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DOI
10.1080/17449626.2024.2338349

Publication date
2024

Document Version
Final published version

Published in
Journal of Global Ethics

Citation (APA)
Cañizares-Gaztelu, J. C., Copeland, S. M., & Doorn, N. (2024). Assessing the capability approach as a justice basis of climate resilience strategies. *Journal of Global Ethics*, *20*(1), 31-55. https://doi.org/10.1080/17449626.2024.2338349

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Journal of Global Ethics

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/rjge20

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To cite this article: Jose C. Cañizares-Gaztelu, Samantha M. Copeland & Neelke Doorn (02 Jul 2024): Assessing the capability approach as a justice basis of climate resilience strategies, Journal of Global Ethics, DOI: 10.1080/17449626.2024.2338349

To link to this article: https://doi.org/10.1080/17449626.2024.2338349

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JOURNAL OF GLOBAL ETHICS
https://doi.org/10.1080/17449626.2024.2338349

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Assessing the capability approach as a justice basis of climate resilience strategies

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ABSTRACT

Climate adaptation and resilience scholars are struggling to address distributive and procedural justice in climate resilience efforts. While the capability approach (CA) has been widely appraised as a suitable justice basis for this context, there are few detailed studies assessing this possibility. This paper addresses this gap by advancing discussions about the prospects of the CA for guiding justice work in climate resilience. With its emphasis on the final value and mutually irreducible character of the concrete beings and doings of individuals, we find the CA relevant for tackling salient aspects of adaptation, such as the multi-faceted and locally specific nature of climate vulnerability. We also present and discuss a capability application that has particular relevance for including distributive and procedural justice considerations in climate resilience. On the other hand, we find that extant arguments in support of the CA neglect the limitations of the CA and some dilemmas involved in applying it, also overestimating the differences between the CA and other justice approaches, especially those based on resources and needs. These problems lead us to advise against treating the CA as a one-size-fits-all solution to the ills of climate resilience and they further raise a need for joining efforts with complementary approaches.

ARTICLE HISTORY
Received 31 January 2023
Accepted 27 March 2024

KEYWORDS
Capability approach; distributive justice; procedural justice; climate adaptation; climate resilience

1. Introduction: climate resilience, justice and capabilities

Resilience is a major concept in the climate adaptation arena (Wamsler, Brink, and Rivera 2013). Climate resilience, the 'capacity of social, economic and ecosystems to cope with a hazardous event or trend or disturbance' (IPCC 2023), is a guiding goal of many multi-scale adaptation efforts (Brown 2012; Rockefeller Foundation and Arup 2016). Yet, there remain considerable concerns with the shortcomings of climate resilience efforts in respect to justice (Meerow, Pajouhesh, and Miller 2019). One perspective that is increasingly perceived as a suitable guide for handling these challenges is the 'capability approach'[1] (CA, henceforth) (Coggins et al. 2021). This article explores its suitability as a justice lens for climate resilience.

Climate resilience efforts raise many kinds of justice concerns (Cañizares, Copeland, and Doorn 2023). For example, actions taken for improving short-term resilience may

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be maladaptive in the long run (Pelling 2010) and even unsustainable (Elmqvist et al. 2019), thus resulting in *intergenerational injustices*. Resilience thinking, with its focus on responding to stress and shocks, may also neglect the causes of climate risks, especially non-climatic stressors – structural factors that create and reinforce vulnerability (Malloy and Ashcraft 2020; O'Brien et al. 2007). This can be interpreted as a disregard for entrenched forms of socio-institutional wrongdoing and related issues of corrective justice, such as *reparations* (to the victims of harms, oppression, etc.) and *retributive justice* (i.e. liabilities and sanctions to those responsible for past harms, oppression, etc.) (Cañizares, Copeland, and Doorn 2023).

A majority of scholars in the adaptation-resilience domain consider procedural justice and distributive justice especially important (Byskov et al. 2021; Coggins et al. 2021). *Procedural justice* captures demands of fair process, in this case related to ensuring that resilience-building efforts are inclusive or at least that they reflect and protect the diversity of local groups (Meerow, Pajouhesh, and Miller 2019). It is important here because, although resilient systems are supposedly decentralized, self-organizing and inclusive (Simonsen et al. 2015), resilience-building efforts have been critiqued as technocratic (Tierney 2015). Such tendencies must be countered by highlighting areas for meaningful public debate and effective channels for participation (Bahadur and Tanner 2014).

In turn, *distributive justice* requires that the positive and negative impacts of resilience-building efforts are appropriately distributed. Distributive justice is vital here because, while resilience is said to be a desirable response of systems to (climate) disturbances and impacts, resilience thinking tends to efface questions about how impacts are distributed within and between human groups (Cañizares, Copeland, and Doorn 2021). For instance, resilience thinking has been critiqued for not being explicitly pro-poor (Béné et al. 2012). This affects landmark resilience initiatives: a recent evaluation of the *100 Resilient Cities* program finds that the program's selection mechanisms aggravate geographical power assymmetries by excluding cities with a low Human Development Index (HDI) (Fitzgibbons and Mitchell 2019). Hodson and Marvin (2009) even suggest that powerful cities and actors are using the climate resilience agenda to develop and control 'elite corridors' of infrastructures and services.

In the last decade, the CA has gathered much support as a basis for addressing these justice issues around climate resilience (Coggins et al. 2021). The CA originated in Sen (1980) as a theory proposing functionings and capabilities as two central categories for normative judgment. *Functionings* are the activities or doings (e.g. participating in community life) and states or beings (e.g. being well-nourished) that constitute people's well-being. *Capabilities* are the freedoms or real opportunities that people have to pursue the functionings they have reason to value (Sen 2001, 18). Having a capability involves having adequate *conversion factors*: the personal (e.g. physical capacity, talents, knowledge) and socio-environmental conditions (e.g. institutional incentives, lack of environmental constraints, family support) needed for converting resources or commodities (e.g. money, vehicles) into actual functionings. In turn, having a functioning turns on having both the relevant capability and the motivation to choose and exercise that functioning.

Proponents highlight several factors that would make the CA particularly suitable as a justice lens for the climate resilience context. Shepherd and Dissart (2022) refer to the importance of the CA in development contexts as an opportunity for foregrounding development issues in resilience practice. Kronlid (2014) praises its multi-faceted

account of wellbeing, which would capture many tangible aspects of climate vulnerability (Füssel 2010), as well as more intangible ones, such as those related to loss of place or identity (Adger et al. 2011; O'Brien and Wolf 2010). The CA is also portrayed as a multi-scalar approach to justice that fits well with the complex landscape of actors involved in resilience efforts, compared to for instance Rawlsian approaches – sometimes described as too focused on the national level (Bulkeley and Betsill 2013; Bulkeley, Edwards, and Fuller 2014). Commentators also stress that the CA offers a flexible framework that enables local negotiations and deliberations about what matters in respect to justice. According to Schlosberg (2012), such an agency-centered, bottom-up perspective on justice is uniquely capable of accounting for the diverse views that exist in relation to what is valuable or desirable in the climate adaptation context, a common demand among adaptation scholars (O'Brien and Wolf 2010; Paavola and Adger 2006). Indeed, Schlosberg argues that the CA can address, more or less single-handedly, most of the justice issues that matter in adaptation, including those relative to procedural and distributive justice. This argument has been influential in the field – see, a.o., Bulkeley, Edwards, and Fuller (2014); Coggins et al. (2021); Shepherd and Dissart (2022).

