



The multiple meanings of justice in the context of the transition to a low carbon economy

**A working paper by the Cambridge Institute for
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1. Introduction

This paper reviews the meanings of justice. It begins by summarising major moral interpretations of justice, and then turns to consider the main theoretical elements of justice: equitable distribution, recognition (eg of others' needs and rights), equal participation and equal capabilities. Various practical applications of these dimensions are then canvassed. Finally, the piece turns to the challenges that interactions between society and the environment present for environmental justice across time and at multiple spatial scales.

2. Methodology

The search for literature was conducted in four steps. A broad search was conducted, in both google.com (for grey literature) and google scholar (academic literature), using the keywords "environmental justice", "energy justice", "climate justice", and "just sustainability". First results were refined using the words "redistributive", "procedural", "historical", "inter-generational", and "low carbon". The three most cited authors from each search were selected for review. In a third stage, articles citing this initial list of papers were scanned to identify recent critiques and developments. A final search in google.com was conducted to find a more diverse set of views encompassing different stakeholders.

The articles used are published primarily in the academic journals "Local Environment: International Journal of Justice and Sustainability", "Energy Policy", "Global Environmental Change", "Journal of Business Ethics", "Environmental Politics", "Geoforum", and "Antipode". Relevant non-academic literature was sourced from the International Institute for Environment and Development (IIED), STEPS centre, Mary Robinson Foundation - Climate Justice, World Resources Institute, Joseph Rowntree Foundation, and the World Business Council for Sustainable Development.

3. Justice and moral thought

Justice is a moral concept with no agreed definition, denoting the general notion that people should be given what they deserve. Justice claims gain meaning in specific circumstances, in association with other values and specific cultural contexts. Despite a diversity of interpretations, justice continues to be seen as a fundamental moral principle and an individual virtue. Both ancient (for example Aristotle, *Nicomachean Ethic*, Book IV) and modern thinkers (for example Rawls, 1971) see justice as a principle to be embedded in all social institutions and as a necessary virtue of individuals in their interactions with others. Yet, even if it is easily agreed that justice is a priority and is about giving people what they deserve, there is disagreement about what it is that people deserve. Five key interpretations of the principle of justice can be distinguished, based on the western tradition of moral political thought. They can arguably be applied both within and between nation states (Okereke, 2006).

From a *utilitarian* perspective, justice is about designing rules and political institutions that bring about the greatest happiness for the greatest number of people (Bentham, 1970). Critics see this as morally problematic, leading to the endless sacrifice of some for the sake of a subjective notion of maximum well-being that is bound to be highly contested (Paterson, 1996).

Opposed to this line of thinking is an idea of justice as *liberal equality* based on the provision of rights. The main proponent, John Rawls (1971), contends that there are “inviolable minima” to which rights attach and no one should be left behind. As a result, any rule or institution, no matter how effective, deserves to be abolished if found to be unjust in these terms (Rawls, 1971).

Some argue that the conception that currently underpins key global environmental regimes is a variation of Rawls’s rights-based approach (Okereke, 2006). The original emphasis on a right to equality is transferred to a *right to equal opportunity*, based on values of individual liberty and property rights. Market instruments are seen as the most just way to distribute costs and benefits. All people are entitled to a share of the market, but this is not defined according to their needs (Nozick, 1974). State intervention in the process of distribution is seen as generating uncertainty to market actors and is not welcome (Hayek, 1976).

A fourth line of thought sees justice as meeting basic needs, based on the moral equality of human beings. The goal is not simply to distribute and respect rights, but to meet fundamental (and differentiated) human needs. The distribution of benefits and burdens is to be made on the basis of the principle ‘from each according to his ability and to each according to his needs’ (Marx, 1969, p.160). As Okereke (2006) and others (Dobson, 1998; Benton 1999; Langhelle, 2000) note, this *egalitarian approach* is embedded in the Brundtland Report on Sustainable Development (WCED, 1987) which states that “the satisfaction of human needs and aspirations is the major objective of sustainable development” (WCED, 1987, p.43), and that inequalities between rich and poor, industrialized and developing countries, are “the planet’s main environmental problem” (p.14).

Finally, a deeper moral foundation for sustainability is proposed by Sen (2009, 2013) who acknowledges the importance of fulfilling basic human needs but argues that this conception of justice is insufficient to attain sustainability. Sen puts forward an alternative vision of justice that is based on the human freedom to act in accordance with one’s own values and objectives (Sen, 2013), while emphasizing the individualistic roots of equality in rights first developed by Mary Wollstonecraft in 1792 (Sen, 2003). It is assumed that free human choices will encompass the meeting of basic needs but may include wider objectives such as the conservation of endangered species. This decision may derive from a notion of moral responsibility, rather than an objective view of the contribution of those species to human livelihoods (Sen, 2009). Sustainability depends, therefore, on attaining and preserving individual freedoms (Sen, 2013a), or a so-called ‘*sustainable freedom*’ (Sen, 2009). Individuals are free to choose the best way to meet their needs and pursue their aspirations, as long as they ensure that future generations will enjoy at least the same degree of freedom.

These various moral understandings of justice have emerged in western contexts, influencing how developed nations organise their political and legal systems. For instance, it may be argued that Sen’s view of justice as ‘*sustainable freedom*’ is intertwined with notions of deliberative democracy (Demals and Hyard, 2014), defined in terms of “protection of liberties and freedoms, respect for legal entitlements, and the guaranteeing of free discussion and uncensored distribution of news and fair comment” (Sen, 1999, p.10). It is important to remain sensitive to the ways in which

understandings of justice may differ in, for example, emerging economies such as Brazil, Russia, India, China and South Africa (the so-called BRICS).

