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ABSTRACT

Energy justice is often conceived of as consisting of distributive, procedural, and recognitional justice. This article adds epistemic justice, which engages with the question of how the exchange of knowledge can be shaped fairly. Energy issues ramify across social worlds, connecting to multiple knowledge systems. The conventional elements of energy justice place specific demands on how different knowledge systems must be accommodated. *Epistemic work* must be done to bridge epistemological differences and pay due respect to different forms of knowledge. Energy justice should not neglect this epistemic work, and it cannot be assumed that it is sufficient to invite stakeholders to the discussion arena. I argue that fair ways of dealing with knowledge and fair opportunities for citizens to contribute knowledge to energy affairs are crucial to achieving energy justice of any general form. Also, this *epistemic justice* is not to be seen as yet another pillar of energy justice but a concern that runs through all pillars of energy justice.

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1. Introduction

Energy justice has a broad presence in social-scientific and humanities research on the production, storage, transport and consumption of energy, access to energy and its use, and democratic governance of energy systems. This article contributes to the discussion on the normative content of energy justice by attending to the role of *knowledge* in energy justice. I argue that fair ways of dealing with knowledge and fair opportunities for citizens to contribute knowledge to energy affairs are crucial to achieving energy justice of any general form. Procedural justice and recognition justice, two often-cited dimensions of energy justice, are intimately connected to whether or not people can participate in decisions on energy affairs. But how exactly is knowledge considered in both recognition justice and procedural justice? What does it take for knowledge to be presented as relevant, pertinent and salient to such energy decisions? What does it take for speakers to voice their knowledge on energy affairs, and what does it take for the addressee to recognize the knowledge as valuable and the speaker as knowledgeable? I argue that these questions become particularly delicate in cases where energy is concerned and that

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energy justice needs to cater for such knowledge exchanges. I develop how the diversity of knowledge systems should be dealt with and use the term *epistemic work* to capture the effort that needs to be made to ensure that all people affected by an energy issue can make their concerns and understandings known to others and that they can do so in a way that stages them as knowledgeable and rational.

Such considerations of fair knowledge exchange have been the concern of *epistemic justice* or knowledge justice. The idea of epistemic justice, or rather its antonym *epistemic injustice*, finds an early landmark in the work of Fricker (2007). As will be further reviewed below, Fricker's work stands in a broader tradition of various critical studies from both feminist and de-colonial scholars. Fricker identifies the two primary forms of epistemic injustice as testimonial injustice and hermeneutic injustice. *Testimonial injustice* refers to a situation where a person's account of knowledge is not taken seriously or denied access to arenas where their knowledge might matter on arguably unfair grounds. *Hermeneutic injustice* emerges when the concepts or intellectual means are unavailable to an otherwise capable person to make sense of an affair, to such an extent that the person is incapacitated to have their views presented and recognized and their rights and interests defended. The central understanding underlying this article is that epistemic justice is not to be understood as yet another pillar of energy justice but as a concern that runs through all the existing pillars of energy justice.

These problems of fair knowledge exchange, or so I argue, become particularly pressing when energy issues are concerned, and conventional understandings of energy justice are poorly equipped to deal with them. Underlying much of the literature on energy justice is the assumption that energy provides a special class of questions of justice and injustice. I explore how this bears specifically on the exchange of knowledge. In contemporary societies, energy is involved in complex and manifold relations to institutionalizations and distributions of power, both political and socio-economic. Thus, energy is a concern for both politics and studies of justice at a more academic level (Jenkins et al., 2016, 2020; Sovacool & Dworkin, 2015).

The word 'energy' refers to many things at once. From the physics school book we learn that it is the potential to conduct labor. In geopolitics, it is one of the primary resources and assets that determine relations between countries. In households, it is what comes out of the wall socket and causes an invoice from the utilities at the end of the month. Energy is about carriers such as oil and electricity, about practices such as households and industries such as coal mining, and about market transactions, environmental footprint, and basic human needs. In consequence, the 'energy' in 'energy justice' will be equally polysemic. Throughout this text, I will refer to all of these, and make clear what I am talking about and further reflect upon the concepts when a more particular meaning is pertinent.

Energy, as a generic resource that people need to conduct basic functions of their lives, can be seen as a *primary good*, i.e. a good that all members of society should have their share of to fulfil their basic needs and where societies have to provide or redistribute (Rawls, 1971). Thus, energy is amenable to considerations of distributive justice, where inequities might need to be repaired in temporal and spatial distributions of costs and benefits and inequalities in access due to people's socio-economic positions (Thomas et al., 2020). In addition, people are often situated in very specific energy contexts, which produce path dependency and lock-ins. Also, much of the situation is determined by

energy incumbents, i.e. those (primarily corporate and institutional) actors that are comparably influential in decisions and the definition of agendas. Decisions may be made in ways that pose challenges to democratic standards. Thus, energy is also subject to procedural justice or the concern of achieving just decisions (Sidortsov & Katz, 2023).

In addition to procedural and distributive justice, a third often-cited dimension of energy justice is recognition justice (Fraser, 2009; Young, 1990), which, in the case of energy justice, is usually elaborated as the need to recognize stakeholders as rational individuals capable of setting priorities and joining in decision making (Jenkins et al., 2016). Recognition justice is intimately connected to procedural justice, as failure to include persons procedurally is often based on a misconstrual of their seriousness as stakeholders. Also, procedural inclusion that fails to grant recognition to those stakeholders is likely to fail as genuine inclusion (Castán Broto & Robin, 2023; Pandey & Sharma, 2021) and is more likely to amount to window dressing.