This paper offers novel perspectives around the potential and the role of the CA as a justice basis for climate resilience. It does so by analyzing two problems that have received insufficient attention in this literature: how to implement the CA, and how the CA relates to other perspectives with a focus on or a relevance to justice. Section 2 deals with the implementation problem. After introducing the CA and some decisions involved in its application, we highlight important problems with two orientations that currently dominate among capability-based proposals for climate resilience: that (i) capabilities should be negotiated locally and (ii) focusing on capabilities is preferable to focusing on achieved functionings. Then we turn to comparing the CA with other approaches to wellbeing, disadvantage and justice (§3), concluding that, while the CA improves on certain theories, its differences from other theories are overstated and depend on how we specify or apply the CA. These results thus undermine the idea that the CA is the most suitable theory of justice for climate resilience (Bulkeley, Edwards, and Fuller 2014) or a 'comprehensive' basis for just adaptation (Schlosberg 2012, 453), instead recommending a more pluralistic and collaborative approach to justice in the domain.

Sections 4–5 build on preceding sections to propose a capability-based justice framework for climate resilience. In §4, we present our distributive proposals, which include, first, a list of six functionings and capabilities of primary interest and, second, a rule for guiding the distribution of advantages and disadvantages along those dimensions. These proposals capture salient challenges around climate resilience while stressing areas of potential convergence and collaboration with other theories of wellbeing and justice and other practices of relevance in the domain. Next, we discuss opportunities for advancing procedural justice and other demands of justice through engagement with the public and with other disciplines (§5). We conclude by briefly highlighting the main findings of the article and reflecting on their consequences (§6).

2. Capability approach and capability applications

With its emphasis on capabilities and functionings, the CA is associated with two core commitments: ethical individualism and value pluralism. *Ethical individualism* is the idea

that human 'individuals, and only individuals, are the units of *ultimate* moral concern' (Robeyns 2017, 184, highlighted in the original). This orientation is often synthesized in the 'each person as an end' principle (Nussbaum 2000). In turn, *value pluralism* means two things. Firstly, that individual 'capabilities and functionings [are] not all that matters' (Robeyns 2017, 56). Thus, for example, capabilitarians can advocate sustainability so long as their primary focus remains with capabilities/functionings. In fact, Sen himself understood sustainable development along these lines (Anand and Sen 2000, 2038); more generally, Sen (1992) has insisted there is a need to complement the CA with other normative perspectives. Secondly, the CA is value-pluralist in that it embraces a multidimensional view of wellbeing: it posits that people have reason to value many different ends, such that losses in relation to one cannot be easily offset by gains in another. Plausibly, for example, capabilitarians would resist a disaster management strategy that forces somebody to flee her community in order to keep having access to food and shelter.

While these core commitments are broadly shared by all or most capabilitarians (Robeyns 2017), capability applications can vary in many ways. Here we cannot examine such possibilities exhaustively – see Robeyns (2017) for more discussion of this point –, but focus on two crucial questions: Which capabilities matter more and how are they selected and weighed? And, should we focus on capabilities or on functionings?

Consider, first, the question of how to select and weigh the importance of capabilities. Sen is often associated with deliberative and democratic approaches to capability selection (also called bottom-up or procedural) (Schlosberg 2012; Shepherd and Dissart 2022). Yet, in various places, Sen argues that certain *basic capabilities*, like being healthy, well-nourished and educated, or being able to avoid escapable morbidity, have to be satisfied 'up to certain levels' (Sen 1992, 45). The idea that some capabilities are more important than others, independently of how people value them, has prompted the development of many lists of 'basic capabilities'. Nussbaum's (2011) 10-item capability list (Table 1), developed on the basis of cross-cultural empirical studies and normative

Table 1. Nussbaum's list of basic capabilities.

1. **Life**. Being able to live to the end of a human life of normal length, not dying prematurely, or before one's life is so reduced as to be not worth living.
2. **Bodily health**. Being able to have good health, including reproductive health; to be adequately nourished; to have adequate shelter.
3. **Bodily integrity**. Being able to move freely from place to place; being able to be secure against assault, including sexual assault, child sexual abuse, and domestic violence; having opportunities for sexual satisfaction and for choice in matters of reproduction.
4. **Senses, imagination, and thought**. Being able to use the senses, to imagine, think, and reason [in] a way informed and cultivated by an adequate education [and] protected by guarantees of freedom of expression […]
5. *Emotions*. Being able to have attachments to things and people outside ourselves […]. Not having one's emotional development blighted by overwhelming fear and anxiety […]
6. *Practical reason*. Being able to form a conception of the good and to engage in critical reflection about the planning of one's life. (This entails protection for the liberty of conscience.)
7. **Affiliation**. (A) Being able to live with and toward others, to recognize and show concern for other human beings, to engage in various forms of social interaction […] (Protecting this capability means […] protecting the freedom of assembly and political speech.) (B) Having the social bases of self-respect and nonhumiliation [and] protections against discrimination on the basis of race, sex, sexual orientation, religion, caste, ethnicity, or national origin.
8. *Other species*. Being able to live with concern for and in relation to animals, plants, and the world of nature.
9. *Play*. Being able to laugh, to play, to enjoy recreational activities.
10. **Control over one's environment**. (A) Political. Being able to participate effectively in political choices that govern one's life; having the right of political participation, protections of free speech and association. (B) Material. Being able to hold property [and] to seek employment on an equal basis with others; having the freedom from unwarranted search and seizure.

Adapted from Holland (2008). Wolff and de-Shalit's (2007) six areas of primary focus are highlighted in bold.

argumentation, is the most prominent example of this non-procedural strategy for capability selection. While capability lists have been critiqued as paternalistic (Claassen 2011; Khader and Kosko 2019; Robeyns 2005), they seem appropriate when assessing poverty and deprivation (Sen 1987, 109) and have other advantages, for example as a springboard for public negotiation and deliberation. The literature also features examples of *mixed* or *multi-staged* processes of capability selection and prioritization, combining features of procedural and non-procedural methods (Byskov 2018). Indeed, Nussbaum (2000) herself argues that the minimum thresholds of attainment for each considered capability should be established through democratic processes.

Capability applications can also vary by focusing either on capabilities or on functionings (Robeyns 2017). Because capabilities stress freedom and agency, they capture differences that are not noticeable from a functionings perspective, yet quite relevant for assessing inequality and justice. Compare, for example, someone who travels for pleasure with someone who is forced to migrate due to heavy storms or water shortage. Suppose, further, that both persons enjoy safe shelter, food and such like in the process. From a functionings perspective, these persons are similarly well-off; from a capability perspective, however, the former is making a choice, and thus is better-off than the latter. For example, Kronlid (2014) has remarked that forced migrants lack the capability of mobility because they are not free to stay home or to move away.