Nonetheless, it is equally important to acknowledge the universal character of the moral principles of justice present in western and non-western systems of political and philosophical thought. As Sen (2009) argues, closely linked “ideas of justice, fairness, responsibility, duty, goodness and rightness have been pursued in many different parts of the world” (p.xiv) across very different moments in history. For example, early jurisprudence in India going back to the sixth century BC distinguished two aspects of justice: *niti* that refers to organisational and behavioural correctness; and *nyaya* that is concerned with the emergent properties of society and the lives that individuals are actually able to lead in their social context (Sen, 2009). In Chinese ancient political thought, the teachings of Confucius (sixth-fifth century BC), further elaborated by Mencius (fourth–third century BC), the people have a just claim to a decent livelihood and the legitimacy of a state depends upon satisfying this claim (Perry, 2008). The people’s right to subsistence, and having their basic needs met, remains central to the way in which ordinary people in modern China think about the social responsibility of the state as provider of socio-economic security (*ibid.*). Rather than presenting a contrasting view, non-western political thought on the moral principle of justice seems to expand the reach of arguments considered in western literature since the ‘European Enlightenment’.

4. The multiple dimensions of justice

Whatever moral approach one chooses, four main *theoretical* dimensions of justice are commonly identified, and widely applied also in the field of environmental justice (Sen, 2009; Fraser, 2001; and Schlosberg, 2007). Justice is seen as variously enabled by *equitable distribution, recognition, equal participation in procedures and equal capabilities*.

Justice as equitable distribution

For years, justice studies conceived justice as the principled, equitable distribution of goods, and debated the principles that should guide distribution. First presented and discussed by Rawls (1971), this perspective on justice is first and foremost about equity in the distribution of benefits, such as resources, opportunities and freedoms; as well as costs, including risks and limits to freedom (Barry, 1999; Brighouse, 2004). Over the last three decades, variants of distributive theory have dominated the literature on justice. Some of this work distinguishes between the object of distribution (goods or rights) and basis for distribution (need or entitlement) (Schofield, 2006; Blaikie and Muldavin, 2014). It is an approach to justice widely accepted by the academic community and widely used in practice, for example by social movements.

Rawls proposed a way to develop and agree on principles of distribution. In this process, individuals step into an imaginary ‘original position’ (behind a ‘veil of ignorance’) – a situation in which one’s own strengths or weaknesses are not considered, and what we might get as result of the process is put to one side for the sake of an agreement on principles for fair distribution that are acceptable to all regardless of the outcome of distribution. One of this approach’s weaknesses is that it discusses only idealised processes for fair distribution, without providing insight into the sources of maldistribution.

Justice as recognition

Young (1990), Fraser (2001) and Honneth (1992) argue that justice studies must also clarify the processes enabling maldistribution and its underlying causes. Fraser (2001) argues that maldistribution is closely linked to misrecognition, which is a cultural and institutionalised form of injustice diffused through social norms, language and practices.

As a consequence, recognition (both individual and social) is put forward as an additional component of justice. Whether and how individuals and communities are recognised is crucial. Environment justice movements often frame their demands in terms of recognition. However, activists and researchers see recognition not just as something “distributed” (for instance by the state as a neutral arbiter), but as something that concerns entire societies and cultures.

Recognition has a *psychological* dimension that stems from the fact that individuals must feel free of physical threat, have equal political rights, and enjoy respect for their cultures (Honneth, 1992). Lack of recognition demonstrated by forms of insult, degradation, and devaluation at both an individual and cultural level “impairs these persons in their understanding of self” and can therefore be a form of oppression (Schlosberg, 2007, p.18). Recognition encompasses the social status of those that are less well-off in distributional schemes. Fraser (2001) identifies three *status*-based examples of misrecognition: a) a general practice of cultural domination; b) a pattern of non-recognition, rendering people invisible; and c) disrespect, or frequent denigration in stereotypical public and cultural representations.

Justice as equal participation in procedures

Fraser’s (1998) vision of justice is supported by three equally important pillars: recognition, procedure and distribution. The procedural component focuses on the political process addressing both unequal distribution and misrecognition. Fraser (1998) sees equal participation as a synonym for procedural justice. Many others agree with this interpretation (Schlosberg, 2007) and have verified in practice that the inclusion of stakeholders in a decision-making process leads to better resource conservation outcomes (Gardner and Walker, 1994; Ostrom, 1990).

Objective conditions for achieving equal participation include resources to ensure a participant’s independent voice. Subjective conditions consist of cultural norms and social practices that “express equal respect for all participants and ensure equal opportunity for achieving social esteem” (Fraser, 2001, p.29).

Justice as equal capabilities

An alternative conception of justice (encompassing the three pillars of justice defended by Fraser) is proposed by Sen (2009) and Nussbaum (2000) through their capabilities approach. Capabilities are about a person’s opportunities to do and be what they choose - to fully ‘function’ in lives of their choosing in a given society. Functionings (eg eating or reading; being well nourished; being free of disease) are selected in different combinations. If reading is a functioning, then being educated is the capability to be distributed. This understanding of justice seems to align particularly well with India’s ancient notion of justice as *nyaya*.

The distribution of capabilities alone does not equal functioning. There also has to be the opportunity to select and combine functionings as a matter of choice (Sen, 2009). Factors that inhibit flourishing are considered harmful and unjust. The challenge is to identify what it is that either enables or interferes with the ability to transform primary goods (if/once they are available) into functionings.

Sen (2009) remains vague about what individuals need to advance their capabilities and develop the functionings of their choice. He merely notes five key concepts and freedoms: political freedom; economic facilities, social opportunities, transparency guarantees, and protective security. It has also been noted that Sen does not consider aspects of collective capability and individual responsibility in a satisfactory manner (Ballet et al., 2007).

Overall, Sen and Nussbaum expand the distributional realm of justice to include the processes people depend on to flourish. Equal participation is seen as a key political capability essential for individual functioning, and recognition is also explicitly included.