In the following sections, I will further engage with the knowledge content of energy justice issues and argue that energy justice cannot be complete without explicit concern for the epistemic part of energy justice. In Section 2, I will analyze how the circulation of knowledge can be problematic in the context of energy. Then, in Section 3, I further develop this into concerns of epistemic justice and how these emerge in the context of energy. Section 4 presents how concerns of epistemic justice should be central to all the constituent notions of energy justice rather than just another pillar for energy justice. In Section 5, I explore what work needs to be done across the breadth of energy justice to integrate a fair exchange of knowledge in realizing the various faculties of energy justice. I will use the concept of *epistemic work* to refer to the active engagement with the knowledge systems in question and the translations between them and the engagement with the schemes of (in)justice that emerge from those knowledge systems and their interactions. The concluding Section 6 spells out how the thinking can be carried further and wraps up the argument.

2. Energy and the Exchange of Knowledge

Although energy is highly polysemic, some points can be made in a general way about how energy is 'known'. There are at least four aspects to energy that make knowledge about it particular. These are the apparent ease at which transactions on energy can be made while overruling considerations of cultural value; the global connections constituted by the transaction of energy carriers; the nature of energy carriers as a scarce commodity; and the intensive use of expertise in staking interests in energy. This list is probably not exhaustive, but it suffices as a justification for the need to have regard for the distinctly epistemic content of energy justice.

For the current argument, I approach knowledge from a sociological view, taking it to be whatever actors consider knowledge (Bloor, 1976/1991, p. 5). I assume that knowledge is social in the sense that it has value for actors because of those actors' situatedness and their social connectedness. Actors can exchange knowledge, and the possibility to exchange knowledge is tied to conventions of validation and criteria for truthfulness held by the actors' communities (but see Geuskens, 2018, p. 20 for a more elaborate inventory of how knowledge can be argued to be social). Knowledge is at once collective and individual: even though validation systems are held in place in collective social

structures, individuals within such a collective may hold different views and opinions. It is this social anchoring of knowledge that produces a plurality of knowledges (Hill Collins, 1990). In addition, the situatedness of knowers engenders particular affordances and constraints with respect to what the knower can (learn to) know. One central tenet of standpoint epistemology is that the situatedness of hegemonic knowers produces an inability to see injustices tied to the same social structures that produce the very hegemony. These injustices are better visible from the position of those who experience them (Hill Collins, 1990; Toole, 2020).

While an extreme case could emerge where knowledge is true in one community or situation and not in another, this paradox is not what I problematize in this article. I am thus not, for example, relating to notions of *knowledge as justified true belief* (Gettier, 1963) or other exercises of arriving at ultimate truths (Klein, 1971). What matters here is how the exchange of knowledge between different validation systems can become problematic due to inequitable social structures and comparably independently from the actual truth value of the knowledge. That is, I am not interested in how to establish whether a person has truthful knowledge to contribute but in the reasonableness of the criteria others use to decide whether to take the person's knowledge seriously or not.

The first way in which the relation between energy and knowledge is exceptional compared to other aspects of social life is that energy is highly *underdetermined* (Feenberg, 2002, 2005, 2010) in its cultural meaning. Energy, in many of its meanings, and energy practices are imbued with cultural significance. Nevertheless, we see that energy carriers can be made to travel across cultural divides at comparable ease, perhaps even more so than money. Thus, whenever energy is passed on between social and cultural contexts, it will not, by and through itself, raise cultural concerns or destabilize (hegemonic) social relations. Rather, it is the existing power relations that determine what cultural frames prevail, which, in the end, may, of course, be deeply conflictuous. For example, it happens that something that seems to improve the living standards of involved communities may, at the same time, lead to important displacements that deteriorate living standards. Nkansah-Dwamena and Raschke (2020) show how a large-scale land acquisition leads to some genuine improvements in living standards but deteriorates the actual possibilities for inhabitants to shape their lives according to their own standards. Rather, it subjugates them to multinational corporate actions that originate in board rooms on a different continent. Thus, while traveling between cultural contexts, energy serves as a vector to transform those contexts after a distinctly Western model, while on the surface, it only appears as a neutral good. A certain cognitive *arrogance* (Medina, 2013, further explained below) can be discerned in the assumption that the improvements will be understood in the same way outside the corporate board rooms as inside.

Second, energy is transmitted across the globe, tying together many different communities which hold different value systems and different conceptions of justice. Supply chains of energy today involve extraction processes across the globe in ways that often fail to benefit the native inhabitants of the land, if not downright harming them through pollution and other wrongs. This means that the relevant actors are of the highest possible cultural diversity, while dependencies are inseparable. Yet, the underdetermination of energy also produces a certain invisibility of cultural frames across the distance, exacerbating the power-vector effect mentioned above.

Third, energy is a commodity and mostly in high demand. Thus, it is implicated in economic relations, which may engender schemes of inequality. In policy and political circles, these inequalities are often primarily discussed in economic and technological terms (Melin et al., 2022). However, first, such inequalities likely intersect with other inequalities, some of them clearly related to the exchange of knowledge: economically disenfranchised people are likely also to have poorer access to sites of decision-making, acquisition of information, or participation in public debate. In addition, the commodified nature of energy may produce an incentive to abstain from engaging in knowledge exchange if this works counter the acquisition of the commodity: the need for fuel might be more urgent than the desire to speak up about it. Similarly, it is not attractive to speak up if your income is affected by it, and in general, it is not attractive to speak up if that compromises your position in the energy system. As Norgaard (2016) shows, dependence on income from the oil industry leads some communities in rural Norway to socially organized denial of plain facts about climate change and its relation to the use of fossil fuels. Such epistemic disincentives and the epistemic inequalities they engender are typically blind spots in the economic and technological terms that dominate policy discussions on energy inequalities (Aune et al., 2016; Biggart & Lutzenhiser, 2007). At this point, energy is also a somewhat different object for justice than environmental safety, the latter being central to environmental justice. Whereas energy is a commodity that is directly part of the transactions that produce injustices and overflows, environmental problems are often only overflows of other economic transactions that are themselves not necessarily centered on environmental goods. While this is a difference more of degree than kind, energy seems itself more central to the wrongful transactions in question than environmental goods.

