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Exploring the interaction between social norms and perceived justice of wind energy projects: a qualitative analysis

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ABSTRACT

The deployment of wind energy projects (WEP) within the process of energy transition changes energy landscapes and daily living environments. With regard to social acceptance as one social response towards WEP, the role of different aspects of justice (i.e. procedural, distributive, recognition) has been discussed. This study highlights the importance of social norms and their influence on perceived justice regarding WEP, which has been neglected in the literature so far. The relationship between social norms and perceived justice is explored as a conceptual framework through a systematic literature review and expert interviews. This framework aims to explain how social norms and their relationship with justice are defined, interlinked and how they affect perceptions of WEP. The results argue that social norms surface in situations where all the key elements of a project are decided without public impact. Thus, norms of fairness emerge under uncertain situations with the influence of similar emotions within groups. Moreover, social norms and perceived justice would explain several responses, such as local conflicts, or the motivation to further develop WEP. This study concludes by discussing the applicability of the framework, which needs further analysis as an analytical tool and deeper empirical investigation.

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Justice; social norms;
systematic review; wind
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1. Introduction

As wind energy projects (WEP) are developed and the new technologies spread across landscapes, they change the natural and social environments in which they are situated. Even though wind energy in the general sense is perceived positively as a clean source of energy generation, a variety of responses from the public can be observed (Wolsink, 2012). Research on public responses to WEP have typically examined acceptance dimensions like support and opposition (Ellis et al., 2007) or attitudes (positive, negative) (Devine-Wright, 2007) mainly on the local level of the affected communities. Additionally, public responses are not limited to active behaviours towards a project, they can be incorporated in beliefs, practices or attitudes (Batel & Devine-Wright, 2015b).

Social norms are argued to have an impact on behaviour under situational, cultural and individual levels (Cialdini et al., 1990). They can be portrayed as expectations, standards or perceptions of behaviour. Due to its *context-sensitive* nature, micro-explanations of why some norms survive or emerge could be formed within a

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culture (Bicchieri, 1999). Thus, the concept of social norms and their impact on how people react to unfamiliar changes in their environment provides a promising layer to understanding public responses.

Whereas the role of social norms is well addressed in research on pro-environmental behaviour (e.g. Steg et al., 2015), it is not prominent in the field of social acceptance of renewable energies like WEP. Distributive justice and procedural justice dimensions have mainly been the focus of research especially during the last decade (e.g. Langer et al., 2016; Sonnberger & Ruddat, 2017). However, social norms were not mentioned as an impact on cultural aspects of social acceptance in studies reviewing the research over the past decades (Rand & Hoen, 2017).

The importance of justice is highlighted in the existing acceptance models for renewable energy technologies (RET). The energy technology acceptance model, including psychological factors constructed by Huijts and colleagues (2012), which can be seen in Figure 1, carries a great importance. Still, the role of norms for justice perceptions is not linked yet (Huijts et al., 2012). Justice perception of groups is connected to shared expectations which is parallels to norms and the collective perceptions of groups. Furthermore, it can be assumed that justice expectations and perceptions are influenced by existing group norms as they are context-related. Even though there are studies including social norms as a significant acceptance factor in their models (Huijts et al., 2012; Hübner et al., 2020), a comprehensive overview into what are the norms of community acceptance are and how they shape justice perceptions remains under-explored. Therefore, this study aims to conceptualize the definitions, influencing factors and impacts of social norms in response to WEP and explore their connection with perceived justice.

The main questions that this study aims to address are the following: (1) What are the indicators of social norms in response to WEP? (2) How do the social norms of the communities shape justice perceptions?

In order to address the presented research questions, firstly research on the social acceptance of wind energy is reviewed with a focus on the factors justice and norms in section 2. With a qualitative approach, a systematic literature review was conducted, which was supported by expert interviews with researchers working on social acceptance issues. Section 3 presents the methodology of this study, including the interview guideline and analytical framework. The main findings from this research are presented in section 4. Finally, section 5 offers a discussion of the results and concludes with some reflections for future research.