5. The role of cultural context in the perception of justice and its dimensions

The dimensions of justice outlined in the previous section can and have been usefully employed to analyse issues in diverse social, political and economic contexts (Schlosberg, 2007; Sen, 2009). Yet, when specifying weights given to the various dimensions, or the specific social mechanisms and conventions that allow an outcome to be perceived as more or less just, some nuances may be identified in specific socio-cultural, political and economic contexts.

For example, individual *responsibilities* and *collective* capabilities may be more highly valued in non-western societies, where, for example, individuals may feel more strongly about their personal obligations towards the communities where they live (Ballet et al. 2007). In some societies, therefore, responsibility underpins freedom and not the reverse. This seems to be the case in China (Perry, 2008), where the exercise of rights is closely attached to an ethical responsibility towards the collective good.

Other differences in emphasis may be found across cultural divides. An emphasis on socio-economic rights and distributive justice can be identified in the way that political power has been exerted and legitimized in China over the past two millennia (Perry, 2008). An emphasis on political rights, and the dimensions of justice as recognition and equal participation, seems to dominate political thought in the US. This is, of course, not to say that issues of recognition and equal participation are dismissed in China, or that aspects of distributive justice are unimportant in the American polity. But perceptions of justice, and the role of the individual and the collective in the pursuit of justice, seem to be somewhat culturally adjusted.

Other differences in emphasis, and perceptions of whether a particular procedure or outcome are more or less just, may become apparent at smaller scales of social organisation. A study on procedural justice and business management in the US and China focused on three aspects of national culture (uncertainty avoidance, societal emphasis on collectivism and gender egalitarianism) and found that they influence perceptions of fairness in decision-making procedures and practices. Findings suggest that managers in the US would be perceived to be more just, in comparison with managers in China, if they provide adequate information and explanations about procedures and how decisions are made. Conversely, managers in China are perceived to be more just if they treat employees with courtesy, dignity and respect. Both cultures give equal weight to consistency in how policies and procedures are uniformly applied across employees and over time (Tata et al. 2003).

These nuances may be relevant for both business and government leaders as they engage with the increasingly wide range of stakeholders influenced by their decisions within and across political borders.

6. Environmental justice

This section reviews how justice concepts are applied in the environmental sphere, to what issues, by whom, and with what framing.

An evolving range of applications

The first conceptions of environmental justice focused on the existence of inequity in the distribution of environmental 'bads' in the US during the 1980s. At issue was the distribution of toxic waste and how some communities (poor Afro-American communities) were exposed to greater environmental risks than others (Bullard, 1990). The unequal distribution of environmental 'bads' was seen as yet another reflection of social injustice (Schlosberg, 2007). The field quickly expanded to include the distribution of a range of environmental goods (such as greenspace, food and water). A 2004 review of evidence of the relationship between environmental and social justice covered 21 topics, including environmental goods, environmental 'bads', and aspects of environmental consumption and service provision (Lucas et al., 2004). More recently, the notion of environmental justice was found in discussions around climate justice, indigenous rights, labour rights, nature conservation, transportation, water, energy and food justice (Schlosberg, 2007; Walker, 2009).

In parallel with this 'sideways' expansion, the concept is now being used in other geographies as well. Walker (2009) identifies no less than 37 countries where the environmental justice concept is being applied by social activists and academic experts. Schlosberg (2007, 2013) also notes that the environmental justice lens has been applied to a multitude of issues, countries, regions and localities including: waste management in the United Kingdom (Watson and Bulkeley, 2005); agrarian change in Sumatra (McCarthy, 2010); nuclear waste in Taiwan (Fan, 2006); gold mining in Ghana (Tschakert, 2009); oil politics in Ecuador (Widener, 2007); wind farm development in Wales (Cowell et al., 2011); pesticide drift in California (Harrison, 2011); and energy politics in Mexico (Carruthers, 2007).

The engagement of religious leaders with issues of environmental justice and climate justice is also testimony to this expanding trend. Environmental justice is increasingly visible through initiatives such as the Alliance of Religions and Conservation, and the repeated calls for a duty of care for nature by leaders like Pope Francis and the Dalai Lama, particularly in the lead up to the COP21 negotiations in Paris (Vidal, 2015).

At the same time, notions of environmental justice are broadening in two other ways (Schlosberg, 2007, 2013): a) to acknowledge the link between justice to individuals and justice to communities; b) to establish the link between environmental justice within human society and justice to non-human nature or 'ecological justice' (see Schlosberg (2007) for an accessible review of different notions of 'ecological justice').

Environmental justice and communities

Contemporary theories of justice are being applied not only to individuals, but to communities and groups too. In tackling the distribution and recognition dimensions of environmental justice, Pulido

(1996) discusses the cultural and racial obstacles that individuals and communities face when pursuing just distributions. Kymlicka (2002) is particularly well known for adopting group rights as an element of justice. His work is centred on social groups in Canada such as First Nations and the Quebecois. It remains Kymlicka's view, however, that group rights must be protected (by the State) for the sake of the individual.

Considering aspects of procedural environmental justice in energy transitions in a developing world context, Yenneti and Day (2015) explore the case of India's large-scale, nation-wide implementation of solar energy programmes. Here environmental justice concerns revolve around the development of large-scale solar PV infrastructure known as 'solar parks'. With a focus on justice to communities, the study illustrates how failures in different aspects of procedural justice can result in unnecessary large impacts on the livelihoods of rural communities, and the further marginalisation of those with lowest social status.

Another account of environmental justice at community level, is provided by Bulkeley and Fuller (2012), in the context of low carbon transitions in the UK. The authors examined the effectiveness of low carbon programmes designed to enable just responses to climate change at the community level. The nine low carbon community programmes were variously led by government, business (British Gas) and civil society. The authors found that, on the procedural front, government-led programmes had more difficulty in engaging with 'hard-to-reach' groups, while the programme initiated by British Gas and those led by civil society organisations had more open decision-making processes. As to distributional aspects, government-led programmes were found to put a greater emphasis on delivering benefits to fuel poor sections of the community in comparison with other schemes. From a recognition perspective, a problem with all the programmes analysed was that, in practice, the schemes placed the responsibility for low carbon reduction with the communities. The authors argue that this is obscuring and displacing the responsibility that public and private sector actors themselves have to take action. In addition, a more explicit recognition of costs for the communities involved, and the distribution of those costs within communities, was found to be missing (Bulkeley and Fuller, 2012).