On the other hand, assessing capability can be difficult in practice. We probably know that migrations during or after extreme weather events are forced, and thus indicative of an impaired capability of mobility. In slow-onset crises, by contrast, responses are more variegated because they depend on many factors, such as the (in)competence of local government at handling the crisis, a family's (in)capacity to use temporary coping strategies, a community's (lack of) attachment to place, etc. (Adger et al. 2011; Mitchell and Pizzi 2021). The capability concept becomes elusive as the possible intervening factors in enabling or constraining freedom and opportunity pile up (Gasper 2007; Pogge 2010).

Such difficulties are one reason why, in practice, many authors treat functionings as proxies for capabilities (Chiappero-Martinetti et al. 2015; Gardoni and Murphy 2010). For example, Sen's (1997) development vision is based on capabilities and freedom, but his critique of the Gross Domestic Product (GDP) concept takes a functionings approach: specifically, he illustrates the inadequacy of the GDP as a justice metric by showing that it hides measures of important functionings like life expectancy, nourishment or literacy (Drèze and Sen 2013). However, functionings perspectives also have their problems. Chiappero-Martinetti et al. (2015) notes that, besides methodological problems related to indicator choice, data availability and comparability, this focus captures little of the richness of the CA, since it elides the distinction between opportunities and achievements, misses the importance of freedom and agency, etc. For this reason, again, capability applications based on functionings have motivated charges of paternalism (Claassen 2014).

These insights about the CA and its application will be important in the remainder of the article. For the moment, note that they raise questions about two central commitments of extant capability applications for climate resilience:

(i) Negotiate capabilities locally: This idea, from Schlosberg (2012) and others, generates concerns about the rationality of negotiations and their appropriateness

for assessing situations where people are deprived of basic capabilities. In contrast, lists of capabilities and/or functionings have several advantages, for sharing experiences and lessons across places and scales as well as for keeping a focus on critical areas of evaluation while avoiding biases. We believe that these advantages override the concerns with the paternalism of capability lists, especially in view of the accelerating pace of the global environmental crisis and the growing need for coordination among the many climate resilience efforts taking place worldwide.

(ii) Concentrate on freedom (capabilities): Extant accounts have assumed, rather than discussed, that we should focus on capabilities in order to emphasize freedom (Kronlid 2014; Shepherd and Dissart 2022). Yet, while freedom is surely crucial in generating adaptation responses, we have seen that capabilities can be difficult to assess. Moreover, in some cases an outcome perspective (i.e. functionings) is more appropriate that a freedom or opportunity perspective (i.e. capabilities): for example, we want to ensure that women are not raped in refugee camps, rather than simply ensuring that they have the opportunity to avoid rape. Thus, concerns about paternalism are again secondary when we consider ends that are intimately related to subsistence or survival and that the climate crisis renders increasingly insecure. In these cases, a functionings perspective should be at least considered.

Our analyses therefore converge around the idea that a suitable specification of the CA for climate resilience should plausibly include – among other things – a pre-specified list of basic functionings. Now we turn to examining another issue sidelined by recent accounts: how the CA relates to other perspectives on wellbeing and justice.

3. Comparing the CA to alternative approaches

Here we compare the CA with five approaches that are often distinguished from it: utilitarianism, preference-based approaches, income approaches, resourcist theories, and needs theories. This discussion clarifies the orientation and strengths of the CA while highlighting areas of convergence and potential collaboration with these other theories.

Consider, first, *utilitarianism*. Utilitarianism is often identified with the *sum-ranking* principle: the idea that justice, development or welfare requires increasing – and if possible optimizing – the aggregate wellbeing (utility) of a population. This principle, key to mainstream economics, could justify leaving most of the population without resources in order to distribute these resources only among those who can maximize aggregate utility (e.g. productive and well-connected people). Thus, the principle problematically ignores inequality and distributive justice, also being at odds with the CA's ethical individualism (cf. §2; Sen 1980; Wolff and de-Shalit 2007). Given that utilitarianism is critiqued by adaptation scholars on similar grounds (Paavola and Neil Adger 2002; 2006), the CA is clearly an improvement because it aptly addresses these concerns.

Many capabilitarians also dismiss metrics of wellbeing and disadvantage based exclusively on *preference satisfaction*, *subjective wellbeing*, etc. (Kahneman, Diener, and Schwarz 1999), on the basis that preferences can be ill-formed or unreasonable (Sen 1977, cf. §2). Adaptive preferences, whereby people adjust their preferences downwards to conditions of deprivation (Sen 1987), are particularly troubling examples of how 'colonization' of the minds of the oppressed can perpetuate oppression and disadvantage. Note, however,

that many capability applications include subjective (e.g. felt fulfillment) as well as objective aspects of wellbeing, thus effectively incorporating these approaches (Robeyns 2017). Further, as suggested in §2, capability applications based on subjective inputs can raise concerns with ill-formed preferences. For example, in assessing capabilities through surveys (Anand et al. 2009), someone's evaluation of a recently acquired house cannot be taken at face value if that person had never had access to housing before. Dealing explicitly with the problems associated to preferences is, thus, key when specifying the CA.

Then, the CA is commonly praised for adding nuance to *income* measures of vulnerability and wellbeing – see, a.o. Wolff and de-Shalit (2007) and Schlosberg (2012). However, the adaptation literature features one slightly dissenting voice that needs to be addressed. It comes from Leichenko and Silva, who note that the CA has an edge over income approaches at the local level, but not in supra-local assessments, where the latter 'facilitate[s] easier comparisons across different countries and societies' (2014, 2).

In our view, the HDI represents a straightforward counterexample to Leichenko and Silva's appraisal. A composite measure of income, life expectancy and education, the HDI was largely inspired by capabilitarian and needs-theory perspectives (Robeyns 2017) and is widely used in supra-local assessments of disadvantage and justice. Thus, while it reflects little of the richness of the CA, the HDI effectively improves on income approaches. Further, the HDI can be expanded from a capability perspective (Cheibub 2010; Murphy and Gardoni 2008). Therefore, one can safely conclude that any workable capability application will retain some edge over income approaches (Anand et al. 2021).

As per resourcist theories, there are various proposals in the adaptation arena, such as the five capitals approach (Norris et al. 2008) and the sustainable livelihoods approach (Moser and Satterthwaite 2010). Here we focus on Rawls' theory, because of its strong presence in adaptation and resilience research (Bulkeley, Edwards, and Fuller 2014; Doorn 2017; Hughes 2013).

Rawls' theory and the CA coincide in their value-pluralism but diverge in their priorities. For Rawls (1999), justice requires equal opportunity to access certain primary goods of which anyone reasonable is supposed to want more rather than less, but *liberty* is the good with ultimate priority. From a basic capabilities (or functionings) perspective, however, liberty must be weighed alongside other concerns, like having a long and healthy life (Sen 2009, 59). Then, while Rawls' primary goods are crucial and multipurpose resources, the CA focuses directly on the ends to which resources are put to use (Nussbaum 2000). In this regard, capabilitarians have often critiqued resourcism for caring only about resource access and neglecting other important obstacles that can hinder the conversion of resources into actual achievements (Arneson 2010, cf. §2; Sen 2001).