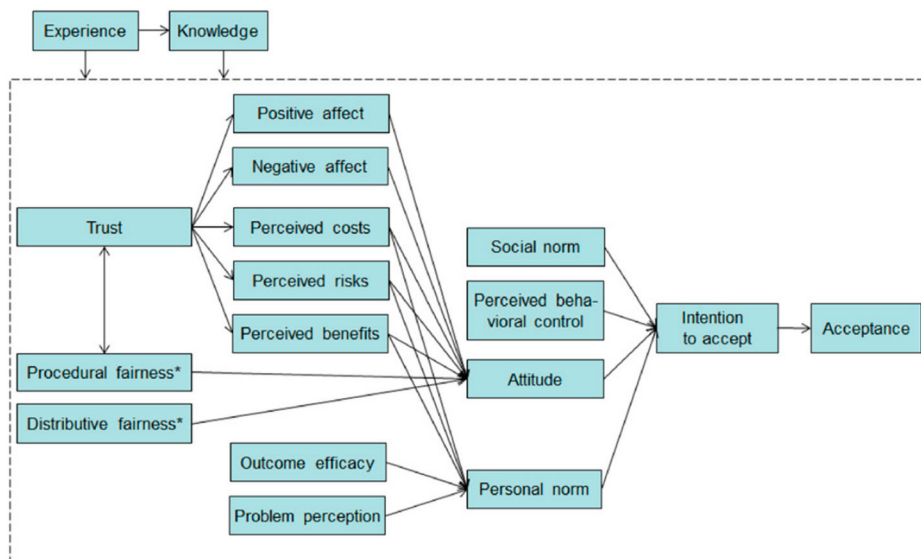


Figure 1. Psychological factors influencing sustainable energy technology acceptance (Huijts et al., 2012, p. 530).

2. Theoretical background

2.1. Social acceptance of wind energy projects

The complex, multifaceted and dynamic structure of social acceptance has been developed with many socio-technical theories from the fields of economics, sociology, psychology, and geography (Ellis & Ferraro, 2016). Likewise, a broad range of different relevant influencing factors has been identified, covering individual attitudes, relationships, contextual issues, perceived impacts, and process-related issues (ibid.). Looking at the concept from the community level, it should be underlined that acceptance is not simply a function of community attitudes; but a pattern of social change, collective action, and responses to the shift of people's living environments (Improta et al., 2017). Thus, acceptance itself includes a multiplicity of public responses. Research on social acceptance conceptualizes many behaviour patterns towards RET, such as support or opposition with different behavioural intensities ranging from passive to active (Batel & Devine-Wright, 2015a; Rau et al., 2012).

Local responses to the landscape and social changes that WEP brings have been investigated to further understand the attitudes, behaviours and expectations of the public. Already some years ago, Social Representation Theory (SRT) (Moscovici, 1988) was implemented as a link between psychology and social development in everyday life and has been implemented to understand public responses to RET (Batel & Devine-Wright, 2015b). Building up from the SRT and social psychology, Devine-Wright (2009) argues that place attachment and place identity shape the acceptance of WEP by attributing meaning to a place. Numerous studies argue that strong place attachment may well lead to either opposition or support in different cases (e.g. Batel & Devine-Wright, 2015a; Devine-Wright, 2011). As social norms can be seen as one aspect of the social dimension in people place-relationships, e.g. place protective actions as normative behaviour, the importance of place and context-relatedness of social responses should be stressed.

These divergent patterns across the research on public responses to RET provide many contrasts. It seems that there has been a lack of focus in examining local responses with a social norm lens. This study draws on the theory of justice and aims to provide a social normative approach to understand public responses to wind energy.

2.2. Justice as a social phenomenon

The conception of justice, according to sociological approaches, is a social phenomenon that is constructed in social institutions, settings, and discourses (Liebig & Sauer, 2016). When justice definitions, preferences and perceptions are discussed, the social conditions of the groups who express them should be considered. Individuals as members of groups, communities and societies share certain values, belief, concerns, norms that may structure what is perceived as fair or unfair. Tajfel and Turner articulated social identity theory with their work on outgroup-intergroup interactions and how people enhance similarities within their group and would motivate the other members to act accordingly. Similarly, the group-value model by Lind and Tyler (1988) has contributed to the progression of procedural justice research by basing its argument on the social identity theory. Procedural justice, in particular, is argued to be highly affected by group identities rather than the distribution of resources.