The capabilities approach offers another important contribution to group-focused notions of justice. Proponents of the approach see individual capabilities as being satisfied only in association with groups or within groups. Groups may therefore be a realm of justice in their own right (Schlosberg, 2007). Bullard and Wright (2009) have edited an important set of reflections about the impacts that Cyclone Katrina has had on environmental justice at the community level. The authors canvass a range of basic needs and functions that were undermined and needed to be restored for the sake of a just recovery. These functions include transportation, employment, health, housing, economic opportunities, community diaspora, and political participation, and are considered to be at the heart of the functioning of the city of New Orleans, its neighbourhoods and communities.

Environmental justice and non-human nature

While most of the discussion on environmental justice revolves around environmental 'bads' and injustices to human beings, more and more authors argue that concept of justice should apply to the treatment of the environment itself. Environmental justice literature in the arenas of climate and energy, for example, treats a functioning environment as a pre-condition for social justice. This represents an important conceptual shift.

By linking social and ecological justice, authors like Agyeman (2008) conceive environmental justice to be not only about socio-cultural impacts but also about interactions between social and ecological communities. Taking the example of post-Katrina recovery, research highlighted how the ecological damage done to surrounding ecosystems is leading to greater vulnerabilities to both human and non-human communities (Ross and Zepeda, 2011).

Schlosberg argues that a capabilities approach to justice is key to address the relationship between human needs and environmental needs, giving due attention and recognition to the functioning of ecosystems themselves, not only to those who depend on them (Schlosberg, 2007). The main problem to address is the interruption of the capabilities and functioning of living systems, which constitute an injustice not only to human beings but to all non-human beings that depend on the integrity of the system for their functioning.

Overall, environmental justice has become more than another dimension of social injustice. It has come to refer to the fundamental and pervasive role that the natural environment plays in the provision of justice.

Environmental justice and sustainable development

As a result of this recognition of the link between environmental justice to all human beings and justice to nature itself, a new focus has emerged to do with the design and implementation of more just and sustainable practices of production and consumption. This is visible in the way that environmental justice movements demand investment in food or energy justice and liveable communities based on a functioning and sustainable relationship with the natural world (Agyeman, 2008). This vision of environmental justice shifts from a strategy based solely on resistance, to a strategy of reconstruction of more just and sustainable communities, or “just sustainabilities”. As Faber puts it, ‘the struggle for environmental justice is not just about distributing risks equally but about preventing them from being produced in the first place’ (1998, 14).

The movements for food justice and energy justice are interesting examples. They do not pursue individualistic consumption-based solutions, but instead aim to build new practices and institutions for sustainability. For the food justice movement, the solution is not only to buy organic vegetables but to engage in growing and sharing food in community supported agriculture, collective gardening, urban farms and farmers’ markets (Alcon and Agyeman, 2011). The aim is to transform people’s relationship with food, its production, transportation and consumption. In pursuit of energy justice, community-wide local generation and networking of solar and wind energy is promoted. An example of efforts towards a just energy transition comes from the Navajo nation in the USA, whose objective is to stop environmental degradation caused by coal mining and burning, and prevent the abuse of local autonomy by mining companies. In the UK, NGOs like National Energy Action are bringing the issue of energy justice to the fore, and linking energy justice to ethical consumption (Hall, 2015).

These initiatives have emerged in Western political contexts based on the rule of law, the protection of liberties and freedoms, respect for legal entitlements, and for “free discussion and uncensored distribution of news and fair comment” (Sen, 1999). However, they align well with notions of *personal responsibility* and *collective capability* that usefully extend Sen’s work on individual capabilities and collective responsibility (Ballet et al., 2007). It seems important to enhance current understandings, in both developed and developing countries, of the role of personal responsibility and collective capabilities in advancing sustainable production and consumption of energy and food, and protecting underlying ecological systems and environmental processes.

According to the findings of the Environmental Justice Organisations, Liabilities and Trade project (www.ejolt.org), funded by the 7th European Research Framework Programme, there is a growing number of links between environmental justice initiatives in developed and developing countries. Furthermore, in western developed economies social movements towards environmental justice are also increasingly accompanied by proposals of a “steady state economy” and “prosperity without growth” (Martinez-Alier, 2015).

Users of the environmental justice concept

The biggest ‘users’ of environmental justice in public claims, policies and practices, are social movements and NGOs across the globe. However, as a result of greater awareness of evidence of environmental injustice, environmental agencies in countries such as the US (USEPA, 2003) and the UK (Environment Agency, 2009) have also investigated the relationship between environmental management and social justice.

Research in the UK has found that the concept of “just sustainabilities” is providing useful meeting ground for government actors focused on sustainable development and civil society actors working on environmental justice (Agyeman and Evans, 2004). Besides NGOs such as ‘Friends of the Earth’ and ‘Capacity’, public actors such the Town and Country Planning Association, the Economic and Social Research Council, the Sustainable Development Commission, and the Environment Agency have taken concrete steps to include environmental justice in their policies and programmes (Agyeman and Evans, 2004). A UK Environmental Justice Network bringing together community groups, NGOs, business and public bodies, existed in 2004 (Agyeman and Evans, 2004) but was not found to have an online presence at the moment. This may be part of a divestment on environmental policy within the UK public sector following the financial crisis (Bell, 2014).