Pogge (2010) highlights two further contrasts that would allegedly count in favor of Rawls'. He argues, first, that the CA's excessive informational demands cannot be easily factored into a justice metric (Pogge 2010, 38). This critique is noteworthy, but does not hold equally for all capability applications: as we saw before and as Pogge (2010, 50) himself recognizes, capability applications can be simplified by working with capability lists or with functionings instead of capabilities. Pogge's second argument holds for all capability applications, however. He argues that, for capabilitarians, all

disadvantages create similar obligations, regardless of their causes: to enhance functionings/capabilities. In contrast, from a Rawlsian perspective, the disadvantages caused by natural misfortunes and institutional wrongdoing are very different: the latter burdens an institution with the duty to repair its wrongdoing. Thus, for Pogge, one advantage of Rawls' theory is that it can inform decisions about the beneficiaries of distributive efforts (as does the CA) *as well as* about who should carry their burden (which the CA does not). In discussing this feature, Táíwò (2022) describes the CA as a 'snapshot' theory of justice: one that focuses on how well-off people are, but not on how they arrived to their situation and what obligations ensue from different histories of disadvantage. Sen (1992, 87) also recognizes this limitation of the CA.

Again, however, the differences between these approaches should not be overstated. Nussbaum's capability list includes some of Rawls' primary goods (e.g. social bases of self-respect, in *affiliation*) (Table 1), and capabilitarians sometimes use measures of resource access as proxies for capabilities. For example, Cheibub (2010) uses indicators of democratic quality and political freedoms (e.g. number of political parties, voting rights) for evaluating political capabilities. Of course, this approach only evaluates the institutional and political resources available to individuals, not how these resources are converted into opportunities or achievements; thus, it is subject to the same concerns capabilitarians have with resourcism (Biggeri and Cuesta 2021).

Finally, we turn to needs theories, which too have major contributions to environmental and climate justice (Lamb and Rao 2015; O'Neill et al. 2018). We focus specifically on recent applications of Doyal and Gough's 'Theory of Human Need' (THN) to this domain (1991). Figure 1 reproduces the THN's basic layout. Gough defines needs as 'universalisable, objective, empirically grounded, non-substitutable and satiable […] preconditions to avoid serious harm' (Gough 2015, 1191). The THN has a multi-layer structure, developed in three steps. In a first stage of philosophical argumentation, three universal basic needs are laid out: physical health, autonomy of agency – viewed as a relational, not an individualistic value – and critical autonomy, which involves political freedom and a capacity to reflect on, and contribute to transforming, one's own culture (Gough 2015, 1199). These needs are then fleshed out, with the aid of relevant scientific and cross-cultural knowledge, into eleven intermediate needs or 'universal characteristics of need satisfiers', also objective and universal but in need of contextual specification (Gough 2015, 1200). Third, this contextual specification involves a dual strategy, combining expert knowledge and 'the experiential knowledge of those whose basic needs … are under consideration' (Gough 2015, 1201).

This overview reflects important similarities between the CA and the THN. Unlike resourcism, these approaches stress a plurality of human ends that are key to wellbeing and disadvantage. Both, too, share concerns with income, utilitarianism and preference satisfaction theories (Gough 2015, 1210). Beyond these obvious parallels, the similarities with Nussbaum's approach are even more profound. The THN and Nussbaum are both committed to identifying a set of universally valuable ends for human individuals. Both, too, address this challenge with mixed methods combining procedural and non-procedural specification strategies. Further, the THN's three basic needs almost coincide with the capabilities that Nussbaum deemed most basic: affiliation, bodily integrity and practical reason (Gough 2023, 7). Other items in Nussbaum's list also parallel the THN's intermediate needs closely, in content and even in language.

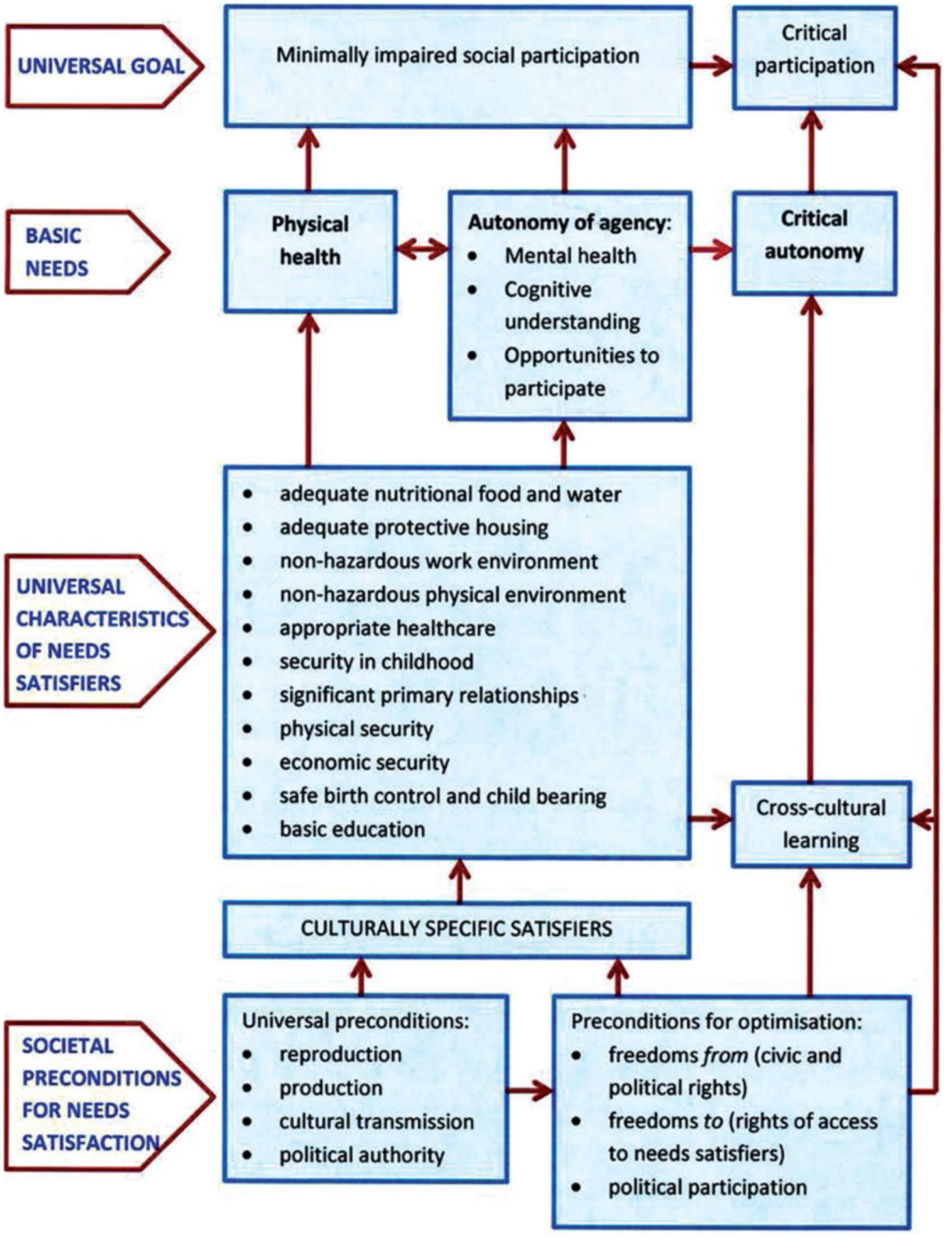

Figure 1. The theory of human needs in outline. Reproduced from Gough (2015).