Fourth, energy justice relates crucially to knowledge in the sense that many energy affairs are expertise-intensive. While this is not unique to energy, it is another possible source of hegemony that may intersect with other inequities. For example, a case study on biogas production in collaboration between farmers and industry shows how industry actors inadvertently impose specific frames, notably of the raw biomaterial as 'waste' without value. For the farmers, proposing alternatives to this frame proved challenging because of their relative knowledge position (Valkenburg et al., 2020). It was not simply about procedural justice, as there was no simple decision that the farmers were included in or excluded from. Neither was it a problem of recognition justice in a plain sense, as the industry partners recognized the position of the farmers and seemed genuinely interested in engaging in a collaboration that was benevolent for the farmers. Rather, it was about specific knowledge exchanges that were closed off because of a certain *closed-mindedness* (Medina, 2013, further explained below) in some dominant players, who could afford this because they were in better positions to validate and discriminate knowledge claims than others.

3. Epistemic Justice in Energy Cultures

The notion of *epistemic injustices* focuses on power exercised through systems and hierarchies of knowledge. In her conceptualization of the concept, Fricker (2007) explicitly moves beyond knowledge and knowing as social goods that can straightforwardly be redistributed as if they were concrete, wholesale goods. If that were the case, access to

education and information would be sufficient reparations for any inequity. Instead, she emphasizes the distinctly *epistemic* nature of injustices, that is, injustices that have to do with the structure and content of knowledge. Any social injustice may cause people to have diminished access to knowledge and information or a diminished capacity to exchange knowledge. However, it is different when such access is impeded by the structure in which the knowledges are cast. Also, the subordination of cultures and identities may be distinctly rooted in the structures of the knowledge those cultures nurture. In the worst case, the knowledge systems themselves become compromised, and compromising someone's knowledge system is potentially a violent act (Visvanathan, 2005, 2009).

The first primary form in which Fricker recognizes epistemic injustice is *testimonial injustice*. Such injustice happens when a speaker's credibility is reduced, the speaker's knowledge contribution is not taken seriously, and the speaker is not respected as a full human being with knowledgeability. This misreckoning may be the consequence of prejudice, either in the individual listener or in the institutional structures in which the listener and the speaker are embedded. Credibility is, in such a case, distributed in unjust ways. Testimonial injustice can happen on willful grounds or by accident when the listener, in more or less inadvertent ways, fails to recognize the speaker's knowledge-ability (Wanderer, 2012). In the energy-justice realm, an example of testimonial injustice is when concerns among the public are declined as being 'mere NIMBY'. NIMBY stands for 'not in my backyard', and it serves as shorthand for protests against developments that are based only on short-term and nearby interests, arguably failing to see the larger picture of societal developments and the responsibility people may have to take therein. Despite being refuted academically, such NIMBY diagnoses of knowledge deficits often emerge in policy processes (Wolsink, 2012). Often, there are, in fact, more nuanced and legitimate concerns underlying the protest than mere lack of knowledge. Still, these remain invisible (or are actively discarded) from the viewpoint of the incumbents. As Burningham et al. (2014) show in a case of a wind farm siting controversy, much of the NIMBY diagnosis is actually owing to structural prejudice amongst bureaucrats and project developers. They consider proponents of the wind farm rational and well-informed. In contrast, opponents are considered driven by emotion, misinformation, and using arguably subjective values such as 'visual intrusion' – in short, irrational. Thus, those who dominate the decision-making arena, in effect, make this arena hostile to a particular class of arguments, such that the people putting forward those arguments are taken less seriously, which is an example of *testimonial injustice* a forteriori. It could be argued, in line with Fricker (2007, ch.1), that exclusion, in this case, is not connected to any broader social identities and common fault lines such as race, class and gender, and, therefore, not a case of testimonial injustice. However, the opponents are *de facto* constructed into a particular identity that is defined by their particular opposing opinion, a specific situatedness of living and a specific situatedness vis-à-vis institutions of power, and, importantly, an incapacity of rational and reasonable thinking. For these reasons, I consider the connection between exclusion and identity sufficiently comprehensive to see this as an example of testimonial injustice.

The second primary form of epistemic injustice is *hermeneutical injustice*, which is when people are made or kept unable to make intellectual sense of a phenomenon by the social situation that produces a gap in access to hermeneutic resources. Such incapacitation

may, for example, consist of the structural non-existence of concepts as a part of discourses. An example is the notion of energy poverty. As Teelucksingh and Poland (2011) show, energy poverty, being the lack of access to energy provision as a basic asset in human life, is distinct from other forms of poverty in terms of its genesis, reproduction, and the social groups it hits. For example, it does so because subsidies for energy-saving refurbishments benefit higher-income groups who least need them (e.g. Lekavičius et al., 2020, generalizing from a Lithuanian study). To make arguments and contribute to debates, people need this conceptualization of energy poverty to make their specific points intelligible to others. However, it can be the case that no such concept of energy poverty has been devised or accepted or that it is insufficiently recognized. Such a non-existence of a vocabulary of energy poverty has been shown to be the case in the United States at specific times and places (Bednar & Reames, 2020). If this vocabulary is absent from the dominant discourses in a given society, it is hard to make sense of the specific form of poverty and to argue for alleviating measures. The absence of vocabulary is an unjust distribution of hermeneutical resources, i.e. resources needed to produce and exchange knowledge.

The literature on epistemic justice stands in a broader tradition of feminist critical thought. One common enemy here has been modern thought that attempts to abstract knowledge from the subjectivities and politics of the knower. Feminist critique has argued that this depoliticizing is, in fact, a political act and that the subjective identity of the knower must be kept in view to assess the knowledge claim fairly. What is more, the ideal is hypocritical in the sense that, in practice, knowers are continually discarded on the basis of subordinate identities of race or gender (Martin Alcoff, 1999). Also, the exemplary subject of knowing is a white male, which fades into the background if knowledge is understood as the typical propositional content of Western thought (Code, 2014).