In general, the literature reviewed revealed little about the position the business community takes on environmental justice in international spheres. In national spheres, large firms in the UK and US have started to acknowledge the problem and put forward environmental justice policies or programmes (USEPA, 2003; Bulkeley and Fuller, 2012). In the US context, a 2003 report compiles interesting insights from 15 large companies operating in minority and/or low-income communities (USEPA, 2003). Surveyed companies were aware of environmental justice issues and employed a variety of techniques to involve communities affected by the siting of large infrastructure facilities. Nevertheless, the firms do not distinguish environmental justice from corporate responsibility practices. They also considered the term “environmental justice” to be negatively biased, and prefer not to characterise the siting of facilities in these terms. The companies argue that the concept tends to polarise stakeholders and limit constructive dialogue. Companies familiar with the concept and its benefits for business-community relations had pro-active environmental justice policies in place.

Overall, the environmental justice movement has broadened its focus from resisting the environmental manifestations of social injustice, to reconstructing more just and sustainable communities. NGOs and public actors have come together to discuss how to reconstruct ‘just sustainabilities’ in food and energy production and distribution. Companies in developed countries have engaged with the concept under a ‘corporate social responsibility’ framing (Gouldson, 2006). Meanwhile, the academic literature has moved to underline the fundamental relationship between the natural environment and the provision of justice. It argues for extending proactive support to functioning systems to sustain both human and environmental needs.

7. Environmental justice across time

An aspect of justice, particularly pertinent to climate justice, concerns the moral duties owed by the current generation to future people, and the rights that future generations have. The rights of unborn people are acknowledged by those proposing a broad conception of justice (Rawls 1971). Cameron et al. (2013, p.9) refer to the '200-year present', a definition of future generations proposed by Elise Boulding (1978), which refers to "a continuously moving moment, reaching out one hundred years [back and forward] from the day we are in", in order to consider the lifetimes of the young and old around us.

In respect to greenhouse gas (GHG) emissions, what duties do present generations owe future generations regarding their quality of life? Some deny future generations any rights as such, given that they cannot exercise them today (Wellman, 1995) nor interact with non-contemporary generations (Barry, 1989). Others argue that the ability to interact is not necessary for the attribution of rights or duties to any person (Buchanan, 2004). Instead, "rights are attributed to beings whose interests are important enough to justify imposing duties on others" (Buchanan, 2004 p.216). In the Fifth Assessment Report of the Intergovernmental Panel on Climate Change it is suggested that:

"if future people's basic rights include the right to survival, health, and subsistence, these basic rights are likely to be violated when temperatures rise above a certain level. However, currently living people can slow the rise in temperature by limiting their emissions at a reasonable cost to themselves. Therefore, living people should reduce their emissions in order to fulfil their minimal duties of justice to future generations" (Kolstad et al., 2014, p.216).

If one accepts the duty to protect the basic rights of future people, the problem of uncertainty also arises. Current people's actions or omissions do not directly violate the rights of future generations; they create a risk that these rights will be violated (Bell, 2011). Some argue that this risk must not only be calculated, but it needs to factor in the likelihood of violating the rights of currently living people (Temkin, 2012). Along the same line of thought, proponents of a capabilities approach (Page, 2006; Forsyth 2014) claim that *inter*-generational justice is also *intra*-generational. They contend that environmental justice is about preserving an environment that enables future generations to retain the same substantive freedoms as their ancestors. Work from the Institute of Development Studies (IDS) argues for the integration of children's rights in inter-generational issues of climate justice (IDS, 2009).

Brown Weiss (2002) proposes three basic principles of inter-generational equity that go even further. Weiss argues that the legacy passed on to the next generation should preserve the same: a) range of options (eg cutting tropical forests will mean that future generations will have fewer options for carbon sequestration); b) quality of the natural environment and the planet's environmental system; c) and access to the legacy of past generations. This has wide-ranging implications, considering that long-term biophysical processes and dynamics unfold over more than one generation (Sikor and Newell, 2014). Blaikie and Muldavin (2014) note that inter-generational conceptions of justice imply regulations governing long-term social processes underpinning the

maintenance of soil fertility and forest quality at various spatial scales (slope, catchment, entire river basins).

In summary, the inter-generational dimension is a distinctive feature of environmental justice. Present generations arguably have duties to protect at least the basic rights of children and those as yet unborn to survival, health and subsistence; and potentially their access to an equal quality of environmental system.

8. Environmental justice across space

Decisions made to address complex social and environmental issues, such as nuclear waste disposal, climate change and transitions to low carbon development, have consequences for the distribution of costs and benefits across space. Social relations unfold in spatial terms in many ways – from the scale at which decisions are adopted; the transnational networks that emerge around specific issues; senses of place and community; and the recognition of sovereign rights over territories. In each place, and at every spatial scale, the set of actors included (and excluded) and the range of available policy options differs, along with environmental justice implications. Furthermore, decision-making processes at local, regional and global scale are becoming inter-related in new ways as a result of economic globalisation and climate change. As a result, the relationship between environmental justice and space is given special consideration here.

Space and distributive notions of environmental justice

“First generation” environmental justice research, based on the distribution of pollution, risk and race in the US, is nowadays seen as taking a one-dimensional perspective on both space and justice (Walker, 2009). It focused on distributive justice and on a spatial pattern of proximity between populations of different racial structure and waste, landfill and industrial sites. Walker (2009) argues that this analytical framework is insufficient, and shows that well-being and environment are intertwined across space in more than one way. To begin with, there are multiple pathways and environmental processes through which pollutants ‘travel’ from one place to another. This implies that exposure and its potential negative impacts cannot be derived simply by spatial proximity.

Furthermore, and beyond issues of spatial distribution of pollutants, it is crucial to understand how different people in the same place (seemingly exposed to the same ‘dose’ of pollutants exposure) are vulnerable to different degrees. This variation may derive not only from physiological difference (women, children, elderly, different ethnic groups) but also from differences in access to resources, healthcare, insurance, good quality food, and so on (Walker, 2009).