Taken together, these analyses challenge the view that the CA is more suitable than other theories of vulnerability, disadvantage, etc. due to its comprehensiveness (Bulkeley, Edwards, and Fuller 2014; Schlosberg 2012). This assumption is tenable in relation to utilitarianism, income measures or preference satisfaction theories but it founders in relation to resourcist and needs theories. Rawls' theory and the CA simply have different

emphases, for example, and the former is better equipped than the latter in addressing demands of corrective justice. In turn, while capabilitarians and needs theorists may disagree and have done so in the past,[2] the similarities (Gough 2015; Robeyns 2017) and potential complementarities (Biggeri and Cuesta 2021) between approaches are many and profound. Crucially, the overlap is especially striking if we apply the CA along the lines advised in §2, namely by prioritizing a list of functionings that are basic in the context of climate resilience.

The next sections examine how the insights obtained thus far can inform justice work around climate resilience. First, we advance a capability application for distributive justice; then, we consider strategies for addressing other important justice issues.

4. A capability application for distributive justice in climate resilience

This section offers capability-based proposals for the two aspects of distributive justice: the evaluative space and the distributive rule. First, for the evaluative space (*what* positive or negative outcomes matter most and why), we propose prioritizing four basic functionings and two capabilities (Section 4.1). Then we describe a three-thresholds distributive rule for guiding transitions toward more just distributions of outcomes within these evaluative areas (Section 4.2).

4.1. Six evaluative dimensions

The list of functionings and capabilities of primary interest we propose derives from Wolff and de-Shalit (2007, 106ff.), who select six items from Nussbaum's list: *life*; *health*; *bodily integrity*; *affiliation*; *sense*, *imagination and thought*; and *control over the environment* (Table 1). These authors justify their choice by illustrating that relevant professionals in public health and social work do often prioritize these aspects of wellbeing over others (Wolff and de-Shalit 2007, 53ff.). They also show that these beings and doings are clustered: whereas a degraded performance in any is highly correlated with problems in all of them, improving just one often leads to improving the rest as well. Because they are clustered, it is likely that focussing our efforts on these can enhance the effectiveness and impact of distributive measures.

While these six beings and doings all seem necessary for having a decent life, we can distinguish two sub-groups: those that are best viewed as functionings (*life*, *health*, *bodily integrity* and *affiliation*) or as capabilities, respectively (*sense*, *imagination and thought* and *control over one's environment*). In the literature, a focus on capabilities is sometimes associated with Sen, whereas Nussbaum's work is associated with a greater emphasis on achieved functionings (Gough 2015). In the following, we show that these two perspectives are not incompatible, although at times one can be more appropriate than the other.

Consider, first, *life* (high life expectancy) and *health* (having adequate health, nutrition, shelter and clothing) (Table 1). Sen often mentions the centrality of these categories for assessing situations of poverty and deprivation (Sen 1992, cf. above). In addition, achievements in these areas are directly measurable through a mixture of public records, indicators (Drèze and Sen 2013, 47; Singh et al. 2019) and subjective reports (Anand et al. 2021). It also seems credible that anyone prefers to live a long and healthy life, rather

than to just be free to do so. These considerations suggest that a functionings, not a capabilities, perspective, is appropriate in these areas. In other words: we argue that certain levels of life expectancy and health should be minima for assessing genuine climate vulnerability.

The case of *affiliation* is similar. *Affiliation* includes things like having a family, belonging to a local community, having non-local connections or tele-connections, spending time in social life (e.g. in reconstruction efforts), etc. While such achievements can contribute much to personal and community resilience, deficits here make people very vulnerable (Cutter, Boruff, and Lynn Shirley 2003; Torres and Casey 2017). Moreover, such functionings are relatively easy to measure (Norris et al. 2008; OECD 2021a). Other relevant demands usually classified in this category do not befit a functionings perspective, however. For example, Nussbaum includes demands for protections to free speech and against discrimination in *affiliation* (Table 1), which are best described as resources rather than as functionings. See UN-OHCHR (2012) for relevant indicators expressing this orientation. Alternatively, Anand et al. (2009) use subjective reports for providing a capability perspective into discrimination and freedom of speech as *felt* by individuals.

Bodily integrity covers a bundle of beings and doings, from physical inviolability (freedom from violence, abuse and assault) to freedom of mobility, which, as Kronlid (2014) explains, involves both the freedom to move and the freedom to stay. This category is especially relevant for assessing a situation of climate migration, where the clustering of disadvantages is particularly visible among migrants and refugees. Besides physical illness and injuries, migrants and refugees often lose their families, homes and ties to place (Adger et al. 2011); women in particular are also frequent victims of rape and other forms of violence (Desai and Mandal 2021). Moreover, the scars of such losses and harms are often enduring (Goodwin-Gill and McAdam 2017; Obradovich et al. 2018). Thus, Nussbaum's understanding of bodily integrity in terms of freedom seems to fall short of what climate migrants and refugees need in this regard. Instead, it would be much more urgent and appropriate to secure relevant functionings, such as: preventing the collapse of infrastructures, ecosystems and livelihoods; when collapse is inevitable, offering transportation and temporary housing while initiating reconstruction efforts; and ensuring that effective measures for preventing abuses and violence are implemented in refugee camps and host countries. This category can also include demands from Doyal and Gough's THN that are easily viewed as functionings, such as *living and working in non-hazardous environments*; *having a safe childhood*; and *safe birth control and child bearing* (Figure 1). Achievements in these areas can be assessed, for example, with qualitative indicators based on subjective reports – see Anand, Hunter, and Smith (2005), Anand et al. (2009).

The remaining two categories are best conceived as capabilities, at least partly. First, we have *sense, imagination and thought*, a category that could be captured by 'education'. Education is a key aspect of long-term wellbeing due to its role in developing and expanding other capabilities, including those related to affiliation or control, for instance (Terzi 2014). For basic and general education, we believe that a capability perspective is required for protecting epistemic freedom and epistemic justice, important in the adaptation context (cf. §1). That being said, specific educational demands are sometimes clearly justified. One instance is the provision of accurate and timely information about

local disasters and emergency measures. Another is the communication of knowledge about the adaptation options available for specific places and about non-local experiences of successful adaptation, which are educational strategies with proven, positive impacts on low adaptive capacity households and regions (Simonsen et al. 2015; Wamsler, Brink, and Rantala 2012). Given their criticality, these restricted areas demand a focus on concrete outcomes, i.e. on functionings.

Something similar applies to *control over one's environment*, which has both capability and functioning characteristics. Nussbaum's conceptualization is impossible to understand without freedom, since it consists basically in economic and political freedoms (Table 1). Yet, the category has also been operationalized as 'continued command over resources' (Gardoni and Murphy 2010, 6), such as owning land or cattle and enjoying a regular use of sustainable energy. These functionings complement other items of economic significance in our list, such as adequate housing and nutrition, both included in *health*.