Young (1990) emphasizes the importance of generalized social processes rather than the distributional aspects of justice claims. Her definition of a social group as 'collective persons differentiated from at least one other group by cultural forms, practices, or way of life' was well recognized and included the individuality of the group members (Young, 1990). With this work, the traditional understanding of justice from its distributional claims was criticised and the concept by tackling social and institutional relations was stressed. Recognition, as a justice claim, is not to be distributed, but it is argued to be a social norm embedded in social practices of a smaller group or even society (ibid.). Social structures, including practices, rules, norms, languages, and symbols that mediate such relations are argued to be determining the recognition aspect of justice, which is crucial to consider (Schlosberg, 2007). In other words, the discussion on how injustices are produced, reproduced, and sustained are seen through social processes and group identities. Fraser (2000) work on a cultural

perspective to examine struggles regarding distribution and recognition asserts the importance of social settings and institutions. Roots of which group, community or society a person is affiliated and to what extent they are recognized when justice questions are raised are essential for justice research.

Attitudes and behaviours regarding WEP are argued to be strongly shaped by justice perception together with distributive and procedural effects (Aitken, 2010). Distributive justice, here, refers to all the outcomes of the project and procedural justice refers to all the processes of the project from decision-making to participation. Furthermore, participation is argued to be the 'silver bullet' for fair wind projects by some studies, also referring to the perception of fairness in transparent and participative processes (Rau et al., 2012). Several principles of distributive and procedural justice have been argued to play a role in the perceptions of the people and therefore impact the acceptance. It has been underlined that procedural and distributive justice must be combined as they create an overall framework for community fairness together (Gross, 2007). Thus, the multiplicity of environmental justice concerns includes distributive and procedural claims, alongside with recognition and participation factors (Schlosberg, 2007). Furthermore, environmental justice research has expanded with diversifying from the claims as justice is a normative evaluation of socio-environmental conditions, to a more essentially involved field that examines further layers of the relationship between people and environmental issues (Walker, 2009).

Taken as a whole, these empirical studies suggest the importance of the public perceptions of justice; however they leave an unanswered question of how these perceptions could be shaped within groups and communities. Thus, this study builds upon social norms theory to form a socio-psychological approach to justice.

2.3. Social norms

People are social beings that are affected by their surroundings. What we see and observe in our daily lives incorporates our understanding of how we perceive the world. Through socialization practices, there are different normative understandings of justice. As discussed above, relevant groups or communities and their identities affect the determination of justice aspects such as procedures, distributions, rights, and responsibilities (Clayton, 2000). Another approach to examine normative views of justice is through the lens of social norms of the public. Social norms, which are incorporated in people within their social surroundings, are significant factors in explaining the patterns of human behaviour as Sherif demonstrated in 1936 with this famous field-experiment (Sherif, 1936). Social norms are not simply a set of rules, but they are also conditional perceptions of what is typically done (descriptive norms) or what ought to be done (injunctive norms). Moreover, there are provincial norms (Goldstein et al., 2008) that consider spatial closeness as a motivational driver for pro-environmental behaviour. In other words, people tend to be more influenced by their close surroundings such as neighbours. On the other hand, Ajzen (1991) argued that the influence of family members or friends to build subjective norms is much higher than that of spatial closeness. Therefore, people are not only influenced by their close surroundings but also through their norms formed in cultural patterns.

In pro-environmental behaviour research, normative influences have been discussed and tested within numerous studies. For instance, Ajzen in 1991 argues with the theory of planned behaviour (TPB) that the intention of a person, which is based on outcome evaluations (*attitudes* and *subjective norms*) and *perceived behavioural control*, essentially captures the motivation that shapes and influences behaviour (Ajzen, 1991). As an example; this theory and the approach alongside social identity through the group-specific norms have been tested by White and colleagues (2009), which presented strong evidence for recycling being a pro-environmental behaviour.

Another approach using social norms was introduced by Cialdini and colleagues (1990) and they argue that norms are salient only during the decision-making process. Their work concluded to argue that normative influences can highly impact human actions, nonetheless cultural, situational or personal norms are also indicators to consider (Cialdini et al., 1990). The very classical norm-activation theory developed by Schwartz (1977), on the other hand, argues that pro-environmental actions occur in response to personal norms, which can be activated in people who believe that environmental conditions pose threats. This provides a strong argument to the cross-sectional approach of this study, as it aims not to overlook personal norms.

Social norms have been distinguished from moral and personal norms, as well as habits, conventions, and legal rules, due to their conditionality and how they pertain to public action usually without deliberate planning. Furthermore, social norms deliver the standards of what behaviour social group views as appropriate.