At the global scale, issues of transfer and disposal of hazardous waste and mitigation and adaptation to climate change have also been considered in the light of unequal production and consumption of environmental bads (Paavola and Adger, 2002). The UNFCCC specifies that countries have “common but differentiated responsibilities”, because of their very different contributions to the stock of GHGs. This is taken to mean that current and historical responsibility for climate change needs to play a role when determining the obligations of different countries to reduce emissions and pay for adaptation measures globally (Kolstad et al., 2014).

Space and recognition-based notions of environmental justice

Space can also be connected to recognition-based notions of environmental justice (Walker, 2009). Misrecognition, as discussed in section 3, involves cultural and institutional processes of disrespect and stigmatisation. It is argued that the stigmatisation of places can result in the misrecognition of people (Walker, 2009). This may be the case, for example, in relation to the siting of projects using stigmatised technologies, such as nuclear waste disposal. Environmental justice movements often seek to recover the positive identities of denigrated places, which, once “associated with trash”, become the “natural destination” for further unwanted land uses (Pellow, 2002).

Space and procedural notions of environmental justice

Making the link between space and procedural notions of environmental (in)justice, Walker (2009) argues that bringing about greater openness and inclusion in decision-making processes also enables access to spaces and networks that were previously restricted. Procedural injustice is associated with exclusion from closed information spaces, networks of access and relationships of power. In this sense, procedural justice is enabled by more open flows of people, ideas, and perspectives across institutional boundaries, and between elite and lay people. Ultimately, procedural justice is fostered by open opportunities for interaction and deliberation.

Concrete examples of how spatial factors interplay with procedural justice include:

- how access to the “open provision” of web-based environmental information and online participatory decision-making is in practice spatially and socially differentiated; and
- the ways in which lack of resources and time constraints of everyday life limit people’s presence in participation meetings and negotiations, either local, regional or global.

Environmental justice across multiple spatial scales

The literature on environmental justice has gradually come to include a wide range of spatial scales, from the local to the global (Sze and London, 2008; Schlosberg, 2007, 2013). The environmental justice framework is now an organizing theme used by global social movements on issues such as food security, indigenous rights, e-waste and climate justice (Schlosberg, 2007; Mohai et al., 2009). Pellow (2011) also illustrates this trend through his work on the global toxic waste trade and how this is resisted both by local communities and a global NGO.

At the global scale, inter-governmental conventions increasingly refer to considerations of equity and justice. These include Reduced Emissions from Deforestation and Degradation (REDD+) (Sikor, 2013) and the Convention on Biological Diversity, with its 2010 protocol on access and benefit sharing. This protocol addresses the lack of access to benefits from biodiversity of many poorer communities that are also stewards of those natural resources (Martin et al., 2013). Environmental justice struggles are also playing out in the arena of transnational trade and investment. Sikor and Newell (2014 p.151) note that “practices of production, trade and regulation at one site increasingly connect with seemingly distant sites elsewhere through extended supply chains, technology diffusion and the internationalization of production”.

As to international climate change mitigation and adaptation efforts, issues of environmental justice were first considered in the UNFCCC context in the 5th Assessment Report published in 2014 (Kolstad et al., 2014). A 2013 report by the Mary Robinson Foundation – Climate Justice reviewed the use of climate justice discourse by key actors involved in the UNFCCC, including governments, civil society and business. The report found that none of the private sector organisations surveyed were addressing the issue in public. During this review, the most recent online publications of the World

Business Council for Sustainable Development on climate and energy (available at <http://www.wbcspdpublications.org/>) were scanned using the key words “justice”, “fairness” and “responsibility”, but no reference to these concepts was found. From the civil society perspective, the contribution of the UK Labour Union Congress to the 2009 United Nations Climate Change Conference stands out. Fearing the consequences of a major economic restructuring, the organisation supports a “just transition” strategy to secure “a green and fair future” (TUC, 2012).

In parallel, private global initiatives are attempting to diffuse best practices concerning procedural environmental justice, encouraging global firms, who reap benefits from access to natural resources and to markets, to adopt them on a voluntary basis. For example, in an effort to enhance procedural justice to local communities in global forest carbon sequestration projects, including REDD+, a group of international NGOs have formed the Climate, Community and Biodiversity Alliance to promote such best practices. The Alliance has established certification schemes (eg standards) to ensure that carbon mitigation goals are pursued in a just manner. The Alliance’s standards are the most recognised and sought after among forest carbon offsetting standards targeting net positive community impacts (Suiseeya and Caplow, 2013). However, it is not clear that the standards, including mandatory criteria associated with procedural justice, are being implemented in practice (Suiseeya and Caplow, 2013). In the face of insufficient access to information and lack of attention to stakeholder engagement processes, the legitimacy of global standard setting exercises led by private actors has been called into question (Suiseeya and Caplow, 2013).

These findings reveal the inextricable relationship between environmental justice and space. There is unequal production and consumption of environmental impacts across space, and access to spaces of decision-making is spatially and socially differentiated.

9. Conclusion

While the definition of justice as a moral principle allows numerous interpretations, a set of important conceptual tools are presented here, along with specific practical examples. The notions of distribution, recognition, participation and capability are all central. Environmental justice is no longer the preserve of NGOs and social movements, and is becoming integrated in the considerations of some governments, as well as large companies addressing localised issues (particularly in the US and UK). Equity and responsibility also feature in several international environmental conventions, with environmental justice entering into the discourse of expert assessments.

Transitions to low carbon are likely to alter the way environmental costs and benefits are distributed and recognised within societies. The justice implications of those changes may need to be assessed at every step, and in a manner that is well adjusted to societal conditions and the environmental complexity of the issues. Who participates in deciding what that transition looks like, how it might be made ‘just’, and how it could be managed across time and space, will affect possibilities and outcomes. An inclusive and transparent strategy of deliberation across public, private and civil society sectors, with the assistance of leading thinkers, is likely to be a difficult but crucial way forward.