Table 2 summarizes our distributive proposals. We have shown here that climate resilience efforts raise a need to focus on six doings and beings of primary interest. Table 2 divides these categories, except *life*, into more specific items that merit special consideration. As was explained, most of these items can be conceptualized as functionings, but many can also be framed from resourcist or needs perspectives, and others are better viewed as capabilities or resources.

Table 2. Summary of distributive proposals.

Categories of primary interest	More specific conceptualizations	Recommended perspectives	Recommended distributive rule (Acceptability, Tolerability, and Upper Thresholds)
Life	Life expectancy	Functioning	A-T
Health	Medical health	Functionings (also needs)	A-T-U
	Nutrition		
	Shelter		
	Clothing		
Affiliation	Having a family	Functionings	A
	Having a community		
	Tele-connections		A-T
	Time in social life		
	Free speech	Capabilities, resources	A
	Non-discrimination		
Bodily integrity	Security from violence, abuse, assault	Functionings (also needs, resources, subjective reports)	A
	Safe infrastructures, working places and environments		A-T
	Safe childhood, birth control and child bearing		A-T
	Safe and sustainable mobility		A-T-U
Sense, imagination and thought	General education (incl. environmental)	Capabilities, resources	A-T
	Emergency-related education	Functionings	A
	Education about adaptation options		A-T
Control over one's environment	Economic and political freedoms	Capabilities, resources	A-T-U
	Continued command over land and resources	Functionings (also resources, needs)	
	Regular use of sustainable energy		

4.2. A three-threshold distributive rule

In addition, we propose a distributive rule comprising three thresholds. Taken together, these thresholds define an *adaptive sustainable consumption corridor* of relevant upper and lower constraints for guiding the distribution of advantages and disadvantages along the six evaluative dimensions considered above. Below we explain what these thresholds consist of and why they are needed.

One central goal in climate resilience efforts is, clearly, the avoidance of serious harm. This orientation is embodied in rules like sufficiency and priority. *Sufficiency*, supported by both capabilitarians (Nussbaum 2006; Wolff and de-Shalit 2007) and adaptation scholars (Pelling 2010), requires that everyone has a minimum share of advantages and a maximum share of disadvantages in all dimensions of value under consideration. In turn, *priority* requires prioritizing those who are worst-off or most vulnerable (Paavola and Adger 2006). It has been argued, however, that these rules converge on similar policies when addressing conditions of deprivation with limited resources (Wolff and de-Shalit 2007). Thus, in what follows we assume that a sufficiency approach to climate resilience effectively incorporates considerations of priority.

Another increasingly popular rule is *limitarianism*, which demands establishing 'upper limits to the amount of income and wealth a person can hold' (Robeyns 2019). Much of the normative force of limitarianism stems from the increasingly obvious links between absolute wealth, on the one hand, and mounting inequality and environmental impacts, on the other. According to recent estimates, for example, since 1990 the richest 10% of the world's population, and especially the top 1%, boosted their share of total emissions and accrued most of the emissions growth, whereas the emissions of the bottom 50% grew little and those of middle- and low-income groups in rich countries actually declined (Chancel 2022). There is, moreover, a double inequity at stake here, since high-emitters are generally less vulnerable and more capable to adapt than low-emitters (Füssel 2010). Limitarians thus stress that inequality and sustainability can be addressed jointly by imposing very high taxes on large fortunes (Gough 2023; Robeyns 2019). These ideas have even made it to the last IPCC report, which discusses limiting '[c]onspicuous consumption' by the 'super-rich […] polluter elite' (Creutzig et al. 2022, 524) as one of the most promising mitigation strategies.

Recently, Gough (2023) linked sufficiency and limitarian demands by proposing a 'sustainable consumption corridor', which describes the space between a generalizable 'floor' of decent living standards, and a 'ceiling' of unsustainable, ungeneralizable excess. This proposal is compelling because it simultaneously tackles demands for avoiding serious harms and concerns with inequality and sustainability. However, as Gough himself recognizes, it primarily focuses on climate mitigation, and thus requires adjustment for dealing with specific problems that arise in climate resilience. One promising strategy in this regard comes from Murphy and Gardoni (2008), who propose using two complementary sufficiency thresholds for demarcating maximum levels of risk to functionings or capabilities, each applicable to different stages of the risk management cycle. An *acceptability threshold*, first, applies in the absence of disasters and/or after recovery measures have proved effective. A *tolerability* threshold, second, assumes that the capabilities/functionings of local individuals will fall below acceptable standards during emergencies and recovery processes, and marks the absolute limit

for this fall. The tolerability threshold is less stringent than the acceptability one, but it is temporary, reversible, and it should never be breached (Murphy and Gardoni 2008; Shepherd and Dissart 2022).

Thus, what we propose is an adaptation-adjusted (or adaptive) sustainable consumption corridor. This modified corridor has several advantages over Gough's. First, it establishes a clear link between distributive justice and risk management, a felicitous result given the centrality of that practice in resilience building (Wamsler, Brink, and Rivera 2013). Then, the idea that vulnerability assessments should track the changing circumstances of the risk management cycle adds flexibility and nuance to Gough's corridor, thereby better aligning distributive efforts with principles of resilience practice (Simonsen et al. 2015) and adaptive management (Haasnoot et al. 2013), key in climate adaptation (IPCC 2023, 19).

In this regard, the two sufficiency thresholds have complementary functions and advantages. *Tolerability* captures the conservative aspect of resilience – the ability to maintain or to quickly restore a minimal level of performance during and after disasters (cf. the IPCC's definition, in §1). Furthermore, it tackles the widespread concern that resilience strategies extend neoliberal governance by justifying the inaction of public bodies and leaning on citizen improvisation (Joseph 2013; Walker and Cooper 2011). It does so because it gives specific targets to be met when things go wrong and acceptable standards are unreachable. In turn, the *acceptability threshold* accounts for the transformative aspect of resilience – the potential for climatic disturbances to be opportunities for learning, improving adaptive capacity or even transitioning toward more sustainable or fair social regimes (Bahadur and Tanner 2014). Acceptability thresholds are important for placing the goals of resilience building squarely within the terrain of social justice. They stress that, instead of using the gains emerging from resilience efforts for developing exclusive services, infrastructures or areas (Hodson and Marvin 2009), such gains should have a positive impact on the wellbeing of those who are worst-off (Shepherd and Dissart 2022).

Note, however, that this three-thresholds distributive rule does not apply consistently across our proposed list. Consider first the limitarian upper limit. We can cap functionings such as *control over resources* (e.g. money, resource- and carbon-intensive functionings), unsustainable and/or expensive forms of mobility (e.g. SUVs, cruises, short-distance flights) and some aspects of *health* (e.g. mansions, unsustainable food, expensive clothing, use of exclusive medical services or facilities) (Bärnthaler and Gough 2023; Gough 2023; Holland 2008). However, it makes less sense to cap others, such as many aspects of *bodily integrity*, some expressions of social and political freedoms (e.g. non-discrimination) and education. Similarly, the downward shift from acceptability to tolerability standards is problematic for some categories. General education services may degrade or even halt in emergencies, for example, but receiving timely and accurate reports or instructions from emergency services becomes critically important. Likewise, precisely because disasters often cause multiple losses and damages, the psychological wellbeing of victims is more critical in these contexts, thus demanding extra efforts to preserve *bodily integrity* (e.g. psychological assistance and therapy, abuse prevention) or *affiliation* (e.g. facilitating support networks).