Looking at the conceptions of justice regarding wind energy projects, which are argued to be emerging through socialization within a community, there should be related norms that are shared. Fairness judgments, therefore, are not completely subjective of what the community or society considers fair given the circumstances. This research further questions what the social norms or the shared scripts of these communities are that strengthen these justice concerns. This does not conclude to argue that there are or will be a consensus of what is perceived as fair or not. On the contrary, it aims to question to what degree are the assumptions of social norms and to what degree the variety of justice perceptions are shaped by them.

3. Research methodology

3.1. Systematic literature review

A systematic literature review related to the concepts of justice and social norms in the social acceptance of renewable energy research was carried out. Our goal was to emphasize how this body of literature approaches and understands the interaction between social norms and perceived justice. On the Scopus database, we searched the word 'wind energy' together with one of the following set of words or combinations: 'social' or 'public' and 'acceptance', 'public' or 'local' and 'response', 'social' or 'local' and 'norms', and 'environmental' or 'energy' and 'justice'. Articles that focused on technical issues were excluded from the analysis which resulted in a total of 243 relevant articles which were screened based on their abstracts. As we were searching for the connection between social norms and public perceptions of justice, articles that identified, conceptualized or applied these terms in the social acceptance literature were analysed. This resulted in 30 articles that reported to our research questions. These articles were recorded and accompanied by bibliographic details, including the location of the study, year, author(s) and journal as well as the scale of renewable energy development involved.

With this literature review, we covered empirical studies and research articles related to the social viewpoints of renewable energy development. Procedural steps of identifying and analysing the research articles are presented in [Figure 2](#).

3.2. Expert interviews

In order to further develop the concept of social norms within acceptance research and develop a framework including the interaction between norms and justice regarding WEP, expert interviews conducted. These data were collected in eight semi-structured interviews with open-ended and exploratory questions between October 2020 and March 2021, using an online tool. The guideline was designed as exploratory expert interviews with a focus on sounding out the subject under investigation, which differentiates from other forms of expert interviews to acquire data (Bogner & Menz, 2009). The researcher introduced their project, explained the aim of their research and answered the questions of the participant before each online interview. The expert list includes researchers from Europe, UK, North America and Asia and can be found in Appendix. Each participant was provided with an information sheet about the study and gave either oral or written consent to participate in the research with guaranteed anonymity. Each interview took approximately an hour to complete.

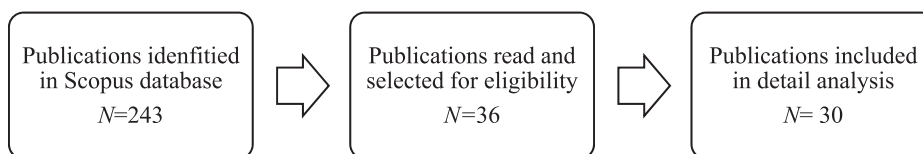


Figure 2. Procedural stages for the systematic review.

Table 1. Analytical framework of social norms.

1. Definitions	1.1. Contextual	1.1.1. Cultural context
	1.2. Functions	1.1.2. Comparison 1.2.1. Descriptive 1.2.2. Injunctive
2. Influencing factors	2.1. Actors and agents	2.1.1. Individuals, groups and organizations 2.1.2. Media tools and communication channels
	2.2. Institutions	2.2.1. Communities as institutions 2.2.2. Gender norms
3. Impacts	3.1. Perception	3.1.1. Assumptions and misassumptions
	3.2. Behaviour	3.2.1. Norm salience 3.2.2. Contradictions with behaviour

Table 2. Analytical framework of justice.

1. Definitions	1.1. Procedural	1.1.1. Public engagement 1.1.2. Trust
	1.2. Distributive	1.2.1. Costs and benefits
	1.3. Recognition	1.3.1. Representation
2. Influencing factors	2.1. Framework for fair wind energy	2.1.1. National level 2.1.2. Local level
	2.2. Discourses	2.2.1. Moralistic 2.2.2. Communal
3. Impacts	3.1. Evaluation	3.1.1. Influence of social norms

In this study, experts were selected from the scientific research field as they are argued to have the forms of knowledge which are distinguished from everyday or common-sense knowledge (Meuser & Nagel, 2009). The first reason for choosing expert interviews is those researchers' up-to-date knowledge of the current issues on the development of wind energy. Second, they may be in the position to influence the policymakers and other institutions as their recommendations are closely related to decision-making bodies. Third, as each expert is from a relatively different discipline or field, this paper aims to develop the most comprehensive, interdisciplinary conceptualization within the limits of the study structure. Building upon the systematic literature review and condensing the experts' point of view, the aim is to define what could normative principles of fair wind development are.