Epistemic justice scholarship also has strong ties with de-colonial thinking. A notable point here is that dominant epistemologies have de facto been defined by white men, which cannot be seen apart from the fact that white men have held dominant positions institutionally, for example, as access to quality education and the assumption of influential positions in faculties (Hill Collins, 1990). As a consequence, experiential accounts by black women have been systematically disregarded in public discourse. These long-standing critical observations must be taken into account when thinking through epistemic justice in energy cultures.

Two entities are to be put in focus to see how such epistemic injustices potentially emerge in the context of energy. First, we must examine the subject of knowing: who 'does' the knowing, how, and in relation to whom and what? Second, we need to look at the object of knowing: what (or whom) is known, how, by whom (or what) and in relation to whom and what? Catala (2019) argues, in a context of racism and white ignorance, that hermeneutic injustice is typically a composite problem between the subject and the object. The subject may hold misconceived standards for the production and validation of knowledge, and the object may be unable to 'speak' (literally or figuratively) to the knowing subject. The ignorance that results becomes naturalized when social structures render alternative views anomalous. To counteract this malicious lock-in, Catala argues for *multicultural literacy*, developing this concept, coined by Jaggar (1999), from its original, generic political-theoretical use toward a more distinctly knowledge-oriented use. Multicultural literacy is the explicit and ongoing 'effort on the part of the dominant

group to understand and be receptive to the experiences and perceptions that non-dominant groups might have of the dominant culture' (p. 3). This literacy serves to recognize that the knowledge position of non-dominant groups is meaningful and even meritable in its ability to diagnose (and critique) the knowledge position of dominant groups. The idea of the object of knowledge might refer to people involved who are thus known in a particular way or to other entities that matter, such as the energy systems we talk about or schemes of justice. I will discuss some objects first and then move to some issues on the subject side.

The first object of knowing in an energy context is energy itself. In line with the polysemy mentioned above, energy can be known in many different ways: as a commodity, as an entity around which our household routines are folded, as something we feel guilty about using because of our carbon footprint, or as a scarce resource through which we see our freedoms constrained. Also, energy constitutes a relation between us and our broader context: it connects to the land we live on and the cities we live in. Relations to land and cities may be vital ingredients of our cultures and identities and, hence, of how we relate to ancestry and heritage. But it also plainly connects us to infrastructures and technological configurations. Some of these ways of knowing are more or less economical, while others are less tangible. It proves particularly challenging to bring the non-economic, less tangible ways of knowing to bear on energy decisions. For example, at the time of writing, considerable numbers of Sami people are rallying against the Norwegian government. They claim that their cultural and traditional interests are insufficiently considered when making decisions on where to locate wind farms. The High Court of Norway agrees that the siting has not been done with due diligence. Some measures have been implemented to compensate for the loss, but these do not sufficiently mitigate the cultural loss inflicted on reindeer herding. This loss is primarily visible from a particularly situated way of knowing and is not straightforwardly translatable to other knowledge frames. As Tsosie (2012, p. 1161) notes, while science can measure concentrations of toxic substances, there is no way of scientifically establishing something such as 'cultural harm'. As a consequence, the High Court judgment does not state how the lack of due diligence should be corrected for.[1] In this particular case, translation between the relevant ways of knowing the energy infrastructure and its impacts has not been accomplished so far.

Another important object of knowing in this context consists of people's value frameworks and the accompanying schemes of justice. Distributive justice is an object of knowing and, hence, subject to particular ways of knowing. It is worth noting here that the Western taken-for-granted primary categories of distributive energy justice, such as access to affordable energy and a fair distribution of the downsides of energy production, are grafted on Western, human-centered, individualist world views (Menton et al., 2020). Western worldviews in dominant positions generally do not tend to epistemological self-awareness and reflexivity. This lack of reflexivity is, for example, seen in their tendency to think of their knowledge as merely 'representing' reality rather than constructing it and imposing normative frameworks on it. Dominant worldviews are unlikely to show awareness of the existence of multiple epistemologies. They enact the colonial tendency to suppress other ones (Berenstain et al., 2021) more than showing the aforementioned *multicultural literacy* (Catala, 2019). At best, they somehow incorporate knowledge from indigenous origin through participation

initiatives. However, they all too often reject the cultural norms that come with that knowledge, thus de facto suppressing the knowledge system and the culture it is part of. Such suppression may even be enshrined in legal arrangements, and it has been argued that the dominant scientific epistemology of 'discovering' reality has served these oppressive legal arrangements well (Tsosie, 2012).

If distributive justice is pursued without paying proper attention to epistemic justice, such (neo-)colonial structures may be reproduced rather than abated. Under a pluralist understanding of epistemology, as epistemic justice compels us to hold, or under an aspiration of multicultural literacy, subaltern understandings of fair distribution must be given space to be advocated. Also, these understandings must not be given space in an unreflexive way but in a substantive way that provides hermeneutic justice. Epistemic agency, i.e. the possibility to act as a knower that I primarily understand as being afforded by the social context rather than as an innate ability of the individual, must be preserved and actively supported. It is not simply about dominant groups being prevented from 'over-shouting' the subordinate groups. It is about actively developing a sensitivity to subordinate standpoints and knowledges and their ability to present schemes of just distribution (Medina, 2012, discussing this issue in a racialized context).

Reproduction of dominant schemes of distributive justice is potentially exacerbated if technological solutions pose the moral hazard of diverting investment from real abatement of unfair practices. For example, many 'smart' energy solutions are presented as alleviating the lives of citizens and providing them with access to more cost-effective energy use. However, these solutions, in fact, require a lot of reorganization of household activities, disproportionately burdening low-income households, especially women. This, in effect, deteriorates those households' relative access to cheaper energy, deepening socio-economic divides (Johnson, 2020; Strengers, 2014). At the same time, such solutions may make the schemes a matter of concern and discussion, in effect, making the unfair practices visible (Wagner & Zizzamia, 2021). One way or another, subjecting hegemonic distribution schemes to deliberation and contestation is vital. This deliberation needs to address such primary categories as the very objects of redistribution and conceptions of which entities – i.e. individual humans, communities, or even non-human actors – are to be included in the scheme. Such deliberation must take account of claims beyond Western notions of distributive justice, as well as the fact that these run a disproportionate risk of being discarded as nonsensical.