References

- Agyeman, J. (2008). Toward a “just” sustainability? *Continuum*, 22(6), 751–756.
- Agyeman, J. & Evans, B. (2004). “Just sustainability”: the emerging discourse of environmental justice in Britain? *Geographical Journal*, 170(2), 155–164.
- Alcon, A.H. & Agyeman, J. (2011). *Cultivating Food Justice: Race, Class, and Sustainability*. Cambridge, MA: MIT Press.
- Aristotle (c.mid 4th century BC). Nichomachean Ethics, Book IV. In J.H. Burns & H.L.A Hart (Eds.) (1970), *An Introduction to the Principles of Morals and Legislation*. London: Athlone Press.
- Ballet, J., Dubois, J., & Mahieu, F. (2007). Responsibility for each other’s freedom: Agency as the source of collective capability. *Journal of Human Development*, 8(2), 185–201.
- Barry B. (1989). *A Treatise on Social Justice, Volume 1: Theories of Justice*. London: Harvester-Wheatsheaf.
- Bell, D. (2011). Does anthropogenic climate change violate human rights? *Critical Review of International Social and Political Philosophy*, 14, 99–124.
- Bell, K. (2014). *Achieving Environmental Justice: A Cross-National Analysis*. Bristol: Policy Press.
- Benton, T. (1997). Ecology, community and justice. In T. Hayward, & J. O’Neill (Eds.), *Justice Property and the Environment: Social and Legal perspectives*. Sydney, Aldershot: Ashgate.
- Blaikie, P. & Muldavin, J. (2014). Environmental justice? The story of two projects. *Geoforum*, 54, 226–229.
- Boulding, E. (1978). The dynamics of imaging futures. *World Future Society Bulletin*, 12, 5, 1–8.
- Brown Weiss, E. (2002). Intergenerational Fairness and Rights of Future Generations. *Intergenerational Justice Review*, 1, 6: 24-35.
- Buchanan, A. (2004). *Justice, Legitimacy, and Self-Determination Moral Foundations for International Law*. Oxford: Oxford University Press.
- Bullard, R. (Ed.) (1990). *Dumping in Dixie: Race, Class and Environmental Quality*. Boulder, CO: Westview Press.
- Bullard, R. & Wright, B. (Eds.) (2009). *Race, Place, and Environmental Justice after Hurricane Katrina*. Boulder, CO: Westview Press.
- Bulkeley, H., & Fuller, S. (2012). *Low carbon communities and social justice*. York: Joseph Rowntree Foundation.
- Cameron, E., Shine, T. & Bevins, W. (2013). Climate Justice: Equity and Justice Informing a New Climate Agreement. Working Paper. World Resources Institute, Washington DC and Mary Robinson Foundation — Climate Justice, Dublin. Retrieved from: <http://www.climatejusticedialogue.org>.

- Carruthers, D. (2007). Environmental justice and the politics of energy on the US–Mexico border. *Environmental Politics*, 16 (3), 394–413.
- Cowell, R., Bristow, G., & Munday, M. (2011). Acceptance, acceptability and environmental justice: the role of community benefits in wind energy development. *Journal of Environmental Planning and Management*, 54 (4), 539–557.
- Demals, T., & Hyard, A. (2014). Is Amartya Sen's sustainable freedom a broader vision of sustainability? *Ecological Economics*, 102, 33–38.
- Dobson, A. (1998). *Justice and the Environment: Conceptions of Sustainability and Dimensions of Social Justice*. Oxford: Oxford University Press.
- Environment Agency (2009). *Social Justice in the Context of Flood and Coastal Erosion Risk Management: A Review of Policy and Practice*. Research Project Final Report. Retrieved from: <http://evidence.environment-agency.gov.uk/fcerm/>
- Faber, D. (Ed.) (1998). *The struggle for ecological democracy: environmental justice movements in the United States*. New York: The Guilford Press.
- Fan, M. (2006). Environmental justice and nuclear waste conflicts in Taiwan. *Environmental Politics*, 15, (3), 417–434.
- Forsyth, T. (2014). Climate justice is not just ice. *Geoforum*, 54, 230–232.
- Gouldson, A. (2006). Do firms adopt lower standards in poorer areas? Corporate social responsibility and environmental justice in the EU and the US. *Area*, 38(4), 402–412.
- Hall, S. M. (2015). Energy justice and ethical consumption: comparison, synthesis and lesson drawing. *Local Environment*, 18 (4) 422–437.
- Harrison, J.L. (2011). *Pesticide drift and the pursuit of environmental justice*. Cambridge, MA: MIT Press.
- Hayek, F.A. (1976). *Law, Legislation and Liberty* (vol. 2). London: Routledge.
- Institute of Development Studies (IDS). (2009). Climate Change, Child Rights and Intergenerational Justice. IDS in Focus Policy Briefing, Issue 13. Retrieved from www.ids.ac.uk
- Kolstad C., Urama, K., Broome, J., Bruvoll, A., Cariño Olvera, M., Fullerton, D., Gollier, C., Hanemann, W.M., Hassan, R., Jotzo, F., Khan, M.R., Meyer, L. & Mundaca, L. (2014). Social, Economic and Ethical Concepts and Methods. In O. Edenhofer, R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel J.C. & Minx (Eds.). *Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge: Cambridge University Press.
- Kymlicka, W. (2002). *Contemporary Political Philosophy: An Introduction*, 2nd ed. Oxford: Oxford University Press.
- Langhelle, O. (2000). Sustainable development and social justice: expanding the Rawlsian framework of global justice. *Environmental Values*, 9 (3), 295–323.