3.3. Analysing procedures

A qualitative thematic analysis has been used to systematically identify and organize the patterns of themes for the data set (Braun & Clarke, 2012). While coding the interviews in thematic analysis, this research includes the existing conceptual frameworks of social norm theories to explore the similarities and differences within the data set. Therefore, coding procedure combined both the descriptive and interpretative approaches to identify the data. Thematic analysis approach contains six main steps; getting familiar with the data, generating initial codes, searching for themes, reviewing potential themes, defining and naming themes and finally producing the report (Braun & Clarke, 2012). Analysis software MAXQDA was used for the systematic literature review, transcribing the interviews, coding the data and identifying the frequencies. The interview guideline also provides the bases for the analytical framework of interpreting the accumulated data.

The analytical framework draws on the theories of social norms and environmental justice. Moreover, reflections from the literature review and in-depth interviews shaped the further development of the analysis structure. The first element of the framework recognises that investigating social norms requires three categories; *definitions of norms*, *influencing factors of norms* and *impacts of norms*, which can be seen in Table 1.

The second element of the framework, drawing on Schlosberg (2007), distinguishes between distributive justice, procedural justice and recognition justice. This study explores justice into three categories; *definitions of justice*, *influencing factors of justice* and *impacts of justice*, demonstrated in Table 2.

Table 3. Frequencies of countries, context of the study and methodology.

Countries ^a		Topic		Data collection methods	
	Frequency		Frequency		Frequency
DE	6	Social acceptance	19	Survey	19
US	2	Intention to use RET ^b	5	Case study	8
BE	2	Behaviour towards RET	4	Review	3
IR	2	Intention to pay for RET	2		
NL	2				
GB	2				
BD	1				
CN	1				
ID	1				
IN	1				
ZA	1				
PT	1				
IL	1				
LT	1				
DK	1				
ES	1				
SE	1				
SI	1				
PL	1				
AT	1				

^aISO country codes.

^bRenewable energy technologies.

4. Results

Based on our Scopus search results, more than two-thirds of papers on the link between social norms and renewable energy technologies were published after 2015, which clearly shows rising interest in this topic. Studies were conducted in 21 countries, most in Europe, while the others were conducted in America, Asia and Africa. All but three of the articles conducted a single study, which covered three domains of thematic areas. Regarding data collection methods, the vast majority of studies used quantitative modelling tools as surveys and questionnaires. Moreover, more than half of the studies investigate different dimensions of social acceptance of RET, while other articles measure individual or collective intention and behaviour (Table 3).

Findings from the expert interviews address the variances in understandings of norms and justice between experts from different disciplines and countries. The results from the literature review complement very well the results from the expert interviews as can be seen in the text. The results from the analysis are presented next.

4.1. Definitions, influencing factors and impacts of social norms

As a social phenomenon, social norms can be defined under two categories, according to the context and the functions. How to conceptualize the social norms of the communities differentiates between places, social systems and the dynamics of that culture. Some authors do not explicitly refer to social norms (e.g. Masukujjaman et al., 2021) however, use other terms such as subjective norms, social influence or normality. For example, Haque et al. (2021) explain normality as a 'broader context of social functioning which is influenced by collective assumptions and aspirations about social norms'. Therefore, the significance of a place-based and cultural approach to identify normative influences in public responses to WEP is also critical. In addition, the way that community members are reacting have an impact on the expectations and perception of an individual, which can be perceived comparatively. For example, Sokoloski et al. (2018) highlight the gap between true normative opinion in a group and what individuals perceive the norm to be. It is important to separate social norms from moral, legal and personal norms, which is argued to often overlap. Hojnik et al. (2021) examined consumers' social norms and moral obligations separately and found that both have a significant impact on willingness to pay for green energy. Even though personal attributes to contribute to a clean energy future in some cultural settings are increasing, this commitment is not always shared commonly across the groups.

Some researchers have explained and measured social norms through their functionality (e.g. Irfan et al., 2021). Descriptive norms are explained as exerted pressure or expectations towards people to behave in a certain way to go along with what most people do. In the context of RET, what your neighbours think of a project may impact your or others' opinion. Similarly, Upham and Johansen (2020) mention descriptive norms as alternative representations which are how individuals believe other social groups perceive renewable energy technologies. Furthermore, the expectations of community members to react similarly with their peers to a project highlights the influence of injunctive norms. In the cases that these expectations are not met could create emotions such as anger or frustration, then leading to opposing to a WEP.