On the subject side, we find equally many perspectives on who counts as a member of the justice community and as a knowing or knowledgeable member. Simply taking 'the energy citizen' to be the generic subject is problematic, as there is no unified notion of this citizen. The citizen may be engaged or aloof, empowered or disenfranchised, and existing as some real community or only as a construct in policy documents (see Silvast & Valkenburg, 2023, for an overview). All these different guises in which the 'energy citizen' emerges entail different knowledge positions and, hence, different potential contributions to make to any decisions on energy affairs. We should expect that this diversity of knowledges and knowledge positions comes with differential opportunities and difficulties to be included in policy processes. Thus, epistemic justice is a necessary condition for the other forms of energy justice to be obtained, which is exactly why epistemic justice is not just another pillar of energy justice but a theme that runs transversally through all of them.

One particularly delicate subject of energy justice issues are the community and individuals affected by energy decisions. If impacts are primarily visible through the epistemologies of those living in the impacted area, and if these epistemologies are not straightforwardly incorporable in policy frames, then it is logical that epistemic injustice emerges. As Menton et al. (2020) argue, the 'elephant in the room' is the taken-for-granted paramountcy of maximizing the GDP (Gross Domestic Product, basically what the economy of a given country earns over a year) as the main principle by which societies are governed. Many considerations people may have are not recognized as such if they do not match dominant epistemologies focused on the GDP. Consequently, people having those considerations are not recognized as knowing subjects. This misrecognition cannot be seen apart from the extractivist, corporatist logics that reduce interests to financial interests, where frames are not geared toward including different sorts of knowledge.

4. Integrating Epistemic Justice Into Energy Justice

Energy justice has been discussed broadly in recent years. Central constituents are often identified as distributive justice, recognition justice, and procedural justice (Jenkins et al., 2016, 2020; McCauley et al., 2016; Thomas et al., 2020). In addition, and partly outside the specific energy-justice literature and more broadly into literatures of environmental and ecological justice, considerations are added of critical, postcolonial, intersectional and non-anthropocentric notions of justice (Menton et al., 2020; Sovacool & Dworkin, 2015). Also, restorative and reparative justice discourses have been adopted into energy justice (Luke & Heynen, 2020; Milun & Pochtaruk, 2022; Wallsgrove, 2022)

The idea of *distributive* energy justice translates generic political-philosophical ideas of a fair distribution of social goods to specific energy-related goods. Building on the tradition of Rawls (1971), primary social goods are understood here as those goods that are good and even necessary for all members of a society or society at large and that this society needs to provide or redistribute among citizens. As energy provision is indispensable for life in contemporary societies, access to affordable energy can reasonably be considered a social good and subject to distributive considerations. As Jenkins et al. (2016) argue, such a scheme of distributive justice should concern not only access to energy but also the burdens and benefits of the production, storage, and transport of energy.

Conceptions of distributive justice cannot be separated from the knowledge systems that produce them, and this is no less so for energy-focused conceptions. Jenkins et al. (2020) acknowledge this by emphasizing that just distribution is a socially constructed category. But there is more to this: if knowledge systems happen to be dominant or hegemonic, they are also best positioned to determine the conception of distributive justice that will be in place. This prerogative reproduces the very hegemony.

Thus, to prevent a conception of distributive justice from reinforcing the hegemony of a particular knowledge system, a direct engagement with the knowledge systems that are affected by the conceptions of justice must be added. For example, Temper (2018) discusses the case of the Wet'suwet'en First Nation in British Columbia. The people are confronted with oil and gas pipelines transecting their land. Measures had been put in place from the side of the Canadian government to install distributive justice. However, as Temper further analyses, the attempts at installing distributive justice were, in effect,

geared toward eliminating indigenous epistemologies and subordination of the accompanying normativities. Thus, energy infrastructures serve as a vector for expanding capitalist extractive rationality and a form of cultural imperialism (Catala, 2019; Young, 1990) at that. The accompanying distributive justice remains a caricature as it does not come with warrants for self-governance on the basis of the ontologies and epistemologies of the people in question.

The idea of *procedural justice* refers to the need for decision-making procedures to ensure that affected citizens can voice their legitimate interests and influence the decision (Sovacool & Dworkin, 2015). Procedural justice is believed to accomplish that people can accept the outcomes of a decision because of due diligence in the process, even if they disagree with the outcome of the process itself (Swift, 2001, p. 68 ff.). For the case of energy justice, Jenkins et al. (2016) elaborate on this as the need for methods to include local knowledge, to disclose relevant information such that no actor has a disadvantaged position in making sense of issues, and to secure proper representation in relevant institutions.

It may seem granted that procedural justice naturally safeguards testimonial justice, as it is essentially about giving voice to actors. However, uncritically inviting relevant stakeholders to the discussion table may do more harm than good. It often remains unclear what it takes for concerns to be voiced and contestation to be possible. In addition to inviting, open provision of information is often thought to be an important principle. However, this runs the risk of remaining an empty slogan if no effort is made toward the translations that are needed to enable a meaningful exchange between different cultural frameworks and value systems. In addition, people may see their identities and concerns insufficiently reflected in such decision-making practices, leading them to refuse to collaborate (Pandey & Sharma, 2021). Similarly, the whole endeavor will fail if they see their fundamental understandings of reality and the future insufficiently reflected in such practices (Castán Broto & Robin, 2023; Krzywoszynska et al., 2018). In a general sense, these are examples of people not sufficiently recognized and facilitated as creators of knowledge and instead only positioned as objects of study (Temper & Del Bene, 2016).