- Lucas, K., Walker, G., Eames, M., Fay, H. and Poustie, M. (2004). *Environment and Social Justice: Rapid Research and Evidence Review*. Sustainable Development Research Network, London: Policy Studies Institute.
- Martin, A., McGuire, S., and Sullivan, S. (2013). Global environmental justice and biodiversity conservation. *Geographical Journal*, 179 (2), 122–131.
- Martinez-Alier, J. (2015). *Is there a global movement for environmental justice?* Department of Development Studies, School of Oriental and African Studies (SOAS), University of London. Retrieved from: <https://www.soas.ac.uk/development/events/devstudseminars/24nov2015--is-there-a-global-movement-for-environmental-justice.html>
- Marx, K. (1969). Critique of the Gotha programme. In L. Feuer (Ed.), *Marx and Engels: Basic Writings on Politics and Philosophy*. London: Fountana.
- McCarthy, J.F. (2010). Processes of inclusion and adverse incorporation: oil palm and agrarian change in Sumatra, Indonesia. *Journal of Peasant Studies*, 37 (4), 821–850.
- Mohai, P., Pellow, D., & Roberts, J. T. (2009). Environmental Justice. *Annual Review of Environment and Resources*, 34(1), 405–430.
- Nozick, R. (1974). *Anarchy, State and Utopia*. New York: Basic Books.
- Okereke, C. (2006). Global environmental sustainability: Intragenerational equity and conceptions of justice in multilateral environmental regimes. *Geoforum*, 37(5), 725–738.
- Paavola, J. and Adger, W. N. (2002). *Justice and adaptation to climate change*. Tyndall Centre, Working Paper No 23. Norwich: University of East Anglia.
- Page, E. (2006). *Climate Change, Justice and Future Generations*. Northampton, MA: Elgar.
- Paterson, M. (1996). International justice and global warming. In B. Holden (Ed.), *Ethical Dimensions of Global Change*. London: Macmillan Press.
- Pellow D. (2002). *Garbage Wars: The Struggle for Environmental Justice in Chicago*. Cambridge, MA: MIT Press.
- Pellow, D. (2011). Politics by other greens: the importance of transnational environmental justice movement networks. In J. Carmin & J. Agyeman (Eds). *Environmental inequalities beyond borders* (pp. 247–266). Cambridge, MA: MIT Press.
- Perry, E. J. (2008). Chinese Conceptions of “Rights”: From Mencius to Mao—and Now. *Perspectives on Politics*, 6(1), 37–50.
- Pulido, L. (1996). A critical review of the methodology of environmental racism research. *Antipode*, 28 (2), 142–159.
- Rawls, J. (1971). *A Theory of Justice*. Oxford: Oxford University Press.
- Ross, J.A. and Zepeda, L. (2011). Wetland restoration, environmental justice and food security in the lower 9th ward. *Environmental Justice*, 4 (2), 101–108.
- Scholsberg, D. (2007). *Defining Environmental Justice: Theories, Movements and Nature*. Oxford: Oxford University Press.

- Schlosberg, D. (2013). Theorising environmental justice: the expanding sphere of a discourse. *Environmental Politics*, 22(1), 37–55.
- Sen, A.K. (2013). The Ends and Means of Sustainability, *Journal of Human Development and Capabilities*, 14 (1), 6–20.
- Sen, A.K. (1999). Democracy as a universal value. *Journal of Democracy*, 10 (3), 3–17.
- Sen, A.K. (2009). *The idea of justice*. Cambridge, MA: Harvard University Press.
- Sen, A.K., Agarwal, B., Humphries, J., & Robeyns, I. (2003). Continuing the Conversation. *Feminist Economics*, 9(2-3), 319–332.
- Sikor, T., & Newell, P. (2014). Globalizing environmental justice? *Geoforum*, 54, 151–157.
- Suiseeya, K.R.M., & Caplow, S. (2013). In pursuit of procedural justice: Lessons from an analysis of 56 forest carbon project designs. *Global Environmental Change*, 23 (5), 968–979.
- Sze, J. & London, J.K. (2008). Environmental justice at the crossroads. *Sociology Compass*, 2, 1331–1354.
- Tata, J., Fu, P. P., & Rongxian, W. (2003). An examination of procedural justice principles in China and the U.S. *Asia Pacific Journal of Management*, 20(2), 205–216.
- Temkin, L. S. (2012). *Rethinking the Good: Moral Ideals and the Nature of Practical Reasoning*. Oxford: Oxford University Press.
- TUC: Climate Change and “Just Transition”. (2012, September 24). Retrieved from Trade Union Congress website, <https://www.tuc.org.uk/workplace-issues/green-workplaces/green-workplaces-news/green-workplaces-network/tuc-climate-change>
- Tschakert, P. (2009). Digging deep for justice: a radical re-imagination of the artisanal gold mining sector in Ghana. *Antipode*, 41 (4), 706–740.
- United States Environmental Protection Agency. (2003). Moving Towards Collaborative Problem-Solving: Business and Industry Perspectives and Practices of Environmental Justice. Cincinnati: National Service Centre for Environmental Publications.
- Vidal, J. (2015, December 4). Religious leaders step up pressure for action on climate change. *The Guardian*. Retrieved from <http://www.theguardian.com/global-development/2015/dec/04/religious-leaders-step-up-pressure-for-action-on-climate-change>
- Walker, G. (2009). Beyond Distribution and Proximity: Exploring the Multiple Spatialities of Environmental Justice. *Antipode*, 41(4), 614–636.
- Watson, M. & Bulkeley, H. (2005). Just waste? Municipal waste management and the politics of environmental justice. *Local Environment*, 10 (4), 411–426.
- Wellman, C. (1995). *Real Rights*. Oxford: Oxford University Press.
- Widener, P. (2007). Benefits and burdens of transnational campaigns: a comparison of four oil struggles in Ecuador. *Mobilization: An International Quarterly*, 12 (1), 21–36.
- WCED. (1987). Our Common Future: Report of the World Commission on Environment and Development. Oxford: Oxford University Press.

Yenneti, K., & Day, R., (2015). Procedural (in)justice in the implementation of solar energy: The case of Charanaka solar park, Gujarat, India. *Energy Policy*, 86, 664–673.