>
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<td>Local politician 2</td>
<td>Interview with local politician</td>
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<td>Local politician 3</td>
<td>Interview with local politician</td>
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<tr>
<td>Association 1</td>
<td>Interview with association member</td>
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<td>Association 2</td>
<td>Interview with association member</td>
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<td>Association 3</td>
<td>Interview with association member</td>
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<td>Association 4</td>
<td>Debate article by association members</td>
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<td>Association 5</td>
<td>Interview with supporting actor</td>
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<tr>
<td>Association 6</td>
<td>Interview with supporting actor</td>
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(continued on next page)
Respondent codes | Brief description
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Association 7 | Background interview with supporting actor
Developer 1 | Interview with project manager
Developer 2 | Informal conversation with communications and public affairs manager
Developer 3 | Debate article by developer
Opponent 1 | Interview with an opponent who was previously a member of the association
Opponent 2 | Interview with an opponent who was previously a member of the association
Opponent 3 | Document, official complaints to appeals committees
Landowner | Interview with landowner with plans for a private wind power project

Appendix 2. Ordered situational map

Individual human actors | Non-human actors
--- | ---
Municipal planners | Wind turbines (size, type, number, siting, logo on nacelle)
Developer's project manager and communication manager | Related technical infrastructure (power lines, transformer station, buildings)
Leading political figures (alderman/mayor) | Environmental reports and appraisals
Particular project opponents taking part in the public debate | Visualizations
Activists involved in advocacy on behalf of nature and local citizens | Scenarios for wind farm layout
Members of the local wind turbine association | The pond bat (rare species) and models predicting its pattern of flying
Consultants | Capital (money, financing, investments, private finances, rents, benefits)
NGO representative | Researchers
Researchers | National politicians
Me as a researcher | Land
Local farmers leasing land to the developer | Map of the area depicting cultural heritage sites
Local farmers developing a private wind power project | Map of the area depicting different landowners’ lands
Investors | Schemes for public participation in RE transitions 4.5 km distance
Lawyers | Facebook (groups and pages)

Collective/institutional actors | Discursive constructions of individual and/or collective human actors
--- | ---
Developer’s organization | Developer as villanous and with hidden agendas
Advisory organizations (consultants, NGOs, research institutions, e.g., Wind People, Green Power Partners and Nordic Folkecenter for Renewable Energy) | Local people as happy amateurs
The national association against giant wind turbines | Local people as lacking the required expertise
The two involved city councils | The association as reform- or revolution oriented
Interest groups (Wind Denmark and Danish Energy – now Green Power Denmark) | (individual members as a Marxist, a dreamer, hopeless optimists etc.)
Relevant boards of appeal | Hyvde Sande Nordstrand project as ideal
Media (local, national, and international) | Political decisions as corrupted by private companies/capital
KL – Local Government Denmark | The municipality as an administrative entity
Danish Society for Nature Conservation | Denmark as wind energy frontrunner country
Banks | (technology and industry)
Pension funds and Investment funds | Denmark as cooperative stronghold

Political/economic elements/discourses
Green transition as imperative
Marginalization of rural areas
Technical fixes as driver of RE transitions
The state

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**Political/economic elements/discourses**

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<td>Local actors’ right to participate in and benefit from RE projects (right to be heard)</td>
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<td>National vs foreign origin (e.g., of corporations, capital)</td>
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<td>“Margins of the state”</td>
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**Appendix 3. Ordered situational map**

[Diagram of ordered situational map with various elements and connections labeled.]
Appendix 4. Arenas map

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L.G. Elkjær and M. Horst

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