Among many examples, Ghorbani et al. (2020) show the importance of community leadership in the emergence of local energy initiatives by analysing behavioural drivers, including social norms. Similarly, in their research Schwarz (2020) argue that citizens with social status, affluence and political position in the communities can actively shape the discourses around energy projects. We argue that there are three different groups of influencing actors regarding community norms: (1) community spokesperson; (2) political figures; (3) opposition groups. These individuals, groups or organisations carry certain political power, social resources, necessary agencies and have strong ties with the communities to impact public opinion. Opposition groups are described as vocal and influential, although sometimes being a minority and are recognised actors that influence public opinion by taking action towards WEPs. For example, Sokoloski et al. (2018) show that levels of support for WEPs are underestimated and incorrect estimation of a norm may influence behaviours among supporters and opponents.

Local political actors such as mayors or municipal council members have outsized roles as advocates of guiding the view of an energy project (Schwarz, 2020). Political impact and leadership on the national level also impact the opinions, which can differ from country to country according to the distinct national energy policies. Moreover, community spokespersons that have resources and networks to create influence are considered to have the ability to convince others.

In the indisputable role of media tools in shaping perceptions and expectations about renewable energy development, social media offers a platform for the public to diffuse norms, views or beliefs (e.g. Borch et al., 2020). For example, Lai et al. (2021) show that informal processes like protesting through social media can influence norms formation and transfer. The open setting of social media may lead to less fact-checking, therefore, can produce misassumptions about WEP, which can be perceived as a tool for negative impact. Nevertheless, social media also initiates younger generations to engage in energy-related topics, which sets up new norms in virtual communities.

Communities have their norms, beliefs and practices about how they function, how they will change through a WEP and how that will impact the characteristics of that group. For example, Mäkivierikko et al. (2019) explored the viability of a local social network as a context for providing energy feedback and suggested the significance of strengthening the sense of local group identity. The power of community mechanisms within themselves can create the need for a decentralized approach to developing energy projects in localities. Moreover, socio-demographic differences in how the community members participate in local energy developments, especially the gender aspect, can influence the normative practices.

The impact of social norms on perceptions, intentions and behaviours towards renewable energy projects has been analysed. For example, Bozorgparvar et al. (2018) examined the psychological factors that influence the use of renewable energy in Iran and subjective norms showed no significant effect on intention. On the other hand, Kalkbrenner and Roosen (2016) highlight social norms and trust as the strongest determinants for willingness to participate in community energy projects. In the case of wind energy, implicit assumptions and misassumptions such as noise, health and biodiversity issues, affect the shared view of the public (e.g. Fischhendler et al., 2021). Siting and consequently the changes in the landscape are considered to one of the main challenges due to the public misassumptions. The impacts and consequences of WEPs are argued to create a structural perception that could directly lead to behaviour. But in some cases, there might be ostensible argumentations, and other aspects such as economic benefit distribution might be behind.

Social norms tend to be salient under uncertain situations. Even though assumptions such as 'wind turbines will disturb your drinking water' have not been scientifically proven, it can create an unclear setting for

communities without prior experience near a WEP. In cases where a negative norm is apparent, it is a key factor to consider the cultural setting and how important it is to fit into that group to the individuals. For example, in their analysis of behaviour related to care for the neighbourhood, Hidalgo et al. (2021) show that people tend to observe and follow the norms of those who are similar to them. In situations where the individuals start having strong emotions, in most cases anger, this might become a predictor for salient social norms. Moreover, feeling discontent and powerless towards the planning process may lead to people opposing to WEP (Schwarz, 2020). Another example from Upham and Johansen (2020) argue that objecting to a WEP is more or less directly socially conditioned by others' opinions. On the other hand, social norms can contradict behaviour. This contradiction can be explained as reframing the situation in order not to violate the social norm and be excluded from the group. As Morrison and Ramsey (2019) found that individuals with social capital who are embedded in their communities, can exert over peer groups about contributing to community energy initiatives. On the other hand, individuals with strong personal norms could correspondingly conflict with their communities.