Zeitoun (2017) point out that there is no hope for procedural justice if there is no parity between actors in the degree to which they can exert influence and enforce decisions that are in their interest. What appears as an empowering provision of information might, in fact, be an incapacitation by providing an overdose of specialist information by which the actual concerns become overshadowed. The underdetermination of energy's value and cultural meaning and the ensuing decontextualization make such disparities easily escape attention, especially if they are cloaked as a provision of information. Thus, these failures are better understood in a framework of epistemic justice: basic concepts through which people make sense of the world are denied credibility (i.e. a hermeneutic problem), which makes their seeming access to sites of giving voice mere window dressing (i.e. a testimonial problem).

Recognition justice is understood as respecting the fact that people have different social, cultural and economic positions and identities. As these differences may be situated in hierarchies and hegemonies, it is not straightforward that every identity receives a fair degree of recognition. Hence, explicit measures might be needed. In discourses of energy justice, recognition justice mostly traces back to the notion as

developed by Fraser (1999) and the politics of difference by Young (1990). These literatures thematize the idea that 'neutrality' or 'impartiality', in fact, compel actors to abstract from the particularities of a subject's situation, while it is precisely in that particular situation that injustices emerge and hegemony plays out. Claiming neutrality may amount to silencing the differences that recognition should rather put on the main stage. More specifically, this might amount to the form of silencing that Dotson (2011) refers to as *testimonial smothering*, as it conditions speakers to curtail their testimony such that only the 'acceptable' parts of it survive into the debate. Indeed, as van Uffelen (2022) proposes, recognition justice is to be understood as the societal enablement of actors to self-realization and a cultural ordering of society in a way that provides groups with participatory parity.

Just like procedural justice, the idea of recognition justice at face value seems a good strategy to deliver a fair exchange of knowledge. However, in the first place, recognition is exactly among the things that go wrong in the procedural problems above. As Catala (2019, pp. 4–5) argues, fair procedures require an active stance on the listeners' part to understand and be receptive to the experience of non-dominant groups. *Cultural imperialism* looms large if dominant social meanings render non-dominant groups' perspectives invisible. As Medina (2018) argues, recognition might very well be mistaken for the question of whether people are 'sufficiently' included. Rather, he argues, the problem is often in the way such inclusion is done. Often, collectivistic and structural causes underly inappropriate modes of recognition and, in fact, require 'changing the terms of the dynamics, [and] opening up new ways of making sense and appearing in the social world' (p. 3).

In the context of energy justice, recognitional injustice can emerge if it is not recognized how one's identity may stand in relation to energy. For example, in communities where much income comes from blue-collar work in the fossil extraction industry, community life may come under pressure if those industries change radically because of low-carbon transitions. The arguable wrongs at the level of community life may not be visible and hence not recognized if those transitions are only addressed in terms of how to compensate the workers financially. Another example of the knowledge-related aspects of recognition justice comes from the book-length account of an activist-philosophical engagement with fracking-based gas recovery in Texas by Briggle (2015). He describes the apparent attempts of industrial actors to render the opponents of fracking 'irrational' and as having a 'skewed sense of reality' (p. 103). Upon closer look, these industrial actors seem to 'try to define the terms of what counts as rational or objective assessment of a technology' (p. 104). In countering such attempts at installing hegemonic rationality and vocabulary, activists insist on using non-neutral terms, preferring, for example, 'toxic waste tanks' over 'condensate tanks', as the industrialists call them. This strategy helps keep in view that language is not neutral (p. 116). This example from the realm of energy production shows that silencing opposing voices or curtailing their possibilities to get their voice heard takes the form of 'undefining' the concepts that would be mobilized to make their claims credible. People are thus robbed of the concepts they need. This is a clear example of hermeneutic injustice.

What is more, recognition is, at least potentially, an asymmetrical transaction. If the recognition depends on the goodwill of the recognizing party, then it remains questionable how genuine the recognition is. As Coulthard (2014) argues, recognition in the

context of Canadian policy, in fact, sustains colonial power relations. By demanding from the colonized that they no longer challenge the legitimacy of a capitalist, the policy de facto installs colonial thought in the colonized. That is to say, the recognition they receive is recognition *within* the colonial system, not a recognition of their own systems of thought. The colonized can issue claims on the land within the colonial system, but they cannot issue claims *informed by the land* as they stem from their own knowledge systems. Generalizing this, a dominant actor can pretend to recognize and respect the viewpoints of others as different from their own and respectfully ask those others to present their viewpoints. Still, if this explication is forced into hegemonic frames of reference, which compromises the integrity of their presentation, then it may not pass as genuine recognition (Berenstain et al., 2021). This notion of recognition has been elaborated widely in environmental justice and by the work of activists in that realm, and it is somewhat ironic to see that discourses of energy justice have, at points, denied this heritage (Salter, 2023).

This issue must not be mistaken for the question of whether those in power can or cannot take any position in an arguably contentious matter. As McGravey and Hodgetts (2022) argue, it is key that those in power, notably states, assume the responsibility of extolling such things as the existence of anthropogenic climate change. Taking such a stance is not to be mistaken for 'silencing other voices than the state's voice', and it is not necessarily a failure of recognition. Yet, the line between them is a thin one, and it matters how the possibility of voicing dissenting positions is shaped. For example, in contrast, Breakey (2015) observes that states often deploy moral language to solidify their positions and preempt them from discussion. If they do so without engaging in moral dialogue and justification, as is often the case, they de facto mobilize moral language to further very particular interests. Then, it does, in fact, become an example of hermeneutic injustice, as it renders certain classes of arguments unintelligible.