Our adaptive sustainable consumption corridor must, therefore, be further specified to account for exceptions and contextual needs (Table 2, right column). The next section

explores how to address these and other problems with relevance for justice by using public inputs and inputs from other disciplines.

5. Addressing other relevant justice demands in climate resilience

Here we explain how our application can be used or complemented in order to attend to demands of justice beyond the distributive, beginning with procedural justice (Section 5.1) and then turning to other justice issues and demands (Section 5.2).

5.1. Procedural justice

Thus far in policy-oriented discussions, the potential of the CA for advancing procedural justice in the climate context has largely rested on an idea attributed to Sen, namely that the capabilities of interest should be selected through public negotiation (Schlosberg 2012; Shepherd and Dissart 2022). Yet, as we saw (cf. §2–3), this may be a slight misinterpretation of Sen, who thought that certain core capabilities hold priority over freedom in situations of deprivation, such as climate change is expected to create. We have mentioned other reasons for using pre-specified lists rather than only procedural methods.

Fortunately, procedural justice can be served in many ways when implementing a capability application. Indeed, Wolff and de-Shalit (2007) utilized mixed methods to develop our list of categories of primary interest. We discuss below several aspects as yet unspecifed in our application, beginning with the distributive rule just explored, to show how they present opportunities for advancing procedural justice.

5.1.1. Specifying the distributive rule

Our adaptive sustainable consumption corridor must be specified both qualitatively and quantitatively. As we have seen, upper thresholds only apply to resource- and infrastructure-intensive categories (*health*, *mobility*, and *control over economic resources*). Beyond this rule of thumb, however, both the items to be capped and the precise contents or amounts of caps are unspecified, and, with notable exceptions (e.g. the savings of the world's richest 1%), such decisions should vary considerably across contexts. Given the limited reliability of public perceptions of inequality (Kraus et al. 2019; OECD 2021b), the choice of upper thresholds must be partly expert-driven to ensure that relevant economic and environmental constraints are factored in. Yet, various forms of public input can also aid this discussion (Gough 2023).

Then, while we allow most functionings and capabilities to degrade during disasters, we have also seen that in some cases standards should plausibly be maintained (e.g. mental health) and even raised (e.g. emergency-specific information). When and how each strategy applies must be decided on a case by case basis, involving risk managers and the public in this process. A first case is when tolerability thresholds are pertinent. Here, we must specify their precise content and the criteria and timeframes for guiding the shift from tolerability to acceptability standards and vice versa, another process that should involve negotiations between experts and the public given the criticality of these thresholds. In turn, the choices of acceptability standards can be entirely left to the public in these cases, so long as these choices end up falling somewhere between

the other two thresholds. When acceptability thresholds are the only sufficiency threshold of reference, we propose that their specification should again involve mixed inputs, i.e. both expert and public.

Thus, the implementation of our distributive rule requires several adjustments for specific cases and contextual needs. While multi-disciplinary expert inputs are needed specifically in relation to the tolerability and upper thresholds, there is also considerable room here for public negotiation.

5.1.2. Refining and operationalizing categories of primary interest

Our list contains six categories and a few more specific beings and doings within each category. Since these are all quite abstract, they describe areas of concern more than actual features or behaviors of individuals (Anand et al. 2009). Thus, when implementing our application, these categories should be refined and specified to fit local perceptions and circumstances: this process can incorporate public inputs. We already indicated that the assessment of *bodily integrity* can be facilitated with subjective reports (Table 2; cf. §4.1). This strategy can be extended to other functionings. For example, assessing health-related functionings does not reduce to scanning and diagnosing people. Health is a complex category whose meaning is negotiable in various ways (e.g. including adequacy of clothing or housing to intended usage). Further, subjective reports are unavoidable for evaluating the healthiness of habits, but also for knowing if someone feels healthy enough for doing what one loves to do, or compared with others (Anand et al. 2009). In short, the process of determining what contributes to primary categories such as health in some context, and for specific people, benefits from public engagement and emphasizing agency.

5.1.3. Prioritizing

Above we argued that the categories of primary interest are clustered. For example, life and health are probably most basic, since nobody can achieve much when these functionings are severely compromised, but even these functionings depend on others, like affiliation and bodily integrity. The idea that these categories are clustered therefore suggests that they all deserve equal attention, at least when considered abstractly. However, in a specific context and period, one category (or an aspect of it) may deserve priority over others. These decisions depend strongly on the contextual features shaping individual exposure, sensitivity and vulnerability to local risks, climatic or otherwise. While they undoubtedly require expert risk and vulnerability assessments, we believe these should be complemented with local appreciations and explicit public discussions (O'Brien and Wolf 2010). Admittedly, such public discussions are far from trivial and they even run the risk of exacerbating existing inequalities. There is an extensive literature around how genuine participation can be hindered by e.g. power relations or personality differences (Boshuijzen-van Burken et al. 2023). We cannot review these problems in detail here. However, we think that a capability perspective is well-equipped for dealing with such problems partly due to its long-standing concern with false and ill-formed preferences. In a detailed discussion about adaptive preferences, Khader (2011) has argued that we can identify these preferences by checking decisions (or subjective inputs, etc.) against an objectively stipulated set of basic functionings: with this admission, preferences are unreliable if they are unconducive to improving the basic functionings

posited, or if people lacked those functionings when forming their preferences. While recognizing that her position is inevitably paternalistic, Khader adds that '[s]trategies for change that people with adaptive preferences participate in crafting are particularly likely to be effective in improving their lives' (Khader 2018, 98). We concur with these words. Indeed, our application allows precisely for the sort of critical but ambitious approach to participation that Khader thinks is needed in applying the CA.

5.1.4. Expanding the list

Finally, the list is not meant to be closed: other concerns can be added, although our proposal entails they will remain secondary to the primary list. For example, we have stressed the importance of living in safe environmental conditions (Table 2), but not the need for protecting other species and our relationships with them, another capability proposed by Nussbaum that has much relevance in the context of climate change, and which might help in linking adaptation planning with conservation efforts, for instance along the lines proposed by Sarkar (2017). This is, thus, one area where the list can be expanded. In this regard, our application just intends to be a point of departure for discussion, which can be specified or expanded in several ways.

5.2. Complementing the capability application

In addition, there are important justice concerns and demands that capability applications cannot address completely. Next, we review some of these issues, mentioning disciplines and sources of knowledge that can complement capability applications in those areas.

5.2.1. Corrective justice

As was discussed in §3, one limitation of the CA concerns its insensitivity to issues of corrective justice (i.e. reparations and retributive justice). Táíwò (2022) argues that the CA is, however, perfectly compatible with his own 'constructive' view of reparations, involving a division of labor between historical considerations and distributive justice. In this division of labor, historical considerations establish the 'who' of distributive justice (who pays and why, who receives), and a distributive justice theory determines the content and purpose of distributive efforts. In relation to climate, indeed, historical and distributive considerations are not just compatible: they converge. That is, the unequal geography of wealth and climate vulnerability reflects the geographically uneven contributions to climate change (Chancel 2022; Füssel 2010), while at the same time these uneven geographies are largely a product of institutionalized slavery, racism, colonialism and unequal ecological exchange from high-emitting countries and regions toward low-emitting ones (Hornborg and Martinez-Alier 2016; Táíwò 2022). Thus, these perspectives conclude similar things, although for different reasons.