In the systematic literature review, studies from different countries and disciplines were taken into consideration to have an overview of how social norms are outlined in different research settings. The social context in different cultures plays an important role in whether social norms in the groups influence the intention, perception or behaviour of the individuals. For example, some studies from China (Irfan et al., 2021) and Lithuania (Liobikienė et al., 2021) that investigated the factors that impact the willingness to use renewable energy sources found no significance effect on social norms. In another study in Slovenia (Hojnik et al., 2021) that explores the drivers for willingness to pay for green energy showed the critical role of social norms. The context-dependency of social norms, therefore, is connected to the cultural structure of the countries, regions and communities. During the expert interviews, the importance of cultural setting to understand the role of norms was highlighted. In individualistic cultures, for example, depending on others to shape your opinions may be considered undesirable, whereas in collectivist cultures individuals tend to define themselves in relation to others. Furthermore, whether individuals follow social norms or stick to their values and beliefs, depend highly on the structure of that culture.

4.2. Definitions, influencing factors and impacts of justice

Justice perception in regards to WEPs can be defined under procedural, distributive and recognition aspects. Procedural justice includes the topics of public engagement, participation and trust. Liebe et al. (2017) highlight the importance of providing citizens with the opportunity to participate in the decision-making process of a WEP may positively impact acceptance. Even though participatory schemes for the communities are essential, when the public cannot impact or change key decisions on siting or other project features, it tends to create further frustration. Agterbosch et al. (2009) argue how the ability of citizen voices to be heard by stakeholders plays as a forecast for community acceptance. Another example from Fischhendler et al. (2021) argue that when the community division is weaker, fairness becomes important in determining the level of acceptance and if the project processes are perceived as unfair, locals tend to actively oppose. In cases where public engagement is illusory, in other words, if the community is excluded from decision-making or planning but are only symbolically informed, there seems to be more conflict. Schwarz (2020) explains that when citizens feel powerless in the WEP planning, this leads to dissatisfaction and may cause distrust in stakeholders which is a conjecture for negative responses to projects.

Expectations about the distribution of costs and benefits regarding a WEP are an underlying predictor of acceptance (e.g. Liebe & Dobers, 2020). There tends to be more of a symbolic dimension of distributive justice, which can be described as individuals feeling injustice because of comparing themselves to their groups or communities. In addition, some communities have further concerns and expectations as they may be taking on more risks living nearby a WEP. For example, Perlaviciute et al. (2018) argue that unfair distribution of costs, risks and benefits may threaten all individual values, which trigger negative emotions towards energy projects. Although, asking for benefits might be considered socially undesirable in certain cultural contexts, which might shift the general discourse of concerns to something else.

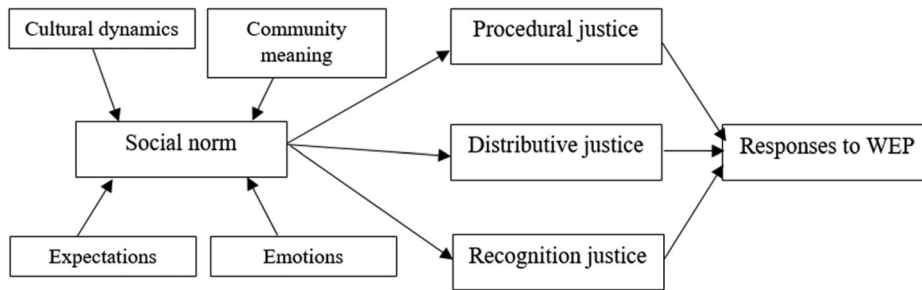


Figure 3. Summarizing the interaction between social norms and perceived justice.

Representation of the localities, their culture and their attachment to their environment are important indicators to recognize and involve the communities in the deployment of these projects. Lai et al. (2021) and Chezel and Nadař (2019) highlight the objectives of recognition justice, which are most of the time neglected. As one possible solution to this recognition issue, frameworks for fair projects can be implemented both on local and national levels. For example, Raymond and Delshad (2016) argue that normative framing of the energy policies may influence public attitudes towards biofuels more than economic frames. Standardizing fair projects by national regulations that also adapt to local settings might be one pathway for influencing factors for justice perceptions. Because what is considered equitable varies in different cultural groups.

According to Lai et al. (2021), the ideological differences in environmental justice in the case of environmental impact assessment and the perceptions of the intermediaries, social norms are underpinning factors. In other words, social conditions and influences are key considerations that affect justice perceptions. Chezel and Nadař (2019) argue that fairness is relational and embedded in energy assemblages. The empirical evidence suggests that there are already existing normative understandings of fairness in the communities, where social norms related to justice are coming to the forefront changes depending on how the project process carries on. Because once the project is announced, in most of the cases, key elements are already decided, this phase tends to be where social norms emerge. However, both negative and positive indicators of norms are subject to change as the project correspondingly evolves. There are a variety of discourses for public interpretation of a WEP, such as communal discourses focusing on local sustainable development of moralistic ones that find connections of the overall advantages of deploying a renewable energy source. These discourses can be examples of deploying positive norms around WEPs. These results attempt to explore the connections between social norms and perceived justice with the Figure 3.