Thus, these central dimensions of energy justice point toward a distinctly epistemic content that merits attention. Conceptions of energy justice are the product of specific knowledge systems – chiefly Western, academic ones. This connection harbors the hazard of reproducing those knowledge systems and the hegemonies upon which they are predicated (Hendlin, 2018; Luger et al., 2022). Ottinger et al. (2017) have argued this for environmental justice, which is an important tributary to the literature on energy justice. Often, some form of participation or inclusion is straightforwardly taken to be an essential ingredient of energy decision making so as to achieve procedural and recognition justice. However, the mere inclusion of knowledges might reproduce existing power relations rather than abating them (Krzywoszynska et al., 2018; Normann, 2021; Pandey & Sharma, 2021; Turnhout et al., 2020). If inequities in epistemic agency are left unaddressed, the hazard looms large that hegemonic knowledge systems remain reproduced, taking hegemonic notions of justice in their wake. For example, as Menton et al. (2020) show, injustices might instead emerge from Western socio-economic relations with their extractivist logic imposed on the Global South rather than being decreased by it. Similarly, as Temper (2018) shows, ideas of justice that fail to put central the self-governance of peoples involved in terms of their own ontologies and epistemologies remain caught in colonial power structures. Thus, while energy justice is conceived as a conceptual tool explicitly pluralist about value (Sovacool & Dworkin, 2015), it is by no means straightforward that this pluralism can be nurtured against the background of the more

fundamental hierarchy in knowledge systems that determines the practical implementation of energy justice. Therefore, explicit engagement is needed to counteract hegemonies and to change pretendedly inclusive knowledge processes that, in fact, reproduce these hegemonies.

5. Epistemic Work for Energy Governance

In view of the mechanisms discussed, securing epistemic justice as part of energy justice is not likely to happen by installing some principles. Rather, countering existing hegemonies remains an ongoing concern. Hence, it is best thought of as work: *epistemic work*. The main challenge for epistemic work in achieving epistemic justice is thus to ensure that people from a diversity of knowledge positions can contribute to decision-making processes. While this is, at its foundation, just an extension of the principle of recognition justice, it is at the same time critical at a more fundamental level, namely the level of the structure of relevant knowledges. It needs to engage with the fundamental social relations that underlie any fair or unfair knowledge exchange. It needs to either cope with these fundamentals in a pragmatic sense or critique those fundamentals.

Ideas on *knowledge brokerage* provide a first source of solutions (Meyer, 2010; Pielke, 2007; Turnhout et al., 2013; Unander & Sørensen, 2020; Valkenburg et al., 2020). In general, knowledge brokerage refers to the gamut of activities that are conducted where multiple knowledge systems meet and knowledge claims need to be exchanged between them. In such encounters, some form of translation is needed. The encounters may themselves be generative (Unander & Sørensen, 2020). Yet, the will to translate is on its own insufficient to grant that knowledge claims survive over all the boundaries articulated in the context of epistemic injustice. If taken naively, it could lead to the mistaken assumption that each of the knowledge systems between which translation is due is receptive to knowledge from outside its own confines. In this vein, Reed et al. (2014) argue for the explicit adoption of an *assumption of rationality and reasonability*: interlocutors should commit themselves to always assuming that others are capable of rational and reasonable thought, even if those others' rationality is different than one's own and their contributions seem nonsensical at first.[2] It is indeed crucial to Fricker's (2007, p. 169) concept of the virtue of hermeneutic justice that hearers develop sensitivity to the possibility that an apparent difficulty in the speaker to provide a meaningful account of a situation might actually be owing to a genuine gap in access to collective hermeneutic resources, rather than nonsensicality. However, it follows from the work by Tsosie (2012, 2013) that this assumption of rationality and reasonability is far from given: dominant Western knowledge systems and the policy systems they support are based on specific criteria for knowledge, such as the separation between the realm of religion and the realm of knowledge. Tsosie observes, however, that many indigenous knowledge systems are predicated on exactly such a connection between the religious and the factual. Thus, such knowledges are more or less automatically disqualified as irrational from Western knowledge systems, nor are the knowledges recognized as ownable and protectable.

In light of the considerations of epistemic justice, this assumption of rationality and reasonableness can be pushed further so as to more closely approach Catala's (2019) idea of multicultural literacy. Medina (2013, pp. 42–45) discusses the virtues of *epistemic humility*, *curiosity and diligence*, and *open-mindedness*. Epistemic humility consists of the

recognition that one's knowledge is limited and of the willingness to identify lacunae in one's knowledge. Curiosity and diligence are the commitments to do the intellectual work to fill those cognitive gaps and overcome limits. Open-mindedness is the willingness and ability to assume a multiplicity of perspectives and accept perspectives that are irreconcilable with one's own. Medina argues that oppressed groups are compelled by force (in his argument, racialized forces) to show these virtues with respect to the perspectives of the oppressors. The oppressed develop what he terms *subversive lucidity*. In contrast, the oppressors, who do not need to show these virtues, develop opposing vices of *arrogance*, *laziness*, and *closed-mindedness*. These vices lead to what Medina calls *active ignorance*. What is more, according to Catala (2019), developing awareness of one's privileged position is a prerequisite to developing such virtues.

Taking this toward the epistemic work that should be part of implementing energy justice as epistemic justice, as a refinement of the assumption of rationality, means that those in charge of energy-related decisions need to make an active effort to practice the values of humility, curiosity/diligence and open-mindedness. Thus, translation and brokering need to go beyond the mere shaping and facilitating of discussion arenas. They also involve active work toward the emancipation of suppressed speakers.

Epistemic work needs to include making talk of justice reflexive. It is needed to be explicit about the frames of reference from which schemes of justice emerge and open up those frames to discussing and moving between them in a comparative mode, i.e. a mode where different frames are discussed from within each other's position without granting primacy to either of them. As Temper and Del Bene (2016, p. 46) argue, questions should be asked as to whether concepts and their meanings are sufficiently shared, how terms and methods are shared or not, and what tools and methods participants are comfortable with. Such a reflexive stance to schemes of justice pertains to all the pillars of energy justice.