Crucially, however, if we worked with a perspective on reparations other than Táíwò's, distributive justice and reparation claims might pull in different directions (Táíwò 2022). Further, besides the global history of colonialism and its connection with the asymmetrical responsibilities for climate change, a specific region may be affected by other histories of oppression and entrenched injustice, related to inter-ethnic conflict (Folami and Folami 2013) or gender (Singh, Divya, and Rao 2021), for example. These issues deserve an independent treatment in local adaptation and resilience planning, beyond the scope of our distributive proposals.

5.2.2. Justice for communities

Further many collective values, such as protecting specific ecosystems, animal justice, and community or national values deserve consideration. Schlosberg (2012) has influentially argued that the CA's more general tendency to ethical individualism underestimates communities and collective action, while also neglecting the fact many environmental injustices affect communities, rather than individuals. He thus demands the prioritization of collective capabilities, 'from issues of community health, to the loss of particular local economic practices, to community dissipation through migration and diaspora, to threats to basic existence following [disasters]' (2012, 456).

Robeyns (2017) offers a thorough discussion of the general merits of the concept of 'collective capabilities', something we cannot go into here. We do note, however, that standard accounts of social-ecological resilience, such as Simonsen et al.'s (2015), already attend to much of what Schlosberg calls collective capabilities; social-ecological resilience is, after all, relative to the persistence of communities and their identity. Thus, these problems can be handled with a division of labor such as Táíwò proposes for reparations. The CA can contribute much by way of assessing individual wellbeing and disadvantage, two areas where resilience practice has known deficiencies. In turn, resilience thinking offers sophisticated tools for addressing issues of collective and system functioning and wellbeing.

5.2.3. Sustainability and environmental protection

Holland's (2008) 'environmental meta-capability' similarly illustrates our point about the need for building bridges with other disciplines and knowledge sources. Holland critiqued the anthropocentrism of the CA and its long-standing neglect for the environment, arguing that these tendencies could be corrected by treating the environment as a 'meta-capability' whose attainment is necessary for any other. Holland's proposal was endorsed recently in the climate justice literature (Shepherd and Dissart 2022), but we consider it an unnecessary complication given that social-ecological research, with its emphasis on preserving key species and ecosystem functions (Simonsen et al. 2015), has resources for addressing many of Holland's concerns, especially at local and regional levels. Holland's proposal of environmental meta-capabilities also responds to other concerns not addressed in this paper, namely those relative to climate mitigation and the structural transformations required for sustainability. In our view, however, these problems fall beyond the purview of the CA, even if we consider environmental meta-capabilities. Instead, what they require is engagement with other sources of knowledge and expertise, such as radical economic and political theory (Gough 2023; Keyßer and Lenzen 2021).

6. Reorienting work on capabilities and justice for climate resilience

As the previous sections establish, the CA does have many features that make it a suitable lens for justice work in the realm of climate resilience. At the same time, much of the present popularity of the CA among adaptation-resilience scholars derives from a narrative whereby the CA's emphasis on freedom, agency and public deliberation situates it as a comprehensive approach to justice in this domain, capable of handling a comprehensive suite of demands, or at least more comprehensively than rival theories and perspectives.

It is this narrative that we have disputed here. Climate change is already generating situations of deprivation and urgency, in which working with a list of basic capabilities has important advantages over participatory or democratic methods of capability selection. Furthermore, whereas an emphasis on capabilities is appropriate in relation to demands containing an ineliminable reference to freedom, many critical demands for justice in the climate resilience arena relate less to freedom than to securing certain outcomes that are tightly linked with mitigation or avoidance of serious harms. Such demands, we argued, are better framed and pursued by emphasizing functionings, not capabilities. At the same time, these choices do not undermine the prospects of the CA for addressing procedural justice. Quite to the contrary, we identified several opportunities to facilitate the adjustment of capability applications to contextual problems and local interests, while tackling demands of procedural justice. These and other problems and possibilities involved in developing capability applications have received little attention among capability-based proposals for climate justice, and yet they are crucial for developing the sort of critical attitude that is necessary in implementing the CA or any justice framework (Murphy and Gardoni 2008).

Further, we raised the question of how the CA fits among other theories and practices with actual or potential relevance for climate justice. The view that the CA covers, or should cover, every justice demand that matters in the climate resilience domain (Schlosberg 2012; Shepherd and Dissart 2022) is, as we have argued, both unrealistic and unadvisable. It is unrealistic because any justice approach inevitably focuses on certain demands and pays less attention to others. And it is unadvisable because a pluralist attitude to justice befits the traditional commitment of the CA with value-pluralism as well as promoting intellectual openness, interdisciplinarity and multi-actor coordination (Robeyns 2017). We have illustrated this by highlighting numerous points of contact or convergence between our capability application and other areas of expertise, such as risk management, social-ecological research, resilience practice and more.

A pluralistic strategy is also appropriate in relation to other justice theories, we would argue. That is, rather than debating about whether the CA is superior to other justice approaches or the other way around, perhaps a better strategy is to focus firstly on the issues that matter in relation to climate resilience, whichever they are (e.g. water access, housing quality, political freedom …), and only secondly on what the available justice perspectives can offer, separately or jointly, to address such issues. In this regard, more detailed analyses are needed about the potential of resourcist and needs theories for contributing to justice work in the climate resilience arena. Our capability application showcases how we can engage directly with these theories.

Thus, to conclude, the CA has received many positive appraisals in the adaptation-resilience domain, and our arguments broadly support this judgment. But our arguments also recommend caution. Specifically, they suggest that we should move beyond the one-sided enthusiasm for this approach and toward seeking bridges with other perspectives on justice and wellbeing. Further, our discussions show that not all applications of the CA are equally useful and that there are dilemmas involved in applying this approach. These results, in our view, represent reasons for caution and a strong warning against treating the CA – or any other justice approach – as a win–win and all-purpose solution to the justice shortcomings in climate resilience efforts.

Notes

1. Sometimes referred to as the 'capabilities approach', in plural, by Martha Nussbaum and others to stress that there are several capabilities to care about. While our proposals in this article have much in common with Nussbaum's, hereafter we follow Robeyns' (2017) distinction between the 'capability approach' (CA), a terminology that comes from Sen, and 'capability applications' or specific versions of the CA. More on this below.
2. Sen expressed concerns with earlier needs theories (Sen 1984; 2009), concerns which are addressed in the THN (Gough 2015, 1197–1198). In turn, Gough (2015) has criticized the elusiveness of capabilities as well as Sen's reluctance to identify a set of universally valuable functionings. For other needs-based critiques of the CA, see a.o. Gasper (2007) or Dean (2009).

Acknowledgements

We would like to acknowledge the hard work and extremely insightful remarks of the reviewers and editor during the review process. They have helped us much in refining our arguments and perspectives on this subject.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the Nederlandse Organisatie voor Wetenschappelijk Onderzoek.

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