5. Discussion

This study addressed the role of social norms as a relevant factor within the field of social acceptance research on renewable energies. In particular, it explored the interaction between social norms and perceived justice to deepen our understanding of various public responses to WEP. With this study, we aimed to illustrate (1) how social norms are framed in the context of wind energy; (2) what is the role of social norms in the perceived fairness of WEPs; (3) what are the implications of this relationship on social acceptance. We conducted a systematic literature review which was supported by expert interviews and then proposed a two-dimensional conceptual framework for the definitions, influencing factors and impacts of social norms and justice. This framework was based on findings from social psychological theories, social acceptance models and normative approaches to justice. Several conclusions arise from our analysis of the interaction between social norms and justice.

First, the results indicate social norms that shape responses to WEP, are, most of the time, not merely about the project itself, but circle around the cultural dynamics of the community. What these communities mean to their members and what are the expectations of other members to behave concerning planning and decision-making processes are the key elements that constitute norms (Haque et al., 2021). Particularly

environmentally-oriented norms could be increasingly bonding to positive emotions and enhancing communities' understandings of the opinions of their social group (Irfan et al., 2021). Furthermore, the results address the differences in approaching social norms as their impact on perceptions, intentions and behaviours changes between technologies.

Second, social norms are linked with and further influence the expectations or standards of how community members should perceive the projects to be fair or not (Lai et al., 2021; Sokoloski et al., 2018). These expectations are argued to include the demand for community-driven projects and well-formed participation schemes where participation is foreseen before the first decisions are made, e.g. on siting (Walker & Baxter, 2017). Studies underlined the frustration of communities over inefficient public engagement in energy projects, especially when their voices are not heard by the stakeholders (Schwarz, 2020). Moreover, trust in stakeholders, community identity and the decision-making processes of the projects construct the evaluation of fairness (Morrison & Ramsey, 2019). In our study, we concluded that existing social norms of the communities tend to emerge in cases where the phases of the project evolve problematically: whether there is mistrust in stakeholders or unequal distribution or an illusion of participation without any public impact, people would follow social norms as a result of strong emotions (Cousse et al., 2020; Kalkbrenner & Roosen, 2016).

While our study is based on a dense sample of data and has been carefully analysed, we realize some limitations. Although we used broad terms for our research, our goal was to define and understand social norm dimensions and their association with justice. However, the large majority of the papers in our review are empirical which reflect culture-specific differences. We aimed to illustrate the nature of diverse approaches, not to claim that they are disconnected. Moreover, our study was limited to wind energy technologies; however, we included studies that investigated other renewable energy sources in our analysis. Each technology is perceived uniquely; therefore, there may be situational factors that impact opinions of different RETs. Lastly, choosing these methodological tools makes this study stay on a rather epistemological ground, therefore, we recognize the need for future research.

Future research could aim to take a comparative approach to explore the social norms of communities in different cultural settings. All the factors and variables included in this study can be used in comprehensive studies focusing on the analysis of influencing actors of social norms on the local energy projects or testing whether a negative norm in the community would impact how locals evaluate the fairness of a project. We expect significant results from empirical investigations of media tools, individuals, groups and organizations as influencing actors and agents of social norms. There is a lot of room for further elaboration and testing of this conceptual framework which provides future research trajectories. The interactions explored in this study hopefully offer the initial steps in that direction. With such research efforts and implications for stakeholders, conflicts and perceived injustices around WEP might be minimized.

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Appendix

List of experts

	Field	Country	Gender	Date
1st interview	Management	Switzerland	Male	29.10.2020
2nd interview	Social psychology	Portugal	Female	05.11.2020
3rd interview	Policy	USA	Male	10.11.2020
4th interview	Sociology	Japan	Male	11.11.2020
5th interview	Policy	USA	Female	13.11.2020
6th interview	Geography	The Netherlands	Male	16.11.2020
7th interview	Social psychology	Germany	Female	26.11.2020
8th interview	Social psychology	Portugal	Female	30.04.2021