Epistemic work would also, in a general sense, need to facilitate contestation. The fundamental possibility of contestation is central to many ideas of democracy (Mouffe, 2000a, 2013). Specifically, epistemic justice is vital to staking the knowledge claims needed to contest power structures (Fricker, 2013). In the case of energy and energy justice, epistemic work would need to take care that not only schemes of justice but also the very decisions that are made can be contested. Expertise is likely to play a dominant role in the practice of energy governance. Even insofar as participatory approaches are meant to counter this dominance, it should be borne in mind that such approaches themselves are vulnerable to reproducing hegemony and building suppressive forms of consensus (Mouffe, 2007). This preservation of contestation modulates the procedural pillar of energy justice. This might seem paradoxical at first sight, as a proper procedure would ideally grant that all members of a constituency can accept the outcomes as collectively binding, and no contestation would be needed. However, that is exactly the point for Mouffe: an apparent consensus must always be understood as suppressing defiant voices and, hence, temporary and never conclusive. Contestation must always be possible, and uncritical approaches to including knowledge are not likely to achieve this. Also, through all these means, policy making and implementation are stripped off some of their potency to get things done, and it is key not to disable democratic institutions from fulfilling their core functions. Epistemic work is thus also about striking a proper balance between contestation and the need to implement decisions that are taken by democratic

means, and ultimately also about staging this as a strengthened democracy rather than a compromised one.

Finally, epistemic work should be about symmetrizing the move of recognition. As explained above, recognition can be an asymmetrical affair if it is at the disposal of only one of the parties. Engaging with difference and empowering both ends of a relation to rejecting the other requires first recognizing and articulating those differences. Certainly, in energy affairs, where one end of the relationship can be a powerful authority or company, such empowerment is a non-trivial effort.

All these ideas on the content and nature of epistemic work still leave the question of who is to do this epistemic work unanswered. However, the answer is implied by exactly the content and the nature of the work: it is to be done by those who can, i.e. those who are in powerful positions in energy affairs – whether these are in practice energy policymakers, corporate actors, or those who are otherwise in socio-culturally dominant positions. At the same time, this includes the responsibility of not reproducing the unequal power balance, and hence the need to pursue ways to empower those in less powerful positions.

6. Discussion and Conclusion

To some extent, these knowledge-related considerations in energy justice have been addressed. For example, Sidortsov and Sovacool (2015) add the notion of *cosmopolitan* justice to the framework, substantiating the idea that the consequences of energy decisions potentially affect people across the globe, not only communities local to where the decisions and interventions happen. Such ramifications include basic distributive aspects (Droubi et al., 2022), e.g. the mining of resources that produce detrimental effects at the mining location and benefits at the consumption end elsewhere across the globe. However, the ramifications also mean that such effects wander across cultures. As the current argument shows, it is not enough for accounts of cosmopolitan justice to simply take account of the needs of all people across the world affected by a certain issue if this 'taking account' is itself not put to critical scrutiny along the lines explained in this article. Frames of justice that originate in Western academic discourses will likely replicate their own views on such fundamental categories as who the referent subject of justice is (individuals, communities, ecologies?) and the schemes that intrinsically connect to such categories. What is needed, or so I have attempted to argue, is a range of measures that counter Western hegemonies.

Paying due attention to the epistemic work content of energy justice also unearths further connections to existing bodies of literature, such as much of the work done in *Responsible Research and Innovation*. Van Oudheusden (2014) has drawn attention to the terms of engagement in decision-making processes being part of those processes themselves and to the fact that these terms themselves should be engaged with rather than taken for granted. Similarly, the need to keep contestation open should be a central part of innovation governance (Mouffe, 2000a, 2000b; Valkenburg, 2020). Various works referenced above have shown that getting people to the discussion table is insufficient, and the current analysis provides further substance.

Much of the argument so far has taken for granted that there is a general need to include knowledges and that knowledges are worthy of protection and curation. This assumption is a direct correlate of the social conception of knowledge that

I started from. If left unaddressed, this opens the door to an 'anything goes' relativist vision of knowledge. However, there will indeed remain a need to judge the epistemic value of knowledge claims, i.e. in what senses it can be deemed meaningful, truthful, and pertinent to a certain issue or situation. Only after due diligence by the principles of epistemic justice should we have a last resort to the possibility of deeming them to be nonsensical (Holman, 2020). Indeed, even if epistemic pluralism is recognized, this should not entail the endorsement of nonsense and lies. Also, critiquing a knowledge system may be transformative and instrumental to forms of learning and not always, by definition, a humiliating or colonizing act. Hence, it would be paternalistic to assume that knowledge systems should categorically be protected against it. Holman (2020), drawing on the work of Helen Longino, argues for upholding important epistemological principles but situating them in the contexts of production and use of the knowledge, not at an external view from nowhere. Acknowledging this situatedness is a vital part of epistemic work. Equity should be pursued in the sense that all epistemologies should be given the same opportunities to defend their claims as true and rational, at least in their own context of emergence. Epistemic work needs further development toward what this could mean in practice. This is then not only a matter of developing modes of dialogue but also about how structural problems might stand in the way of such dialogue and how notions of reparative and restorative justice (Luke & Heynen, 2020; Wallsgrove, 2022) can be leveraged against such structural problems.

This article has discussed how epistemic justice connects to energy justice. Rather than discussing epistemic justice as yet another pillar of energy justice, the argument has been that epistemic justice needs to be taken into consideration across each of the other pillars. Knowledge claims are exchanged in any consideration of justice, and in any such knowledge exchange, degrees of unfairness can emerge. If left unabated, each attempt at implementing justice runs the risk of aggravating the hegemony of Western notions of justice. Forms of epistemic work were proposed to mitigate such problems. It is to be hoped that the literature on energy justice takes this emancipation of knowledge systems further.

Notes

1. https://www.nrk.no/norge/jurister_-dette-sier-hoyesterett-om-vindmollene-1.16314514, accessed 28 February 2023.
2. This is close to the *principle of charity* (Blackburn, 2016, p. 79), which holds that as much truth should be assumed in discussants' claims as possible. However, truth is a problematic concept once we take a pluralistic stance to epistemologies.

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